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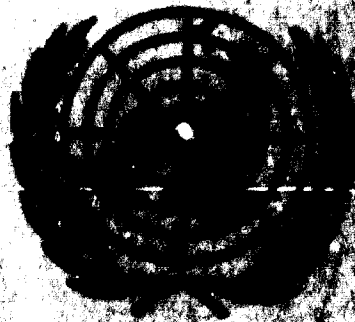


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**PROFILES OF  
MANUFACTURING  
ESTABLISHMENTS**

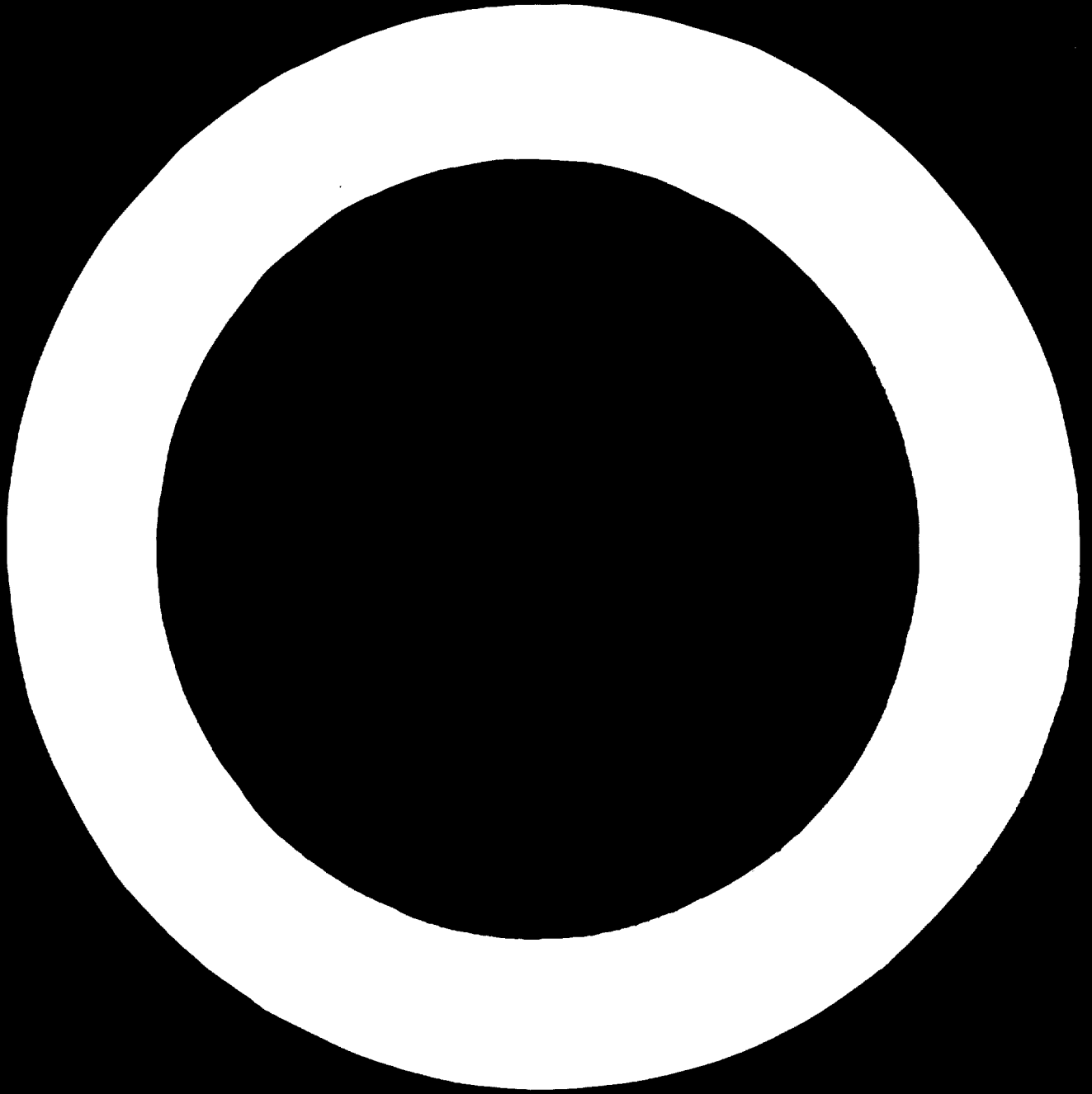
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**Volume II**



**UNITED NATIONS**

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**PROFILES OF  
MANUFACTURING  
ESTABLISHMENTS**

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**Volume II**



**UNITED NATIONS**  
**New York, 1968**

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**UNITED NATIONS PUBLICATION**

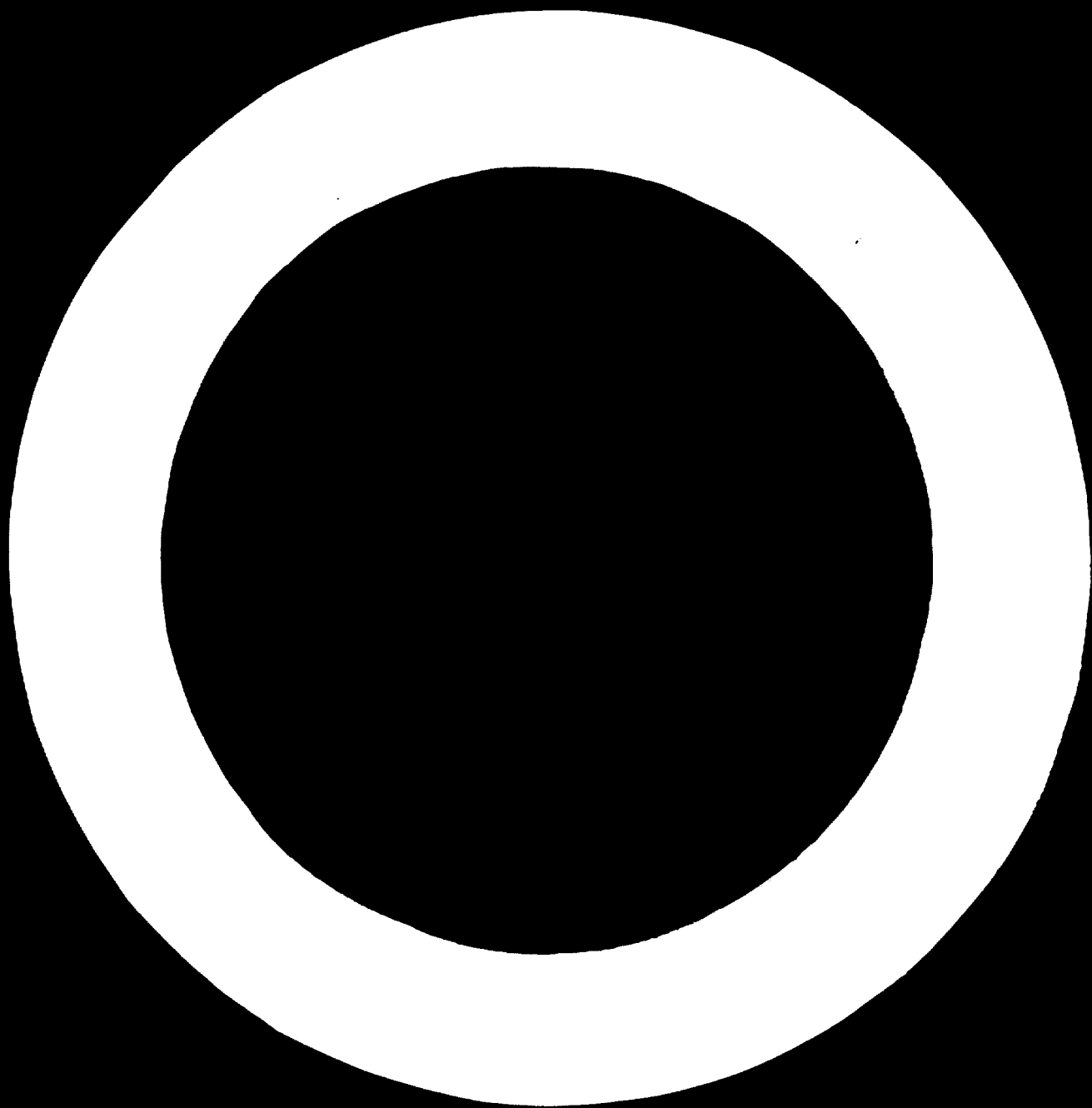
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## PREFACE

This is the second issue of the *Profiles* series which has been developed by UNIDO as an integral part of its data bank services in the field of industrial programming and project planning. The preparation of the material for Volumes I and II was made possible by the extra-budgetary financial support of the Government of Sweden. UNIDO wishes once again to express its gratitude to the Government of Sweden for this valuable assistance and to extend thanks to the groups of consultants and authorities of particular enterprises who have co-operated in the preparation of the *Profiles*.

Volume III of this series, containing a collection of data from a different group of countries, in a somewhat revised format, is currently under way and will be published early in 1969.



## PROFILES OF MANUFACTURING ESTABLISHMENTS

Consolidated list of establishments in Volume I and Volume II

<i>Country</i>	<i>Classification</i>	<i>Major products</i>	<i>Vol. No.</i>	<i>Page</i>
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<i>Country</i>	<i>Classification</i>	<i>Major products</i>	<i>Vol. No.</i>	<i>Page</i>
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Country	Classification	Major products	Vol No	Page
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<i>Country</i>	<i>Classification</i>	<i>Major products</i>	<i>Vol. No.</i>	<i>Page</i>
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Israel	311-(1)	Pesticides, chlorine, caustic soda, plastic products, etc	I	142
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<i>Country</i>	<i>Classification</i>	<i>Major products</i>	<i>Vol. No.</i>	<i>Page</i>
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Country	Classification	Major products	Vol. No.	Page
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France	: 339-(2)	Concrete products (small girders, plasterwork for prefabricated floorboard, concrete blocks and conduits) .....	II	632
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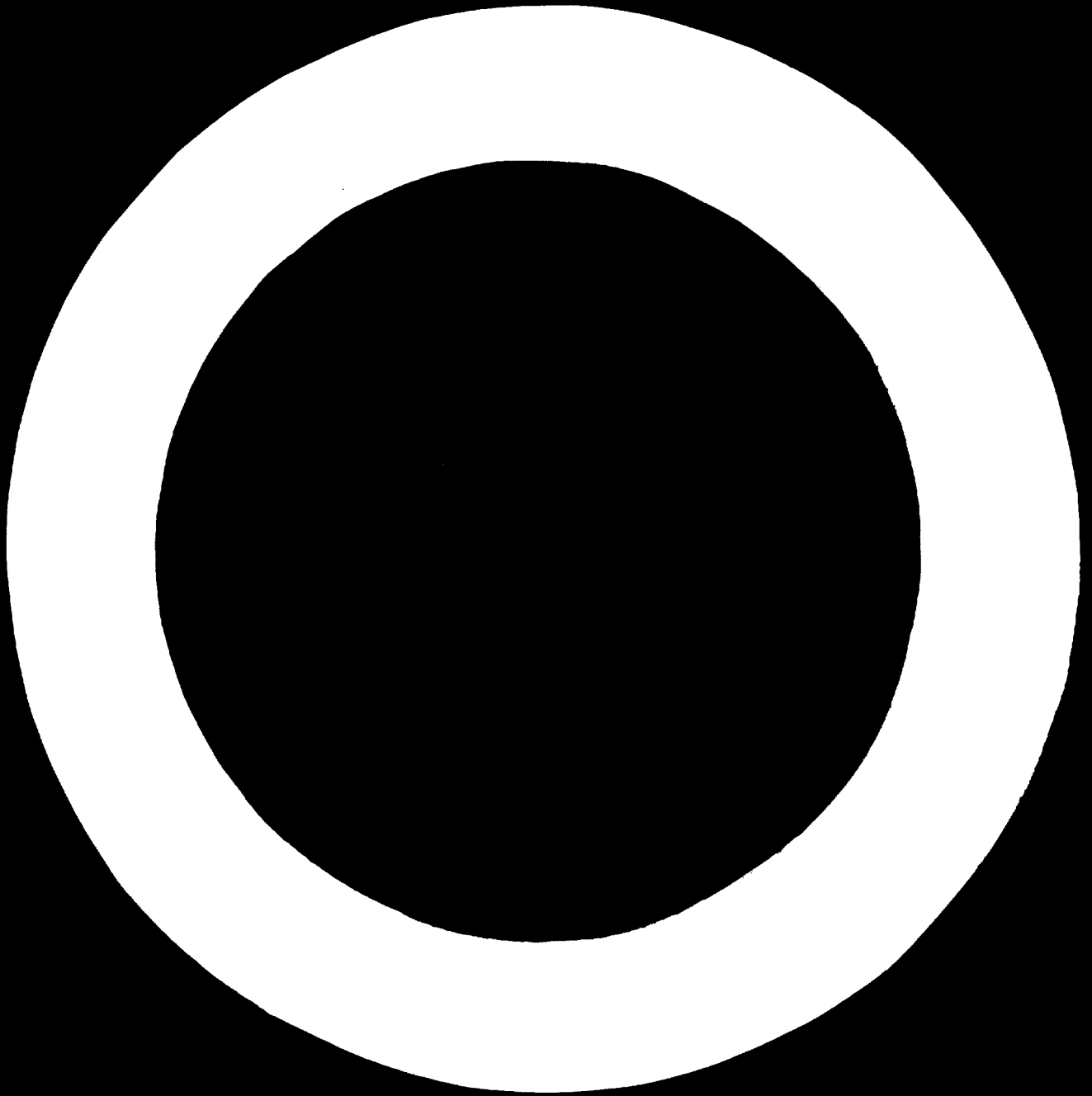
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<i>Country</i>	<i>Classification</i>	<i>Major products</i>	<i>Vol. No.</i>	<i>Page</i>
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## INTRODUCTION

1. This second volume of the *Profiles* is an addendum to *Volume I* which was published early in 1968.<sup>1</sup> The countries covered and the format used in presentation of data are identical in the two volumes.

2. This volume contains additional sample establishments in those nineteen (ISIC 3-digit) industry groups represented in Vol. I, as well as establishments classifiable under other industry groups, such as: 232 (knitmills); 243 (wearing apparel); 251/252 and 260 (wood manufactures and furniture); 291 (leather tanneries); 300 (rubber manufactures); 312 (vegetable and animal oils and fats); 331 (structural clay products); 332 (glass manufactures); 339 (concrete, asbestos; gypsum products); and 370 (electrical machinery, appliances and supplies). A total of 461 sample establishments have been covered from the five countries (France, India, Israel, Japan and Yugoslavia), including the 190 establishments already included in Volume I. For the convenience of the user, Volume II includes a consolidated list of the establishments covered in both volumes.

3. TECHNICAL NOTE I (Criteria for selection of candidate establishments) and TECHNICAL NOTE II (Explanatory notes for the compiled data), as presented in Volume I, apply without modification to this volume as well, and will not be reproduced here. By way of a reminder, certain points of particular importance are repeated in the following paragraphs.

4. As explained in the INTRODUCTION to Volume I, the intent of this series is to provide a "zoo" of live specimens of industrial establishments, which can be studied by various users for various purposes. It is worth repeating here that this presentation is designed "not to force upon the users a hasty image of representative specimens, but rather to invite them to acquaint themselves with a number of possibilities existing in the real world". While this may be considered as the unique feature of

the approach in these data collections, it should at the same time be understood as a warning against naive abuse.

5. That is to say, the data has been compiled for each selected establishment or enterprise rather faithfully reflecting the records of actual annual performance; a limited effort has been made to "normalize" the observations. The normalization effort consisted in most cases of removing obvious reporting errors and those transitory disturbances or trivial anomalies which might otherwise have obscured the basic pattern of productive performances. The adjustments thus applied were generally of a minor nature. The compiled data subsumes a number of factors peculiar to given establishments, such as markets, management, accounting practices and other historical and environmental conditions. The user of the *Profiles* data who is interested in the explicit delimitation of programming "norms" for specific industries is urged to conduct his own preliminary analysis, in cross-establishment, cross-country and/or cross-industry terms, in accordance with his own particular needs. As the scale of collection under this series becomes sufficiently large UNIDO intends to provide some form of analytic digest as an aid for non-expert users.

6. It may be worth restating in particular the manner in which the concept indicative of "profitability" is treated in the *Profiles*, since, despite the explanation already given in TECHNICAL NOTE II, some of the queries received from the users of Volume I suggest that this is a rather fallible point in the present data-format. "Other gross business incomes" (Section VI, Item 6) can be considered as consisting of corporate income tax, dividends, retained earnings (net of depreciation allowances) and interest paid on financial liabilities. This sum is made consistent with the annual production-consumption relationship and not with the actual annual revenue-expenditure record. As explained in TECHNICAL NOTE II (Vol. I, p. 12), this implies that net changes in inventories are valued at the same prices as those involved in the sales

<sup>1</sup> United Nations Industrial Development Organization, *Profiles of Manufacturing Establishments* Vol. I (ID/SER. E/4; Sales No. E. 67. II. B. 17; vii + 363 pp., US \$5)

and purchases during the reference year. Capital gains connected with inventories and other assets, if any, as well as the revenue arising from the sale of scrapped equipment, are omitted from this production-g geared accounting identity.<sup>2</sup>

7. It should also be noted that "gross profit" referred to under *Selected Coefficients* is identical to "other gross business incomes" shown in Section VI, Item 6. This terminology is indeed at variance with the conventional one. For certain purposes, it may be preferable to let "gross profit" be represented by "other gross business incomes" plus "annual depreciation allowance". In the case of Yugoslav profiles, "interest paid" on financial liabilities is shown separately from "other accumulation". Since a similar distinction is not available in the case of the other four countries, the term

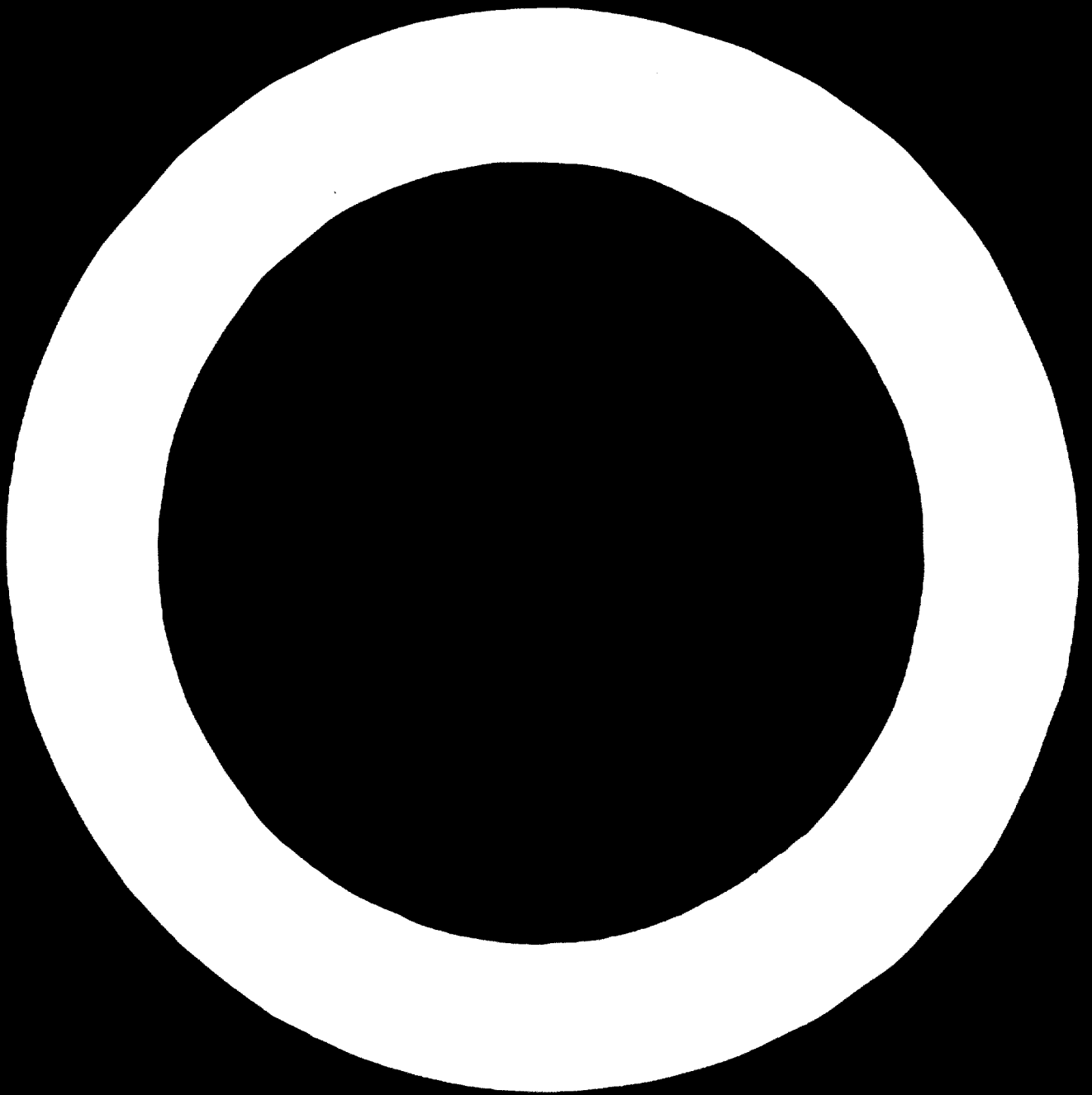
<sup>2</sup> The annual volume of production actually depends on the particular inventory-control policies adopted in the given year which in turn reflect the changing trend of demand. But the data in the *Profiles* do not as a rule involve any arbitrary adjustment for the gap between the actual and the desired level of production.

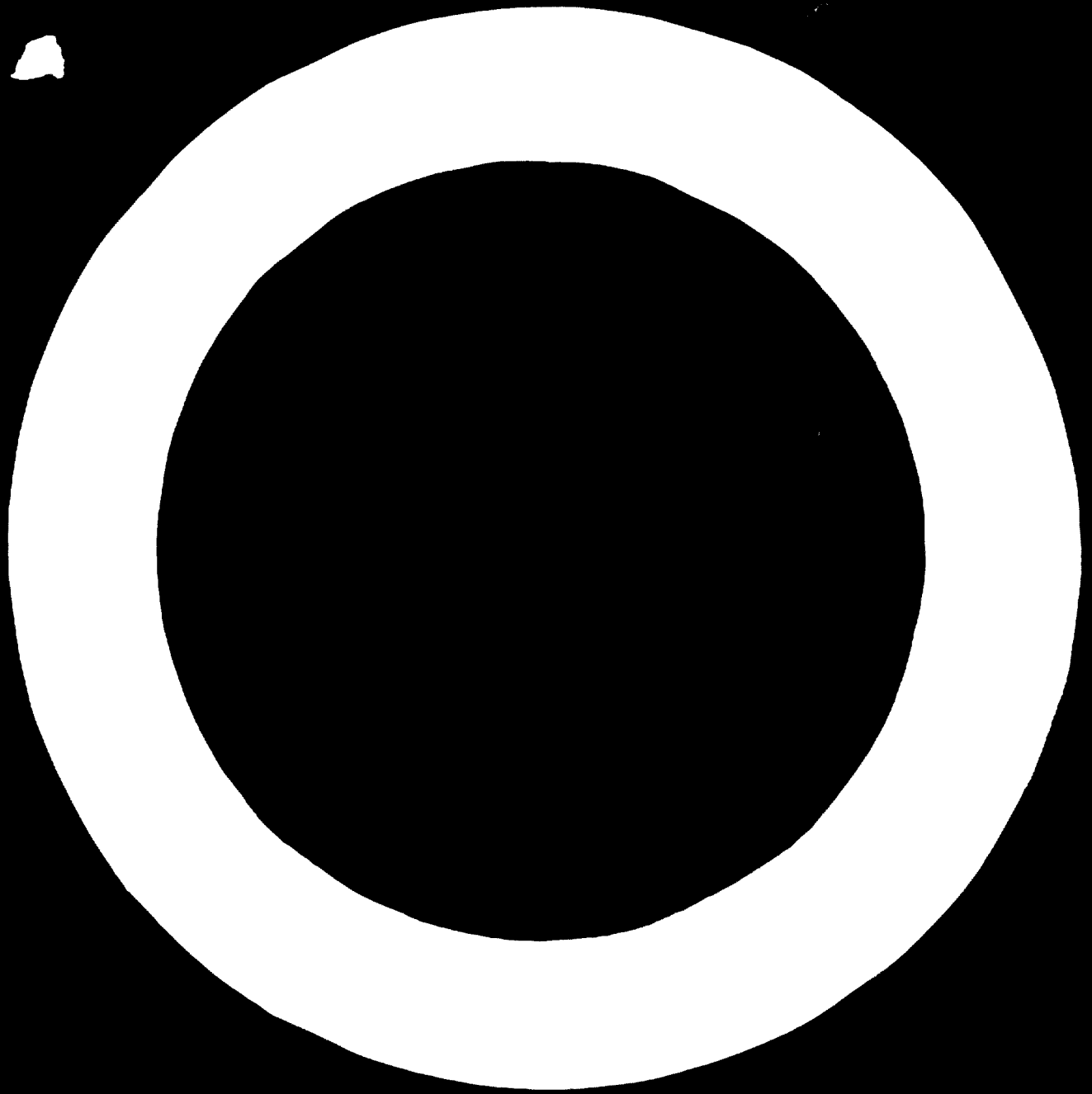
"gross accumulation" used under *Selected Coefficients* obtains as "other accumulation" plus "interest paid" for the sake of comparability.

8. The "break-even point" is meant as nothing more than an arithmetical exercise based on the highly simplified assumption of the behaviour of short-run variable/fixed costs, profit being defined again as inclusive of interest. In later issues of the *Profiles*, it is hoped that some factual observations will be made available in regard to the first break-even point reached by a given establishment in its earlier phase of operation.

9. Any questions concerning the *Profiles*, as well as comments, criticisms and suggestions may be addressed to:

Industrial Programming Section  
United Nations Industrial Development  
Organization  
Felderhaus, Rathausplatz 2  
Vienna, A-1010, Austria.





Organisation des Nations Unies pour le Développement Industriel,  
Vienne

Série « Planification et programmation industrielles », n° 5

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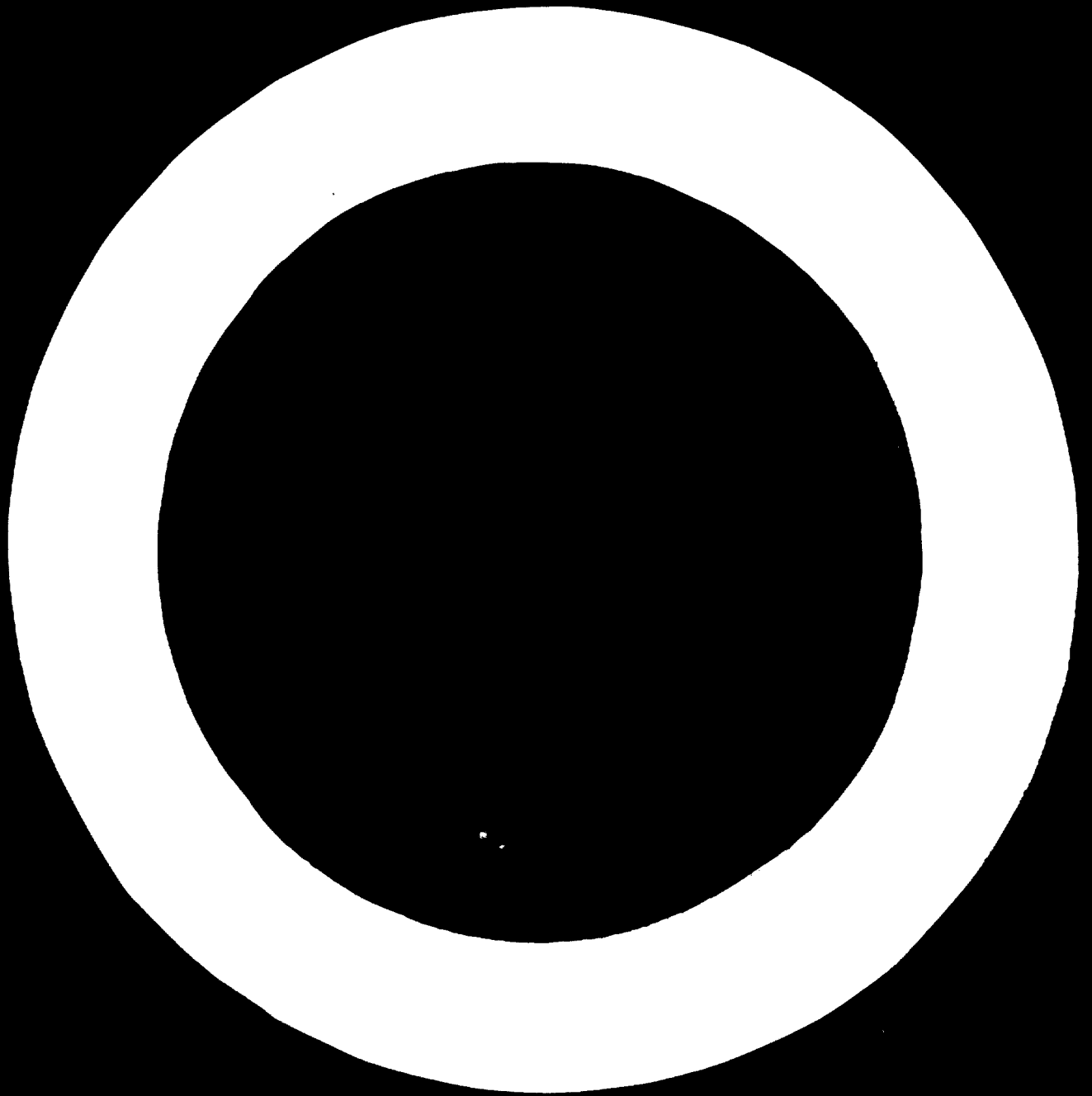
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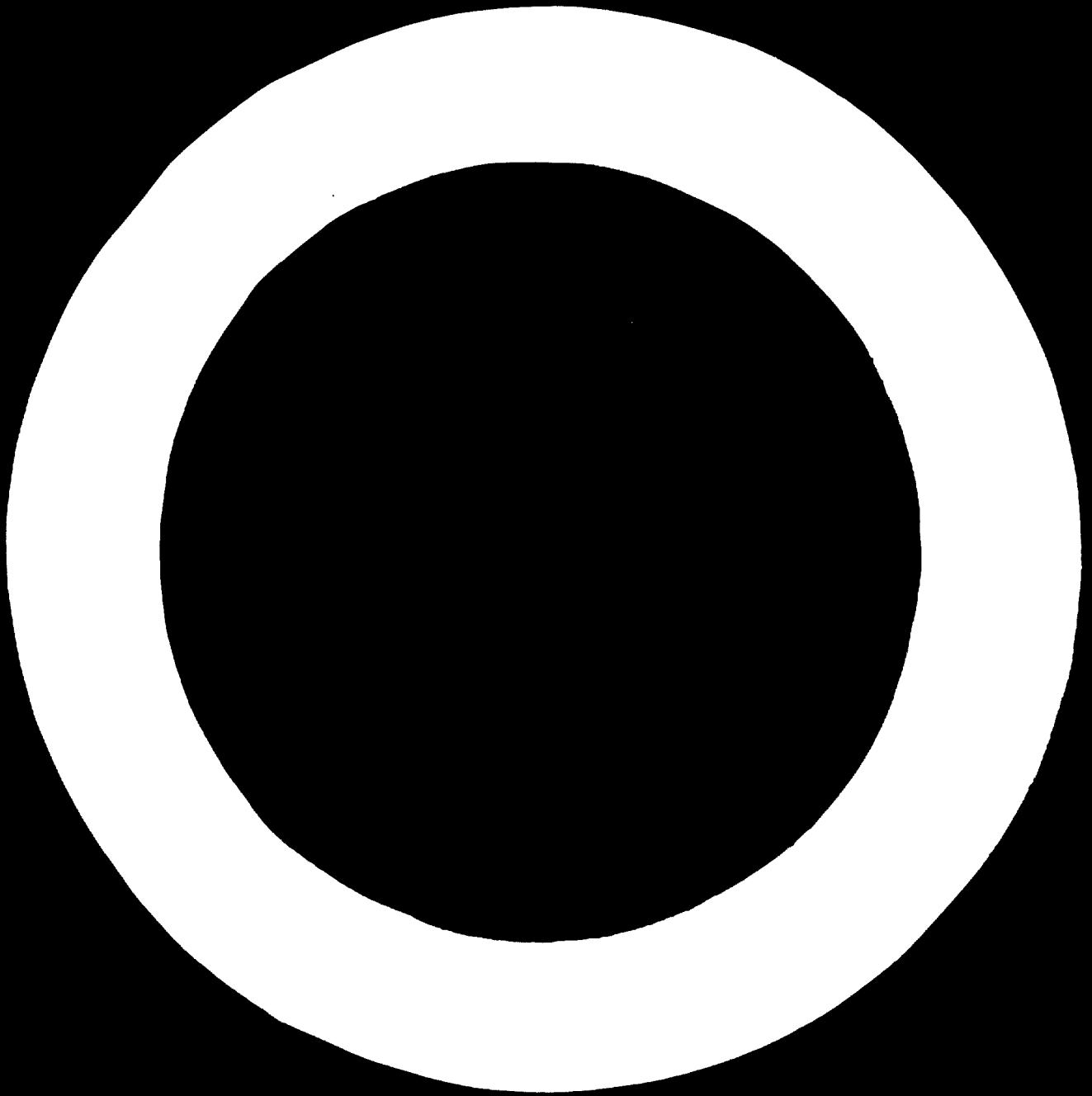
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## AVANT-PROPOS

La présente publication est le deuxième volume de la série des *Profils* conçue par l'ONUDI comme faisant partie intégrante des services de sa banque de données concernant la programmation et la planification industrielles. Grâce à la contribution financière extra-budgétaire du Gouvernement suédois, il a été possible de rassembler les matériaux nécessaires à la publication des volumes I et II, et l'ONUDI tient une fois encore à exprimer sa gratitude au Gouvernement suédois pour l'aide précieuse qu'il lui a prodiguée et à remercier les groupes de consultants et les dirigeants des diverses entreprises qui ont collaboré à la préparation des *Profils*.

Le volume III des *Profils*, qui rassemblera des données concernant un groupe différent de pays sous une présentation légèrement modifiée, est en préparation et sera publié au début de 1969.





## PROFILS D'ETABLISSEMENTS INDUSTRIELS

Liste générale des établissements mentionnés dans les volumes I et II

Pays	Classification	Principaux produits	Numéro du volume	Page
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France	: 202-(1)	Lait, stérilisé et pasteurisé, yogourt, crème fraîche et fromage .....	I	16
France	: 202-(2)	Lait, stérilisé, pasteurisé et en poudre, beurre, etc. ....	I	18
France	: 202-(3)	Lait, beurre, crème pasteurisés, etc. ....	I	20
France	: 202-(4)	Lait en poudre, fromage, caséine, etc. ....	II	364
Inde	: 202-(1)	Lait, pasteurisé et en poudre, crème glacée, beurre et ghee .....	I	22
Inde	: 202-(2)	Lait, beurre, ghee, crème pasteurisés, etc. ....	I	24
Israël	: 202-(1)	Lait, crème, caillé, beurre stérilisés, etc. ....	I	26
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Inde	341-(2)	Tubes soudés, tubes sans soudure et bandes laminées à froid	I	206
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**LAMINAGE, ETIRAGE ET MEXLAGE DES METAUX NON FERREUX**

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## INTRODUCTION

1. Le volume II des *Profils* est en fait un additif au volume I publié au début de 1968<sup>1</sup>. Les données publiées émanent des mêmes pays et sont présentées de la même façon que dans le premier volume.

2. On trouvera dans le présent volume de nouveaux établissements appartenant aux 19 groupes d'industries (indicatif à trois chiffres de la CITI) figurant dans le volume I, ainsi que des établissements appartenant à d'autres groupes, à savoir: 232 (bonneterie); 243 (articles d'habillement); 251/252 et 260 (articles en bois et meubles); 291 (tanneries de cuir); 300 (articles de caoutchouc); 312 (huiles et graisses d'origine végétale ou animale); 331 (éléments de construction en argile); 332 (industrie du verre); 339 (béton, amiante, produits du gypse); 370 (machines, appareils et accessoires électriques). Au total 461 établissements ont été retenus dans les cinq pays (France, Inde, Israël, Japon et Yougoslavie), outre les 130 figurant déjà dans le volume I. Pour faciliter la lecture des *Profils*, on a publié dans le volume II la liste complète des établissements mentionnés dans les deux volumes.

3. La *Note technique I* (Critères appliqués au choix des établissements) et la *Note technique II* (Note explicative sur les données recueillies) figurant dans le volume I sont également valables, sans aucune modification, pour le présent volume ou elles n'ont donc pas été reproduites. En revanche, on a jugé bon de préciser de nouveau, dans les paragraphes qui vont suivre, un certain nombre de points particulièrement importants.

4. Comme il était dit dans l'introduction au volume I, cette série vise à constituer une "collection de portraits pris sur le vif" d'établissements industriels, pouvant être étudiée par les différents intéressés à des fins diverses. Encore convient-il d'insister sur le fait que cette présentation n'a pas pour but "de faire passer devant les yeux des intéressés une image rapide de quelques échantillons d'entreprises représentatives, mais plutôt de leur faire étudier un certain nombre de solutions possibles que leur offre la réalité". On peut certes estimer que c'est là ce qui confère à ces recueils de données un caractère

unique; mais il importe aussi d'y voir une mise en garde contre toute interprétation abusive des *Profils*.

5. En effet, les données rassemblées pour chaque établissement ou entreprise retenu correspondent assez exactement aux résultats réellement obtenus dans l'année; on a simplement tenté, dans une certaine mesure, de "normaliser" les observations. La plupart du temps on s'est contenté pour cela de rectifier les erreurs évidentes et d'éliminer les perturbations passagères ou les anomalies insignifiantes qui risquaient de masquer les lignes essentielles du schéma de productivité des entreprises en question. Les modifications ainsi apportées conservent donc généralement un caractère mineur. Les données recueillies portent sur des facteurs propres à certains secteurs tels que les marchés, la gestion, les méthodes de comptabilité et d'autres éléments caractéristiques de l'établissement et de son milieu. Le lecteur des *Profils* qui voudrait définir de façon explicite les "normes" de programmation pour des industries particulières, devra procéder lui-même à une analyse préliminaire, en comparant les établissements, les pays ou les industries, selon ses besoins personnels. Lorsque les données recueillies pour la présente série de publications seront suffisamment nombreuses, l'ONUDI se propose d'établir une sorte de résumé analytique à l'usage des non-spécialistes.

6. Il convient peut-être de rappeler plus particulièrement la manière dont le concept d'indice de "rentabilité" est traité dans les *Profils* puisque, malgré les explications déjà données dans la *Note technique II*, à en croire certaines questions posées par les lecteurs du volume I, ce serait là un point faible de la présentation actuelle des données. On peut considérer que la rubrique "autres revenus bruts de l'entreprise" (section VI, poste 6) englobe les impôts sur le revenu des sociétés, les dividendes, les bénéfices non distribués (nets des provisions pour amortissement) et les charges de capital de l'entreprise. Cette somme est ajustée en fonction du rapport annuel production/consommation et non pas du chiffre annuel réel des revenus et des dépenses. Comme l'indique la *Note technique II* (volume I, p. 12), il s'ensuit que les variations nettes des stocks sont évaluées au même taux que celles des achats et ventes au cours de l'année de référence

(Organisation des Nations Unies pour le développement industriel, *Profils d'établissements industriels*, volume I (FD/SER E/A N° de vente E.67.11.8.17) 364 pages, 5 dollars des Etats-Unis)

Les gains en capital provenant des stocks et, le cas échéant, d'autres avoirs ainsi que le produit de la vente du matériel mis hors service n'entrent pas dans cette comptabilisation axée sur la production<sup>2</sup>.

7. Il convient en outre de noter que l'expression "bénéfices bruts", mentionnée sous la rubrique intitulée *Coefficients choisis*, est identique à l'expression "autres revenus bruts de l'entreprise" utilisée à la section VI (poste 6). Cette terminologie s'écarte en fait de la terminologie traditionnelle. Il peut être préférable, à certaines fins, de représenter les "bénéfices bruts" par les "autres revenus bruts de l'entreprise" plus les "provisions annuelles pour amortissement". Dans le cas des profils yougoslaves, les "intérêts payés" sur les charges de capital de l'entreprise sont distingués des "autres accumulations", ce qui n'est pas le cas pour les quatre autres pays.

<sup>2</sup> Le volume annuel de production dépend en fait des mesures de contrôle des stocks adoptées pendant l'année considérée, mesures qui elles-mêmes dépendent de la tendance variable de la demande. Mais les données présentées dans les *Profils* n'impliquent en général aucun ajustement arbitraire pour ce qui est de l'écart existant entre le niveau réel et le niveau souhaité de production.

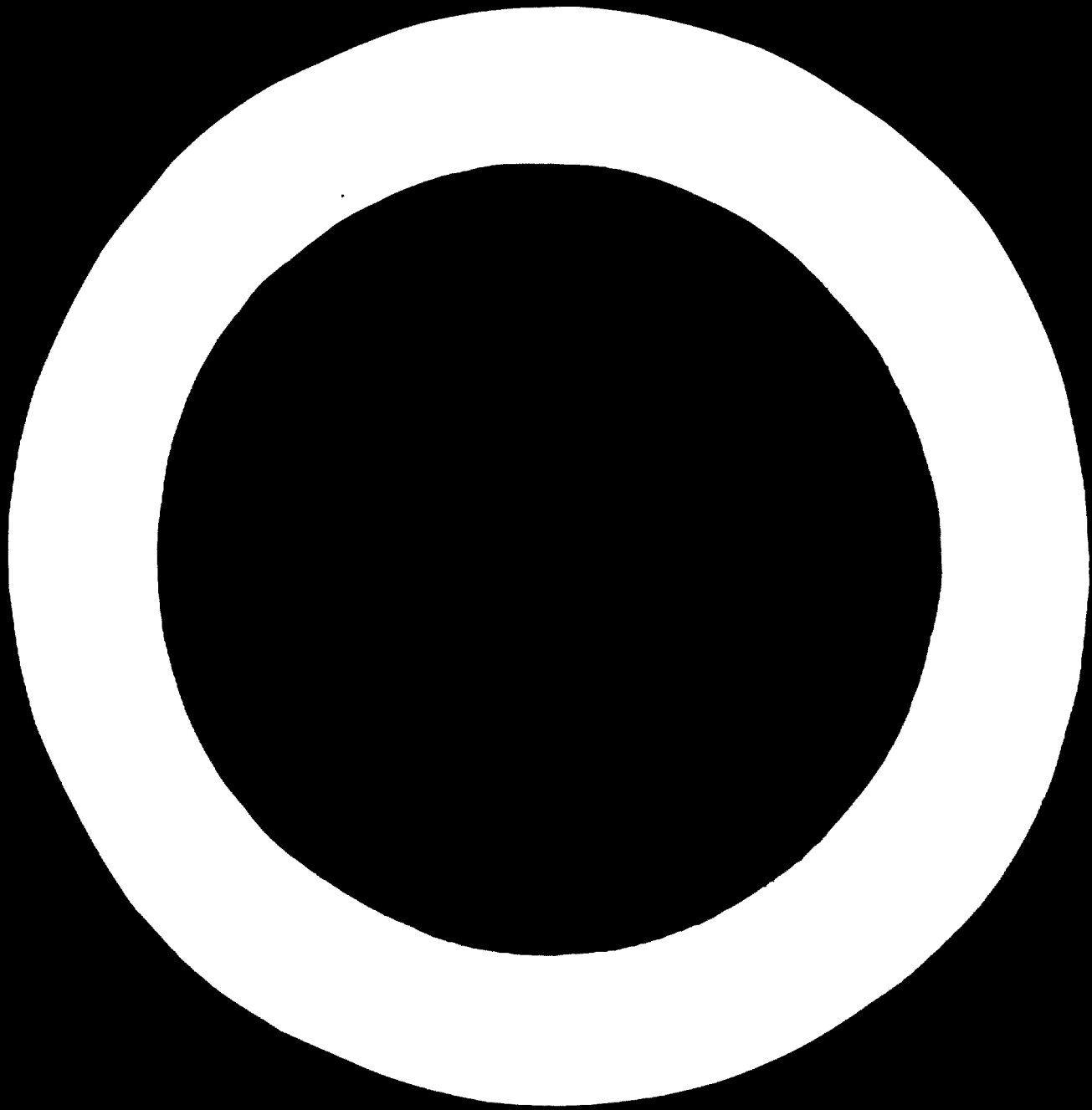
Pour faciliter la comparaison, on a donc employé, dans la rubrique intitulée "coefficients choisis", le terme "accumulations brutes" qui comprend les "autres accumulations" plus les "intérêts payés".

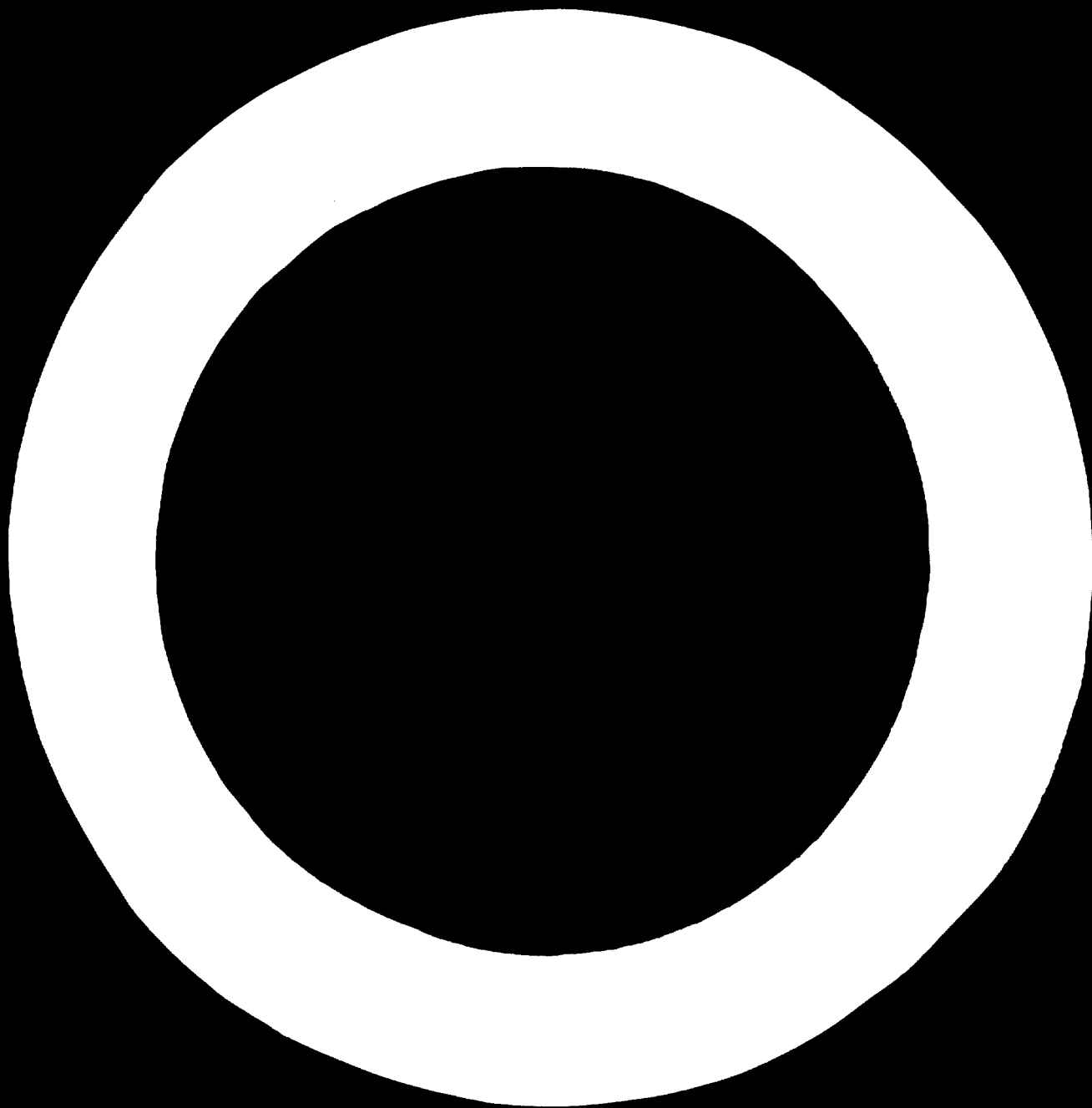
8. Le "seuil de rentabilité" ne représente rien d'autre qu'un exercice arithmétique basé sur l'évaluation extrêmement simplifiée du rapport coûts variables à court terme/coûts fixes, le bénéfice étant défini ici encore intérêts compris. Dans les prochains volumes des *Profils*, on espère pouvoir fournir un certain nombre de données réelles relatives au premier seuil de rentabilité atteint par l'établissement donné au cours de la phase initiale d'exploitation.

9. Les questions concernant les *Profils*, ainsi que toutes observations, critiques et suggestions, peuvent être envoyées à l'adresse suivante:

Section de la programmation industrielle  
Organisation des Nations Unies pour le développement industriel  
Felderhaus, Rathausplatz 2  
Vienne, A-1010, Autriche.

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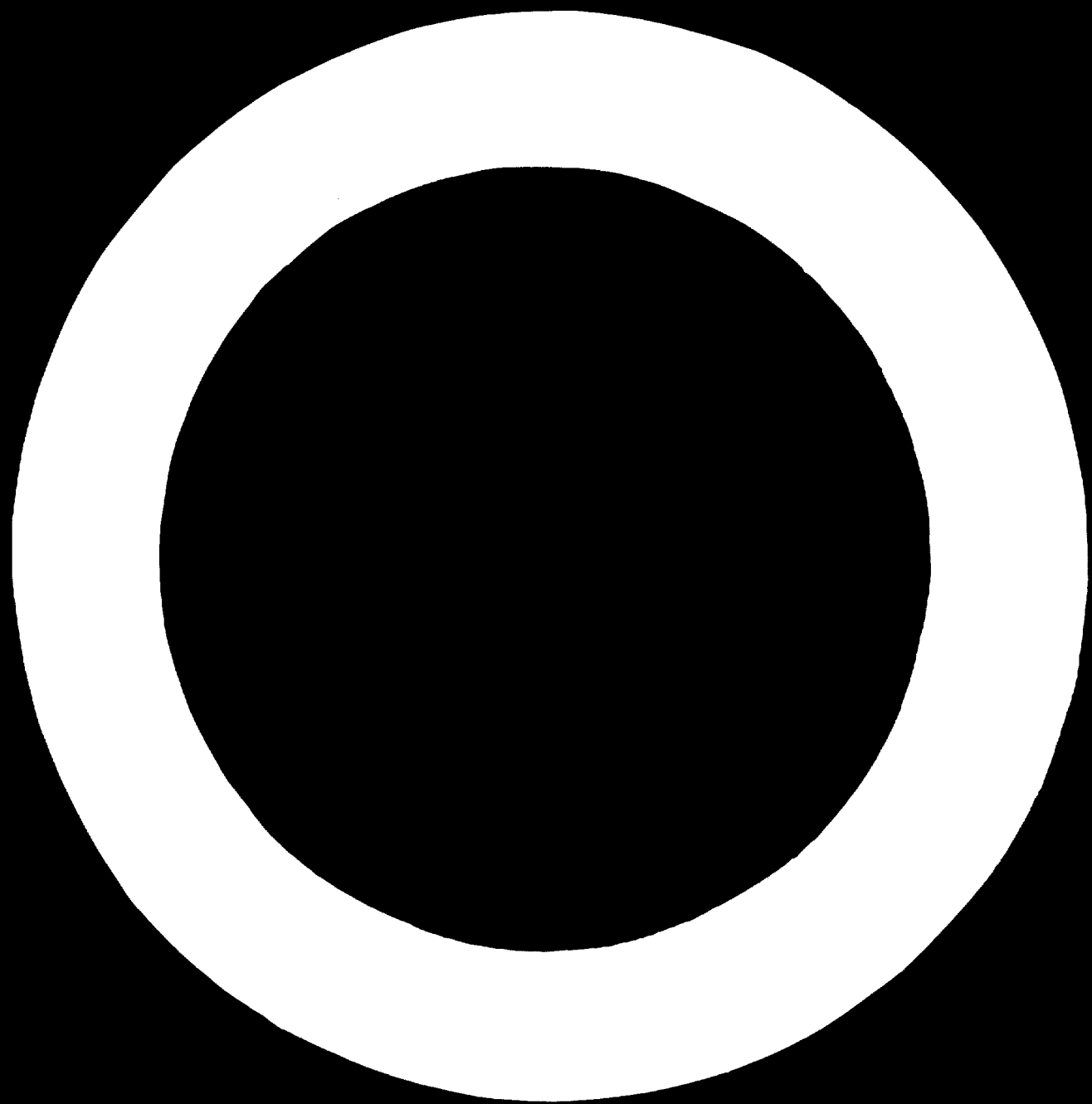
**PERFILES DE  
ESTABLECIMIENTOS  
MANUFACTUREROS**

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**Volumen II**



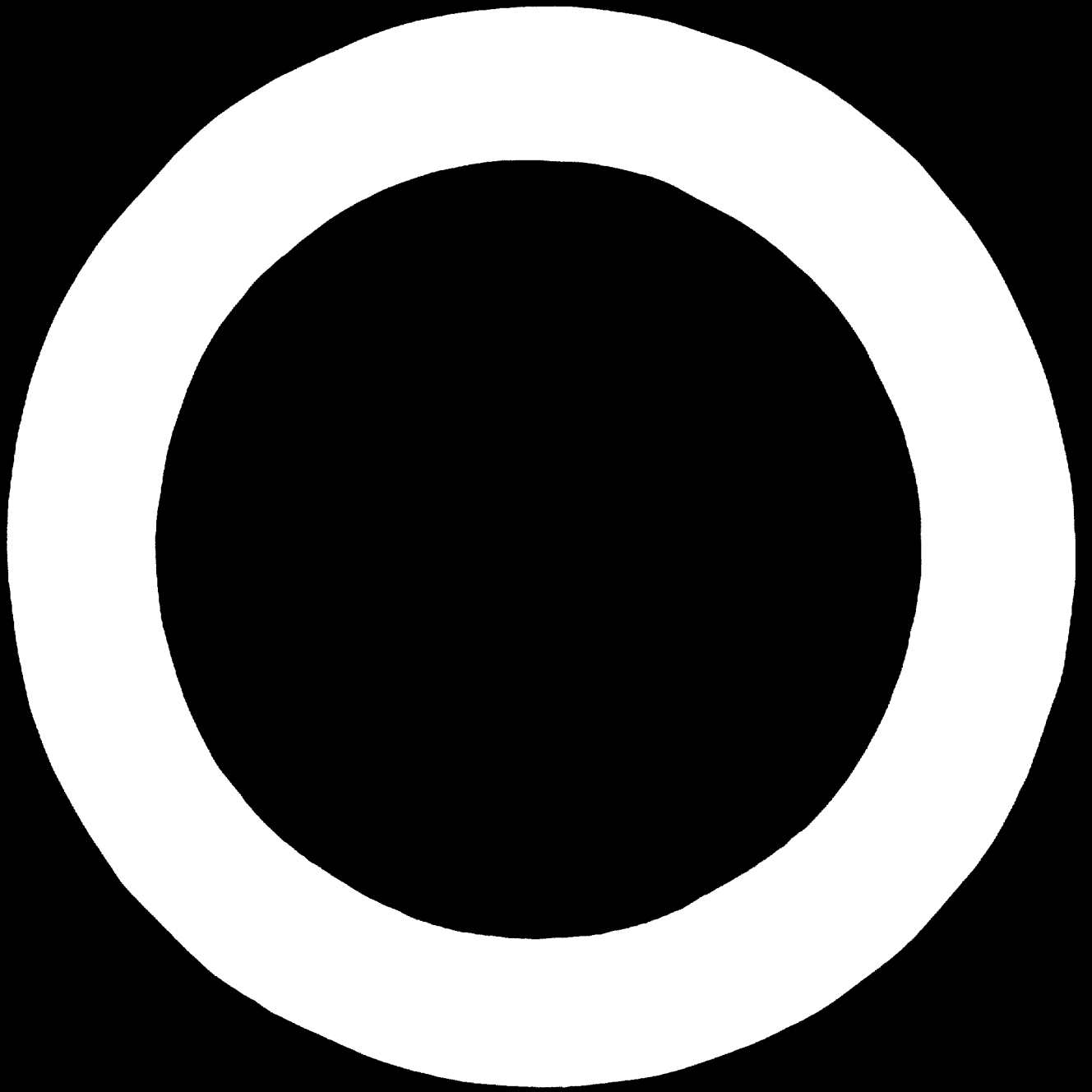
**NACIONES UNIDAS**  
**Nueva York, 1968**



## PREFACTO

La presente publicación es el segundo volumen de la serie *Perfiles*, preparada por la ONUDI como parte integrante de sus servicios de banco de datos en materia de programación industrial y planificación de proyectos. La documentación para los volúmenes I y II pudo ser preparada gracias al apoyo financiero extrapresupuestario del Gobierno de Suecia. La ONUDI desea reiterar su agradecimiento al Gobierno de Suecia por su valiosa asistencia, y dar las gracias a los grupos de consultores y al personal directivo de las empresas que colaboraron en la preparación de los *Perfiles*.

El volumen III de esta serie, en el que se presentará en forma ligeramente distinta una serie de datos provenientes de un grupo diferente de países, se encuentra en preparación y será publicado a principios del año 1969.



## PERFILES DE ESTABLECIMIENTOS MANUFACTUREROS

Lista consolidada de los establecimientos que figuran en el Volumen I y Volumen II

<i>País</i>	<i>Clasificación</i>	<i>Principales productos</i>	<i>Vol</i>	<i>Pág</i>
<b>FABRICACIÓN DE PRODUCTOS LÁCTEOS</b>				
Francia	202-(1)	Leche esterilizada y pasterizada, yogur, crema fresca y quesos	I	16
Francia	202-(2)	Leche esterilizada, pasterizada y en polvo, mantequilla, etc.	I	18
Francia	202-(3)	Leche pasterizada, mantequilla, crema, etc.	I	20
Francia	202-(4)	Leche en polvo, queso, caseína, etc.	II	264
India	202-(1)	Leche pasterizada y en polvo, helado, mantequilla y aceite de mantequilla clarificada	I	22
India	202-(2)	Leche pasterizada, mantequilla, aceite de mantequilla clarificada, crema, etc.	I	24
Israel	202-(1)	Leche esterilizada, crema, cuajadas duras, mantequilla, etc.	I	26
Israel	202-(2)	Cuajadas, queso, crema agria, mantequilla, helado, etc.	I	28
Israel	202-(3)	Helado	I	30
Yugoslavia	202-(1)	Leche en polvo, condensada y evaporada, huevo en polvo, etc.	I	32
Yugoslavia	202-(2)	Leche y huevo en polvo, queso, mantequilla, etc.	I	33
Yugoslavia	202-(3)	Yogur, mantequilla, queso, helado, etc.	I	34
Yugoslavia	202-(4)	Mantequilla, queso y otros productos lácteos	II	366
<b>ENVASE DE ALIMENTOS</b>				
India	203-(1)	Envase de frutas y legumbres	I	36
Israel	203-(1)	Envase de frutas y legumbres	I	38
Israel	203-(2)	Envase de frutas y legumbres	I	40
Japón	203/4-(1)	Envase de pescado y frutas	I	42
Japón	203/4-(2)	Envase de pescado y frutas	I	44
Japón	203/4-(3)	Envase de pescado	I	46
Yugoslavia	204-(1)	Envase de pescado y de harina seca de pescado	II	368
Yugoslavia	203/1-(2)	Elaboración y envase (incluido el envase en recipientes herméticos) de legumbres y carne	II	369
Yugoslavia	203/211-(3)	Envase de legumbres, elaboración de frutas, bebidas alcohólicas	II	370
<b>MANUFACTURA DE PRODUCTOS DE MOLINO</b>				
India	205-(1)	Harina de trigo (y salvado)	I	48
India	205-(2)	Harina de trigo (y salvado)	I	50
Israel	205-(1)	Harina de trigo (y salvado)	I	52
Israel	205-(2)	Harina de trigo (y salvado)	I	54
Israel	205-(3)	Harina de trigo (y salvado)	I	56
Israel	205-(4)	Harina de trigo (y salvado)	II	372
Japón	205-(1)	Harina de trigo (y salvado)	I	58
Japón	205-(2)	Harina de trigo (y salvado)	I	60
Yugoslavia	205-(1)	Harina de trigo (y salvado)	I	62
Yugoslavia	205-(2)	Harina de trigo (y salvado)	I	63
Yugoslavia	205-(3)	Harina de trigo y de maíz y productos farináceos	I	64
Yugoslavia	205-(4)	Harina de trigo y productos farináceos	II	374

<i>País</i>	<i>Clasificación</i>	<i>Principales productos</i>	<i>Vol.</i>	<i>Pág.</i>
<b>REFINERÍAS DE AZÚCAR</b>				
Francia	207-(1)	Refinerías de azúcar de remolacha	I	66
Francia	207-(2)	Refinerías de azúcar de remolacha	I	68
India	207-(1)	Refinerías de azúcar de caña	I	70
India	207-(2)	Refinerías de azúcar de caña	II	376
Israel	207-(1)	Refinerías de azúcar de remolacha	I	72
Japón	207-(1)	Refinerías de azúcar de caña	I	74
Japón	207-(2)	Refinerías de azúcar de caña	I	76
Yugoslavia	207-(1)	Refinerías de azúcar de remolacha	I	78
Yugoslavia	207-(2)	Refinerías de azúcar de remolacha	I	79
Yugoslavia	207-(3)	Refinerías de azúcar de remolacha	I	80
Yugoslavia	207-(4)	Refinerías de azúcar de remolacha	II	378
Yugoslavia	207-(5)	Refinerías de azúcar de remolacha	II	379
Yugoslavia	207-(6)	Refinerías de azúcar de remolacha (incluidas fábricas productoras de alcohol y licores de azúcar)	II	380
<b>HILADO, TEJIDO Y ACABADO DE TEXTILES</b>				
Francia	231-(1)	Hilados y telas de lana y sintéticos	I	82
Francia	231-(2)	Hilos e hilados de algodón	I	84
Francia	231-(3)	Hilados de lino	I	86
Francia	231-(4)	Hilos e hilados de lana y fibra sintéticas	II	382
Francia	231-(5)	Hilados de algodón	II	384
India	231-(1)	Hilados y telas de algodón, toallas, tiendas de campaña y otros artículos confeccionados	I	88
India	231-(2)	Hilados, telas y textiles confeccionados de algodón	I	90
India	231-(3)	Sacos de yute, arpillera y otros productos fabricados con yute	I	92
India	231-(4)	Hilados, telas y sacos de yute	I	94
India	231-(5)	Hilados, telas, sábanas, saris, etc. de algodón	I	96
India	231-(6)	Hilados, telas, saris, sábanas, tiendas de campaña, etc. de algodón	I	98
India	231-(7)	Hilados, telas, taparrabos, sábanas, tela para camisas, etc. de algodón	II	386
India	231-(8)	Hilados, telas, taparrabos, sábanas, etc. de algodón	II	388
India	231-(9)	Hilados, tejidos, toallas, mantas, etc. de lana	II	390
India	231-(10)	Hilados, tejidos, franela, velo, etc. de lana	II	392
India	231-(11)	Hilados y tejidos de estambre	II	394
Israel	231-(1)	Hilados de nylon	I	100
Israel	231-(2)	Hilados de nylon (banión)	I	102
Israel	231-(3)	Hilados de nylon y tejidos de rayón para neumáticos	I	104
Israel	231-(4)	Hilados sintéticos y de lana	I	106
Israel	231-(5)	Hilados de algodón	II	396
Israel	231-(6)	Hilados y tejidos de algodón	II	398
Israel	231-(7)	Hilados y tejidos de lana y su teñido	II	400
Israel	231-(8)	Hilados y tejidos de lana y su teñido	II	402
Israel	231-243-(9)	Tejidos y pantalones de lana peinada	II	404
Israel	231-243-(10)	Tejidos y pantalones de lana	II	406
Japón	231-(1)	Tejidos de lana y estambre	I	108
Japón	231-(2)	Tejidos de lana y de seda	I	110
Yugoslavia:	231-(1)	Hilados, hilo y telas de algodón y sintéticos	I	112
Yugoslavia:	231-(2)	Telas de algodón, sintéticas y de fibras celulósicas, y artículos de punto	I	113
Yugoslavia:	231-(3)	Hilados e hilo de algodón	I	114
Yugoslavia:	231-(4)	Telas, algodón y fibras sintéticas	I	115
Yugoslavia:	231-(5)	Hilados y tejidos de lana, sintéticos y celulósicos, y prendas de punto	I	116
Yugoslavia:	231-(6)	Hilados de algodón	II	408
Yugoslavia:	231-(7)	Hilados de algodón	II	409
Yugoslavia:	231-(8)	Tejidos de algodón	II	410
Yugoslavia:	231-(9)	Hilados y tejidos de lana	II	411

<i>Pais</i>	<i>Clasificación</i>	<i>Principales productos</i>	<i>Vol</i>	<i>Pág</i>
<b>HILADO, TEJIDO Y ACABADO DE TEXTILES (CONTINUACIÓN)</b>				
Yugoslavia	231-(10)	Tejidos de lana	II	412
Yugoslavia	231-(11)	Tejidos de rayón y de fibras sintéticas	II	413
Yugoslavia	231-(12)	Artículos de cañamo, yute y sisal (cuerdas, cordaje, sacos, etc.)	II	414
Yugoslavia	231-(13)	Hilados y tejidos de lana	II	415
Yugoslavia	231-243-(14)	Tejidos y ropa confeccionada de rayón y fibras sintéticas	II	416
Yugoslavia	231-(15)	Hilados y tejidos de algodón	II	417
Yugoslavia	231-(16)	Hilados y tejidos de lana y de fibra artificiales	II	418
<b>FABRICAS DE TEJIDOS DE PUNTO Y PRENDAS DE VESTIR</b>				
Francia	232/243-(1)	Tejidos de punto y otras prendas de vestir	II	420
Francia	243-(1)	Prendas de vestir	II	422
Francia	243-(2)	Prendas de vestir	II	424
India	232-(1)	Artículos de punto de algodón y nylon (calcetines, chalecos, calzoncillos, etc.)	II	426
India	232-(2)	Tejido elástico, ropa interior, medias, etc.	II	428
Israel	232-(1)	Medias y mallas	II	430
Japón	232/243-(1)	Suéteres y camisetitas deportivas	II	432
Japón	232/243-(2)	Suéteres, acabados y semiacabados	II	434
Japón	232-(3)	Calcetines	II	436
Japón	243/232-(1)	Camisas y suéteres	II	438
Japón	243/232-(2)	Ropa interior, fajas y otras prendas	II	440
Yugoslavia	232-(1)	Telas, ropa interior y medias de tejidos de punto	II	442
Yugoslavia	232-(2)	Calcetines y medias	II	443
Yugoslavia	232-(3)	Calcetines y medias	II	444
Yugoslavia	232-(4)	Calcetines y medias	II	445
Yugoslavia	232/231-(5)	Hilados y artículos de punto (de lana)	II	446
Yugoslavia	232-(6)	Artículos de punto (de lana)	II	447
Yugoslavia	243-(1)	Ropa interior y ropa de confección	II	448
Yugoslavia	243-(2)	Camisas de hombre, ropa de confección y ropa interior	II	449
Yugoslavia	243/232-(3)	Tejidos de punto, prendas de vestir y de confección	II	450
Yugoslavia	243-(4)	Camisas de hombre y ropa interior de confección	II	451
Yugoslavia	243-(5)	Ropa interior de confección	II	452
Yugoslavia	243-(6)	Trajes, gabanes, pantalones y otra ropa de confección	II	453
Yugoslavia	243-(7)	Vestidos de señora, gabanes, blusas y otra ropa de confección	II	454
<b>TALLERES PARA TRABAJAR LA MADERA Y MANUFACTURAS CONEXAS</b>				
Francia	251-(1)	Paneles de madera terciada	II	456
Francia	251-(2)	Tableros de madera aglomerada	II	458
India	251-(1)	Partes de madera, accesorios para las hilanderías de yute y algodón (lanzaderas, dientes de carda, bobinas, etc.)	II	460
India	251-(2)	Chapas y madera terciada	II	462
Israel	251-(1)	Madera terciada y paneles	II	464
Israel	251-(2)	Madera terciada, cartón de papel usado y paneles, cajas y partes de muebles	II	466
Israel	251-(3)	Madera terciada, cartón de papel usado y lápices	II	468
Japón	251-(1)	Chapas y madera terciada	II	470
Japón	251-(2)	Madera terciada y tableros de madera aglomerada	II	472
Yugoslavia	251-(1)	Chapas y madera terciada	II	474
Yugoslavia	251-(2)	Tableros de madera, madera aglomerada y chapas	II	475
Yugoslavia	250-(3)	Madera aserrada, madera terciada, cubiertas, puertas y otros productos de madera	II	476
Yugoslavia	250/260-(4)	Madera aserrada, paneles de madera, muebles y otros productos de madera	II	477
Yugoslavia	250/260-(5)	Madera aserrada, chapas, tableros de madera, cartón de papel usado y muebles	II	478
Yugoslavia	250/260-(6)	Madera aserrada, parquet, cartón de papel usado, muebles y casas prefabricadas	II	479

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<b>TALLERES PARA TRABAJAR LA MADERA Y MANUFACTURAS CONEXAS (CONTINUACIÓN)</b>				
Yugoslavia	250-260-(7)	Madera aserrada, tableros de madera y muebles	II	480
Yugoslavia	250-(8)	Madera aserrada, cubiertas y tableros de madera, etc	II	481
Yugoslavia	250-260-(9)	Madera aserrada y muebles	II	482
Yugoslavia	250-260-(10)	Madera aserrada y muebles	II	483
<b>FABRICACION DE PULPA DE MADERA, PAPEL Y CARTÓN</b>				
Francia	271-2-(1)	Cartón de pasta de paja para envases ondulados y otros envases, y otras cajas de empaquetar de papel	I	118
Francia	271-(2)	Cartón (para valijas y automóviles) y cuero sintético (para calzado)	II	484
India	271-(1)	Papel de periódico blanqueado o sin blanquear (de bambú y de "salai")	I	120
India	271-(2)	Papel y cartón de diversas clases (de bambú y de otros materiales)	I	122
India	271-(3)	Cartón de pasta de paja	II	486
Japón	271-(1)	Cartón de revestimiento de yute	I	124
Japón	271-(2)	Cartón de revestimiento de yute y papel de base para cartón de yeso	I	126
Yugoslavia	271-(1)	Celulosa de sulfito (de coníferas), papel de pasta química, papel de envolver, etc	I	128
Yugoslavia	271-(2)	Celulosa de sulfito (de coníferas, haya, etc) papel de periódico, papel fino, y papel de envolver	I	130
<b>INDUSTRIA DEL CUERO Y PRODUCTOS DE CUERO</b>				
Francia	291-(1)	Curtiduría (para la pala del calzado) y cuero marroquí	II	488
India	291/241-(1)	Curtiduría (incluso una fábrica de calzado y otros artículos de cuero)	II	490
Israel	291-(1)	Cuero para la pala del calzado	II	492
Yugoslavia	291-(1)	Curtiduría	II	494
Yugoslavia	291-(2)	Curtiduría	II	495
Yugoslavia	291/2-(3)	Curtiduría y peletería	II	496
Yugoslavia	291/241-(4)	Curtiduría (incluso una fábrica de calzado)	II	497
Yugoslavia	291-(5)	Curtiduría, guantes de cuero y lana industrial	II	498
<b>FABRICACION DE PRODUCTOS DE CAUCHO</b>				
Francia	300-(1)	Suelas para calzado, cubiertas para pisos, llantas recauchutadas, etc	II	500
India	300-(1)	Cámaras y llantas de caucho	II	502
India	300-(2)	Cámaras y llantas de caucho	II	504
India	300-(3)	Cámaras y llantas de caucho	II	506
India	300-(4)	Cámaras y llantas de caucho	II	508
India	300-(5)	Cámaras y llantas de caucho	II	510
Israel	300-(1)	Cámaras y llantas de caucho	II	512
Yugoslavia	300-(1)	Cámaras, llantas y otros productos de caucho	II	514
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FABRICACIÓN DE PRODUCTOS METÁLICOS, EXCEPTUANDO MAQUINARIA Y EQUIPO DE TRANSPORTE

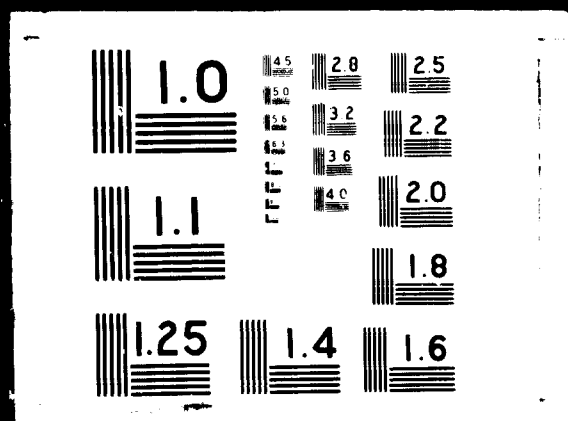
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Yugoslavia	350-(3)	Herramientas manuales agrícolas (productos forjados a mano)	I	300
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Yugoslavia	350-(5)	Fabricación de perfiles laminados de acero, depósitos, grúas industriales, equipo de refrigeración, etc.	I	302
Yugoslavia	350-(6)	Cadenas de acero (y piezas para maquinaria agrícola)	II	712
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India : 370 - (7)

**MAJOR PRODUCTS:** Rubber and P.V.C.-insulated cables and flexibles. Annual capacity output is about 34,000 kilometres of cables on 3-shift operation. The establishment operated only at about 50% of its rated capacity during 1965 with two shifts.

**REPORTING UNIT:** A one-establishment enterprise founded in 1962. The total capital assets is Rs. 24 million (net worth Rs. 11 million) and the number of employees is 341 as of 1965.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. 000)	12,798	10,458
1. Land	453	453
2. Land improvements	-	-
3. Buildings	3,411	3,141
4. Other construction works	-	-
5. Machinery & equipment	8,207	6,295
6. Tools & instruments	-	-
7. Vehicles	109	1
8. Office furniture & fixtures	618	569

**DETAIL OF I.5 (No.)**

- a. Wires department machinery (32)  
 b. Rubber department machinery (17)  
 c. Rubber and plastic extrusion department machinery (9)  
 d. Braiding department machinery (238)  
 e. Maintenance shop equipment (6)  
 f. Ancillary services equipment (8)  
 g. Test department equipment (8)  
 h. High and low voltage equipment (13)  
 i. Spark testers (16)  
 j. Laboratory equipment (50)

Total Bk. value	Avg. Age	Oper. rate	Depr. rate	1965 replace. value
Rs. 8.21 million	From 3 to 7 years	A 20% and B	20%	Rs. 9.07 million

**II. INVENTORIES**

(end of 1965)	Actual	Normal
<b>TOTAL VALUE</b> (Rs. million)	10.29	-14
1. Direct production materials	4.77	-10
2. Other input materials	-	-
3. Work in process	1.31	-33
4. Finished products	4.21	-13

- Normal inventories of finished products 33 % of annual gross production

- Seasonal variations:

No seasonal variations.

Capacity of electr. motors: 1,444 KW

Total load, capacity of trucks: 5 t

Machinery was partly imported.

**EXTERNAL CONDITIONS:**

All external conditions are excellent.

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 341	246	95	-
1. Direct production (all male)	228	85	-
Annual total manhours (000)	(653)	(243)	( )
a) Wires department	31	11	-
b) Rubber department	29	12	-
c) Rubber and plastic extrusion department	33	14	-
d) Braiding department	25	12	-
e) Maintenance shop	35	16	-
f) Ancillary service and test department	34	13	-
g) Laboratory	41	7	-

2. <b>Auxiliary activities</b> (m. 24 f. 4)	18	10	-
Managerial and technical control	18	10	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Other
Engl- ness			
<b>TOTAL</b>	2	6	313
<b>Management</b>	2	4	3
<b>Direct Production</b>	-	-	-
<b>Skilled</b>	-	-	13
<b>Semi-skilled</b>	-	-	-
<b>Unskilled</b>	-	-	17
<b>Auxiliary Activities</b>	-	-	-
<b>Skilled</b>	-	2	4
<b>Semi-skilled</b>	-	-	-
<b>Unskilled</b>	-	-	13

- Average working hours per direct production worker: 2,800 hours.

- Proportion of motors occupied: 97% on both shifts.

- Degree of mechanization and automation is fair in all shops.

- Skilled workers in direct production deal with wire drawing, stranding, paper lapping, cable laying, lead sheathing, armoring, etc.

In auxiliary activities they are stores and purchase assistants, administrative assistants, etc.



IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION (Rs. 000)		9,469		TOTAL VALUE OF CONSUMPTION (Rs. 000)		7,734	
Product	Unit	Quantity Produced	Unit Value (Rs.)		Unit consumed	Unit value (Rs.)	
a) Rubber insulated power cable	Km	3,782	405	1. Energy & water: total			216
b) P.V.C. insulated power cable	Km	6,987	761	- Water	000 Ton	6,300	170
c) Rubber insulated flexible cables	Km	600	435	- Electricity	000 Kwh	1,206	70
d) P.V.C. insulated flexible cables	Km	547	350	- Kerosene Oil	000 l	283	445
e) Scrap of cables etc.	Rs. 000	104	..	- Diesel Oil	"	201	26
f) Revenue from mixing rubber compound and tinning bare copper wire	"	30	..	- P.S.D. Oil	"	13	900
				- Lubricating Oil	"	13	1,670
				2. Direct production materials: total	6,753		
CAPACITY OUTPUT: 100% higher than the actual 1965 output with sufficient demand for products and sufficient supply of raw and intermediates materials, as well as additional 146,000 man-hours on the 3rd shift. The product mix is wholly flexible.				a) Copper rods	ton	175	520
Unit value of product: Market value F.O.B. before sales tax				b) Aluminium rods	"	234	4,417
Unit value of material: Market price o.i.f.				c) Tin ingots	"	2	12,622
Materials (a), (c), (e), (f), (k), (m), and (n) are directly imported; (b), (d), (l) and (o) are partly imported; the others contain a significant amount of imports. Materials (g), (h), (i) and (j) are transported by railroads only; all others by railroad and sea.				d) Galvanised steel wires	"	133	3,030
				e) Rubber smoked sheets	"	92	3,691
				f) Neoprene	"	2	5,787
				g) P.V.C. compound	"	312	7,575
				h) Cotton yarn	"	27	10,561
				i) Calico	000 sq mtrs	122	2,280
				j) Yellow cable cloth	000 mtrs	91	3,455
				k) China clay	ton	62	461
				l) Accelerators	"	2	9,550
				m) Esso butyl rubber	"	9	3,837
				n) Synthetic rubber synoprens	"	5	3,800
				o) Other raw materials: total	Rs. 000	873	526
				9,000 wooden packing cases (Rs. 11 each); 261,000 metal stampings for Rs. 142 per thousand; 1 ton of paper (Rs. 13000) 1/			
				4. Work performed by sub-contractors ( ) =			
				5. Repairs & maintenance (materials) 23			
				6. Material inputs for auxiliary activities 35			
				- Stationery and purchases 4			
				- Administrative expenses 31			
				7. Non-factor service inputs: total 181			
				- Transportation, insurance and storage 158			
				- Other services purchased 23			
VI. VALUE ADDED TOTAL 1965 (Rs. 000) 1,735				SELECTED CONCLUSIONS (in 1965 replacement value)			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools/per employee in direct production on 1st shift: Rs. 39,780			
- Employees in direct production 451				- Value added per employee: Rs. 5,090			
- Other employees 608				- Annual wage per employee in direct production: Rs. 1,442			
2. Other expenditures for employees 20				- Variable input costs/gross production ratio: 84%			
3. Annual depreciation allowance 210				- Gross profit/gross production ratio: 4.4% (at full capacity: 10.3%)			
4. Rental paid (for buildings) 28				- Level of production at break-even point is approximately 73% of the 1965 actual level. 2/			
5. Sales & other indirect taxes (less subsidies) not included in total [ 195 ]							
6. Other gross business income (before income tax) 417							
VII. EXPANSION: HISTORY & PLAN				2. Future Plan			
1. Recent Expansion				a. Investment proposed for the period 1967 to 1970			
From 1963 to 1965				Total value (Rs. million) 14			
a. Total Investment (Rs. 000) 3,883				Of which: - Mach. & equipment 60			
- Land -				- Land improv. & bldg. 40			
- Land improvements -				- Land -			
- Buildings 1,145				- Others -			
- Other construction work -				b. Net increase in no. of employees envisaged for the same period:			
- Machinery & equipment 2,594				- Direct production: 40			
- Tools & instruments }				- Auxiliary: 10			
- Vehicles 3				c. Purposes: Introduction of new products (winding wire, covered copper stripes, nylon aircraft cables), and of new processes (for nylon aircraft cables), as well as balanced expansion of capacity in the same location.			
- Office furniture & fixtures 141							
b. Corresponding increase: From 1963 to 1965							
In no. of employees 279 341							
In annual gross production (Rs. 000) 8,197 9,439							
VIII. SUPPLEMENT				1/ (Continued from V.3.) 2,089 wooden drums for Rs. 70 per thousand; 360,000 ply discs for Rs. 414 per thousand; 2 tons of cardboard for Rs. 2,500 each and 603 rolls of craft brown paper for Rs. 15 each; others: Rs. 66,000.			
2/ The 1964 performance level was quite comparable to the 1965 level. The break-even point was surpassed by the end of 1963.							
Structure of liquid assets and current liabilities (end of 1965; in Re. million)							
- Cash on hand and in bank 0.23				- Accounts payable 3.47			
- Accounts receivable 1.99							
- Loans and advances 0.74							

India : 370 - (8)

IV. ANNUAL PRODUCTION (1965)			
TOTAL VALUE OF PRODUCTION ( 000 Rs. ) 11,148			
Product	Unit	Quantity Produced	Unit* Value (Rs.)
a. Rubber insulated cables	kilometre	9,573	484
b. PVC insulated cables	"	7,721	295
c. Rubber insulated flexibles	"	490	4,000
d. PVC insulated flexibles	"	784	1,160
e. Paper insulated cables	"	888	1,540

\* Size varies within each category. The prices are calculated as weighted averages for each category.

**CAPACITY OUTPUT:** 40 % higher than the 1964 actual production level with additional manhours 50,000 and 20,000 on the first and the second shifts, respectively. The underutilization is largely due to the year-round insufficiency of demand for the products. The product-mix is flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Products (a) to (e) are partly exported.
- Production materials (a) to (e) contain a significant amount of import contents; delivery by sea with freight rates 8 to 9 %. All other materials (including those for packaging) have little import contents; delivered by railroad and road with freight rates 4 to 5 %.

VI. VALUE ADDED		TOTAL 1965 ( 000 Rs. )	4,387
1. Wages & salaries (before income tax)		497	
- Employees in direct production	(..)		
- Other employees	(..)		
2. Other expenditures for employees		847	
3. Annual depreciation allowance		630	
4. Rental paid		17	
5. Sales & other indirect taxes (less subsidies)(not included in total)		[189]	
6. Other gross business income (before income tax)		2,396	

VII. EXPANSION: HISTORY & PLAN			Gross acquisition
1. Recent Expansion			
From 1964 to 1965			
a. Total Investment ( 000 Rs. )	928	% of repair	
- Land	6	-	
- Land improvements	21	5	
- Buildings	152	7	
- Other construction work	-	-	
- Machinery & equipment	616	10	
- Tools & instruments	8	15	
- Vehicles	16	50	
- Office furniture & fixtures	107	7	
c. Corresponding increase:			
In no. of employees (factory alone)	156	263	
In annual gross production ( Rs. million)	3.04	11.15	

### VIII. SUPPLEMENT

Structure of liquid assets and current liabilities  
(end of 1965: Rs million)

Cash on hand and in banks	1.09	Taxes payable	.91
Accounts receivable	2.08	Accounts payable	1.52
Loans and advances	.54	Short-term borrowing; from bank	.36

1. One half of the 1965 wages and salaries regarded as variable cost.

2. In 1964 when the enterprise embarked on commercial production, the annual output was about 7,500 km. In 1965, the annual output already reached a level of 17,500 km (90 % of the 1965 level).

V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF CONSUMPTION ( 000 Rs. ) 6,761			
1. Energy & water: total 221			
		Quantity consumed	Unit value (Rs.)
- Electricity	000 kWh	1,110	150
- Petroleum	000 l	11.0	760
- Fuel oil	000 gal.	55.5	830
2. Direct production materials: total 5,265			
a. Aluminium bars	ton	139.0	4,900
b. Electrolyte copper wires & bars	"	297.0	5,130
c. Steel tape	"	1.7	27,500
d. Galvanized steel wires	"	76.0	2,700
e. Rubber smoked sheets	"	125.5	4,200
f. Neoprene	kg	361.0	7.5
g. PVC compound	ton	28.0	6,600
h. Cotton yarn	"	25.0	8,400
i. Oil resisting cloth	000 m	98.1	1,820
j. Hessian cloth	000 m	28.7	700
k. Jute string	ton	.7	2,500
l. Cords	"	1.9	8,500
m. VC cloth	000 m	114.9	2,900
n. Fresh chalk	ton	35.0	272
3. Packaging materials: total 267			
Paper products (Rs. 0.19 each) 185,634; wooden boxes (Rs. 13.20 each) 4,055; plywood flanges (Rs. 0.37 each) 350,942			
4. Work performed by sub-contractors ( ) -			
5. Repairs & maintenance (materials & services purchased) 100			
Maintenance of plant & machinery 6			
Services purchased 102			
6. Material inputs for auxiliary activities 220			
Maintenance of non-productive facilities 28; forwarding freights 178; welfare 4; other administration 10.			
7. Non-factor service inputs: total 680			
Of which transportation, insurance and storage (purchased separately) 67			

SELECTED COEFFICIENTS		(in 1965 replacement value)
- Mach., equip., instruments & tools/per employee in direct production on 1st shift:		Rs. 43,800
- Value added per employee:		Rs. 14,500
- Annual wage per employee		Rs. 1,640
- Variable input costs/gross production ratio:		53.0 % <sup>1/</sup>
- Gross profit/gross production ratio:		21.5 %
- (at full capacity)		28.5 %
- Level of production at break-even point is approximately		53 % of the 1965 actual level.

VII. EXPANSION: HISTORY & PLAN		Gross acquisition
2. Future Plan: (A definite plan is negotiated for with foreign collaborators)		
a. Investment proposed for the period 1966 to 1967		
Total value ( 000 Rs. )		
Of which:		
- Mach. & equipment		
- Land improv. & bldg.		
- Land		
- Others		
b. Net increase in no. of employees envisaged for the same period:		
- Direct production:		
- Auxiliary:		
c. Purposes:		

**MAJOR PRODUCTS:** Rubber- and P.V.C.-insulated cables and flexibles. Annual capacity output is some 27,000 km on two shifts.

**REPORTING UNIT:** A two-establishment enterprise (one is the central office) with total assets of Rs. 13 million (net worth Rs. 8 million) and employees 303 as of 1965. Founded in 1962.

**I. FIXED CAPITAL ASSETS (end of 1965)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE ( 000 Rs. )</b>	<u>6,748</u>	<u>4,778</u>
1. Land	116	116
2. Land improvements	41	38
3. Buildings	1,384	1,186
4. Other construction works	23	15
5. Machinery & equipment	4,903	3,236
6. Tools & instruments	55	38
7. Vehicles	69	25
8. Office furniture & fixtures	157	124

**DETAIL OF 1.5 (No.)**

- a. Wire drawing machines  
b. Annealing plants  
c. Tinning plant  
d. Wire stranding machines  
e. Vertical laying-up machines  
f. Double twist bunching machines  
g. Bale splitting machine  
h. Rubber straining machine  
i. Rubber mixing machines  
j. Vulcanizing plant  
k. Plastic granulator  
l. Plastic extruder  
m. Tape cutting machine  
n. Taping machine  
o. Laboratory equipment  
p. Machines for maintenance and miscellaneous items

Total Bk. value of. deprec.	Avg. Age (Yr.)	Depr. rate (%)	1964 replace value
Rs. 4.9 million	2	12	Rs. 5.7 million

**II. INVENTORIES**

(end of 1965)	Actual	Normal
<b>TOTAL VALUE ( 000 Rs. )</b>	<u>4,421</u>	<u>- 7 %</u>
1. Direct production materials	3,101	- 13
2. Other input materials	309	+ 62
3. Work in process	1,011	- 10
4. Finished products		

- Normal inventories of finished products 8.2 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 1,040 KW

Total load, capacity of trucks: 7 t

- Machines were partly imported. There have been three stages of investment:

- (1) Founding of the establishment with Rs. 5.7 million (1962)
- (2) Additional plant and machinery with Rs. 0.6 million (1963) and
- (3) Partial expansion of the manufacturing shop with Rs. 0.3 million (1964/65).

**GENERAL CONDITIONS:** Long distance transportation and utilities, excellent; local transportation, residential and educational facilities, fair; health and recreational facilities, poor.

**III. LABOUR**

(1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	<u>229</u>	<u>74</u>	<u>-</u>
1. Direct production ( all male )	132	65	-
Annual total manhours (000)	<u>( 330 )</u>	<u>( 162 )</u>	<u>( )</u>
a. Manufacturing shop	105	55	-
b. Machine shop	12	7	-
c. Laboratory	15	3	-
2. Auxiliary activities ( all male )	<u>97</u>	<u>9</u>	<u>-</u>
a. Managerial & supervisory	10	1	-
b. Auxiliary activities	47	8	-
c. Central office	40	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	Other
<b>TOTAL</b>	3	22	192
<b>Management *</b>	3	6	2
<b>Direct Production</b>	-	16	107
<b>Skilled</b>	-	11	27
<b>Semi-skilled</b>	-	-	36
<b>Unskilled</b>	-	-	-
<b>Auxiliary Activities *</b>	16	9	-
<b>Skilled</b>	-	8	6
<b>Semi-skilled</b>	-	-	16
<b>Unskilled</b>	-	-	-

- Actual hours worked per annum per direct production workers: 2,497 hours.

- Proportion of motors occupied:  
95 % on the first shift;  
55 % on the second shift.

- Manufacturing shop is fairly mechanized and automated; machine shop, poor; and laboratory well mechanized and moderately automated.

- Skilled workers in direct production are engaged in: wire drawing, stranding, paper lapping, cable laying, drying & impregnation, lead sheathing armouring, servicing, etc.

\* Not including the employee in the central office.

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**MAJOR PRODUCTS:** Electric lamps (with a glass-producing plant). Annual installed capacity is 13 million lamps on partial three-shift operation (only the glass manufacturing plant is operated with three shifts).

**REPORTING UNIT:** An independent one-establishment enterprise with total assets Rs. 11 million (net worth Rs. 6 million) and employees 1,000 as of 1964. Founded in 1933.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. million)	6.97	4.19
1. Land (total acreage: 9.43)	.58	.58
2. Land improvements	-	-
3. Buildings	1.32	.69
4. Other construction works	.19	.10
5. Machinery & equipment	4.40	2.60
6. Tools & instruments	.06	.03
7. Vehicles	.12	.07
8. Office furniture & fixtures	.30	.12

**DETAIL OF I.5 (No.)**

	Total Bk. value	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Spiralizing machines (26)	4.0	15-20	B	10-15	12.0
b. Hot cut flame machines (3)			C		
c. Stem machines (3)			B		
d. Inserting machines (13)			B		
e. Mounting mills (2)			C		
f. Sealing machines (11)			B		
g. Exhaust machines (9)			C		
h. Base filling machines (3)			B		
i. Capping machines			B		
j. Aging machines (9)			B-C		

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Rs. million) (end of 1964)	2.13	+ 18 %
1. Direct production materials	1.49	+ 30
2. Other input materials		
3. Work in process	.03	- 25
4. Finished products	.61	- 10
- Normal inventories of finished products 6.2% of annual gross production		
- Seasonal variations: None		

Capacity of electr. motors; 445 kW  
 Diesel electric generator for stand by 20 kW  
 Total load, capacity of trucks: 16 t

All of the itemized machines were imported.

**GENERAL CONDITIONS:** Local transport, excellent. Long distance transport, public utilities and educational facilities, fair. Residential, health and recreation facilities, poor.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 1,000	769	126	105
1. Direct production (742)	565	120	100
Annual total manhours (000)	(1,460)	(310)	(260)
a. Glass manufacturing	103	100	100
b. Coil making	23	4	-
c. Lamp manufacturing	358	16	-
d. Automatic lamp manufacturing	50	-	-
e. Testing	8	-	-
f. Maintenance shop	23	-	-
2. Auxiliary activities (all male)	204	6	5
a. Managerial	54	-	-
b. Auxiliary	150	6	5

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other
Engi-neers		
<b>TOTAL</b>	1,000	
<b>Management</b>		
7	7	30
<b>Direct Production</b>		
Skilled 145		
Semi-skilled 563		
Unskilled 77		
<b>Auxiliary Activities</b>		
Skilled 121		
Semi-skilled 20		
Unskilled 20		

- Average working hours per annum per direct production worker: 2,586 hrs.

- Proportion of motore occupied: 85% on the 1st shift and 40% on the 2nd and 3rd shifts.

**Technological features:**

a.) Manufacture of glass shells from silica soda lime by blowing, annealing and cutting.

b.) Manufacture of tungsten coils by winding the material on a mandrel steel wire and then dissolving the steel wire in hydrochloric acid and thereby taking out the tungsten coil.

c.) and d.) Flanging, stem making with electrodes, glass rod and exhaust tube, mounting and chemical treatment of filament, sealing of the mounted stem with glass shell, exhausting and then filling with gas, finishing, capping and aging.

- Mechanization and automation generally poor, except for (d) which is rated as fair.

- Skilled workers in direct production are those engaged in glass manufacturing, coil making, lamp manufacturing testing and maintenance.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION (Rs. million)		9.84		TOTAL VALUE OF CONSUMPTION (Rs. million)		4.40	
Product	Unit	Quantity Produced	Unit Value (Rs.)				
a. General lighting lamps	000 No	9,814	910	1. Energy & water: total			
b. Train lamps	"	533	840	* Water is drawn from the tube-well owned by the factory.			
c. Other lamps	"	589	710	Quantity Unit consumed value (Rs.)			
d. Scraps (broken glass cells, broken brass caps, broken wooden boxes and waste papers)	000 Rs	40	..	- Furnace Oil Ton 1,334 180			
				- Electricity 000 KWH 1,343 100			
				- High speed oil Ton .05 660			
				- Petroleum 000 litres 54.25 810			
				- Coal gas 000 therms 78.86 1,040			
				2. Direct production materials: total			
				a. Glass shells 000 Nos 533.1 240			
				b. Glass tubing rods (lead glass) Ton 110.7 2,250			
				c. Tungsten wire 000 Km 6.0 11,600			
				d. Coiled filament 000 Nos 7,093.9 50			
				e. Molybdenum wire 000 Km 1.0 31,200			
				f. Solder wire Ton 8.4 11,200			
				g. Leading wire 000 pairs 12,964.6 10			
				h. Steel mandrel wire 000 Km .5 6,300			
				i. Brass caps 000 Nos 11,612.9 80			
				j. Capping cement Ton 18.8 1,860			
				k. Mica Ton .3 30,000			
				l. Soda nitrate Ton 12.6 300			
				m. Argon gas 000 cu. m. 2.4 16,600			
				n. Nitrogen gas 000 cu. m. 5.6 7,150			
				o. Glass chemicals Ton 14.3 1,710			
				p. Others Rs. million .16 ..			
				3. Packaging materials: total			
				Paper products Rs. 680,000; glass material Rs. 290,000			
				4. Work performed by sub-contractors ( ) -			
				5. Repairs & maintenance (materials & services purchased) .15			
				6. Material inputs for auxiliary activities .08			
				Administration Rs. 10,000; welfare Rs. 70,000			
				7. Non-factor service inputs: total .40			
				Of which transportation, storage and insurance (purchased separately) Rs. 110,000			
CAPACITY OUTPUT: 20% higher than the 1964 actual production level with additional manhours of 42,000 on the 1st shift, 9,000 on the 2nd shift and 7,000 on the 3rd shift. The underutilization is due to teething troubles to start the new lamp sections (automatic manufacturing). Product mix is flexible.							
Unit value of product: Market value f.o.b. before sales tax							
Unit value of material: Market price c.i.f.							
- Direct production materials (a) to (j), (m) and (n) directly imported; delivery by sea; freight rate 11% of c.i.f. value; these prices are believed to be peculiarly high due to limited import quota. All the rest (including energies) are of domestic origins and delivered by railroad, with freight rate 5%.							
VI. VALUE ADDED		TOTAL 196 (Rs. million)		SELECTED CONVECTANTS (in 1964 replacement value)			
		5.44		- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 23,700			
1. Wages & salaries (before income tax)		1.70		- Value added per employee: Rs. 5,440			
- Employees in direct production		.70		- Annual wage per employee in direct production: Rs. 2,166			
- Other employees		.62		- Variable input costs/gross production ratio: 55.6%			
2. Annual depreciation allowance		.36		- Gross profit/gross production ratio: 20.6%			
3. Annual depreciation allowance		.36		- (at full capacity: 24.6%)			
4. Rental paid (buildings)		.03		- Level of production at break-even point is approximately 54 % of the 1964 actual level.			
5. Sales & other indirect taxes (less subsidies) (not included in total)		[.01]					
6. Other gross business income (before income tax)		2.03					
VII. EXPANSION: HISTORY & PLAN				2. Future Plan			
1. Recent Expansion				a. Investment proposed for the period 1967 to 1969			
From 1961 to 1964				Total value (Rs. million) 12.5			
a. Total Investment (Rs. million)		3.23		Of which: - Mach. & equipment 90 %			
- Land		.04		- Land improv. & bldg. 10			
- Land improvements		.58		- Land -			
- Buildings		.10		- Others -			
- Other construction work		2.38		b. Net increase in no. of employees envisaged for the same period: - Direct production: 100			
- Machinery & equipment		.02		- Auxiliary: 90			
- Tools & instruments		.06		c. Purposes: Introduction of fluorescent lamps and glass tubes; introduction of new processes; and largely balanced expansion of existing capacity in the same location.			
- Vehicles		.05					
- Office furniture & fixtures		.05					
b. Corresponding increase:		From 1961 to 1964					
In no. of employees		800 1,000					
In annual gross production (Rs. million)		8.40 9.84					
VIII. SUPPLEMENT				Structures of liquid assets and short term liabilities (end of 1964: Rs. million)			
Cash on hand and in bank		1.18		Taxes payable		2.27	
Accounts receivable		2.10		Accounts payable		1.86	
Loans and advances		1.92		Short term borrowings from commercial banks		1.20	
Total liquid assets		5.20		Total short term liabilities		5.33	

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**MAJOR PRODUCTS:** Electric motors. Annual capacity output is about 12,000 motors of various types amounting to I£ 2.8 million on one shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets I£ two and a half million and employees 110 as of 1964. Founded in 1940.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( I£ 000 )	460	330
1. Land (5,000 sq.m)	-	(rented)
2. Land improvements	-	(rented)
3. Buildings	-	(rented)
4. Other construction works	-	-
5. Machinery & equipment	340	250
6. Tools & instruments	30	20
7. Vehicles	60	35
8. Office furniture & fixtures	30	25
	<b>Avr. Age (Yr.)</b>	<b>Depr. rate (%)</b>
		<b>1964 replace. value</b>

**DETAIL OF I.5 (No.)**

a. Lathes (5)	2-20	A	10	45
b. Grinding machines (5)	6-12	A	10	40
c. Presses; 8-80 ton (5)	2-20	A	10	..
d. Automatic presses (2)	4	A	10	15
e. Balancing machines (2)	5	A	10	30
f. Shaping machines (2)	4,7	A	10	20
g. Drilling machines; multi-headed (2)	1	A	10	20

**II. INVENTORIES**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> ( I£ 000 )	800	-
1. Direct production materials	400	-
2. Other input materials	-	-
3. Work in process	200	-
4. Finished products	200	-
- Normal inventories of finished products		
7.1 % of annual gross production		
- Seasonal variations:	None	

Capacity of electr. motors: 110 KW  
Capacity of electr. furnaces: 10 KW  
Total load, capacity of trucks: 1 t

All machines itemized were imported:

(b), (e) and part of (d) from Germany;  
part of (d) from U.S.A.; (f) and (g) from Italy.

**ENVIRONMENTAL CONDITIONS:** Transportation, public utilities and community facilities are all excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	110	-	-
1. Direct production (all male)	80	-	-
Annual total manhours (000)	(176)	(-)	(-)
a. Machining	27		
b. Winding	15		
c. Assembly	10		
d. Maintenance	8		
e. Miscellaneous	20		
2. Auxiliary activities (m. f.)	15 15		30

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other
4	26	80
4	2	-
<b>Direct Production</b>		
-	4	-
<b>Semi-skilled</b>		
-	16	-
<b>Unskilled</b>		
-	-	60
<b>Auxiliary Activities</b>		
-	-	-
<b>Semi-skilled</b>		
-	4	-
<b>Unskilled</b>		
-	-	20

Average working hours per annum per direct production worker: 2,200 hours.

Proportion of motors and furnaces occupied: 80% and 50%, respectively, on the 1st shift

Conventional process is employed. Relatively small series production with mostly universal-type equipment. Degree of mechanization is fair in (a); poor in the rest. No automation involved.

- "Skilled operatives" are engaged in winding.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)																																																																				
TOTAL VALUE OF PRODUCTION ( I£ 000 ) 2,800				TOTAL VALUE OF CONSUMPTION ( I£ 000 ) 1,430																																																																				
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Israel : 370 - (2)

**MAJOR PRODUCTS:** Electric bulbs (incandescent, fluorescent and mercury). Capable of producing annually about 3.2 million incandescent bulbs and 0.5 million fluorescent bulbs plus some mercury bulbs, amounting to more than 11.5 million in revenue terms, on one-shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets of 3.5 million and employees 120 as of 1964. Founded in 1955.

I. FIXED CAPITAL ASSETS (end of 1964)		Before deprec.	After deprec.
TOTAL BOOK VALUE (IE 000)		2,182	1,560
1. Land (rented)		-	-
2. Land improvements		1,000	800
3. Buildings		-	-
4. Other construction works		1,112	700
5. Machinery & equipment		-	-
6. Tools & instruments		70	60
7. Vehicles		-	-
8. Office furniture & fixtures		-	-

DETAIL OF I.5 (No.)		Total Bk value bef. depr.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
---------------------	--	---------------------------	----------------	-------------	----------------	--------------------

a. Machinery for incandescent bulb parts	..	1,10	A	10	60
b. Electrode machines (3)	..	3	A	10	40
c. Winding machines (10)	..	3	A	10	30
d. Incandescent lamp assembly equipment (1 steam making machine, 1700 pcs./hr; 1 filament mounting machine; 2 sealing machines; 1 pasting machine; 1 canning machine)	500	1	A	10	500
e. Fluorescent bulbs assembly equipment (1 washing and drying machine, 200 pcs/hr; 1 coating machine; 1 steam making machine, 400 pcs./hr; 2 sealing machines, 100 pcs./hr; 1 summing-out unit, 100 pcs./hr; 1 aging machine)	225	7	A	10	270
f. Mercury bulbs equipment	..	8	A	10	100

II. INVENTORIES (end of 1964)			Actual	Normal
TOTAL VALUE (IE 000)			201	-
1. Direct production materials			370	-
2. Other input materials			-	-
3. Work in process			-	-
4. Finished products			183	-

- Normal inventories of finished products 7.1 % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 23 KW  
Capacity of electr. furnaces: 25 KW  
Total load, capacity of trucks: - t

- All the itemized machines were imported (mainly German makes).

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities, excellent.

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift
TOTAL EMPLOYED		120	-	-
1. Direct production (male 73, fem. 47)		88	-	-
Annual total manhours (000)		(246)	( )	( )
<b>I. Incandescent bulbs</b>				
a. Parts		6		
b. Assembly (No. 1)		10		
	(No. 2)	22		
c. Packing		4		
d. Miscellaneous		3		
<b>II. Fluorescent bulbs</b>				
a. Parts		3		
b. Assembly		12		
c. Packing		3		
d. Miscellaneous		5		
<b>III. Mercury bulbs</b>				
a. Assembly		3		
b. Packing		1		
c. Miscellaneous		4		
2. Auxiliary activities (male 40, fem. 10)		32		

EDUCATIONAL BACKGROUND (No. of employees)			
Engi- neers	Univ. or higher		Sr. High sch. or equiv.
	Other	Other	
TOTAL	1	14	103
<b>Management</b>			
	1	1	1
<b>Direct Production</b>			
		4	
		2	82
<b>Auxiliary Activities</b>			
		1	
		1	
		5	21

- Average working hours per annum per direct production worker: 2,775 hours.

- Proportion of motors and furnaces occupied: 95 % and 80 %, respectively.

- The production line I and II employ conventional processes with mechanization rated at fair to poor: III is operated mostly manually because of the small lots. No automation involved.



IX. ANNUAL PRODUCTION (1964)			
TOTAL VALUE OF PRODUCTION ( I£ 000 ) 2,589			
Product	Unit	Quantity Produced	Unit Value ( I£ )
a. Incandescent bulbs	000 pcs.	3,200	440
b. Fluorescent bulbs	000 pcs.	440	4,400
c. Mercury bulbs	( I£ 000 )	125	..

**CAPACITY OUTPUT:** About the same as the 1964 actual production level with the present level of demand. With sufficient demand as well as sufficient supply of manpower the production could be increased three-fold by operating 2nd and 3rd shifts. Then some 20,000 annual manhours would be required on each additional shift.

**Unit value of product:** Market value f.o.b. before sales tax  
**Unit value of material:** Market price c.i.f.  
 - I.1: (b) is partly exported.  
 - V.2: (a) to (e) are imported.  
 The approximate freight rates per 000 pcs. are: I£ 20, I£ 10, I£ 4, I£ 2 and I£ 20 for (a) to (f), correspondingly.

V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF CONSUMPTION ( I£ 000 ) 1,620			
1. Energy & water: total	I£		
	Unit	Quantity consumed	Unit value ( I£ )
- Electricity	000 kWh	400	40
<b>2. Direct production materials: total</b>	<b>1,100</b>		
a. Bulbs	000 pcs.	3,800	..
b. Glass pipes	000 pcs.	500	250
b'. Glass pipes	ton	60	1,000
c. Brass caps	000 pcs.	4,100	..
d. Aluminum caps	000 pcs.	404	..
e. Filaments	000 pcs.	3,800	..
f. Fluorescent powder	ton	22	15,000
g. Argon	cubic m.	1,200	..
h. Welding gas	ton	1.3	600
i. Others (including 1.1 million pcs. electrodes, packaging materials, etc.)	( I£ 000 )	384	..
<b>3. Indirect materials: total (included in 2. i.)</b>	<b>..</b>		
<b>4. Work performed by sub-contractors ( )</b>	<b>..</b>		
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>	<b>10</b>		
<b>6. Material inputs for auxiliary activities</b>	<b>5</b>		
<b>7. Non-factor service inputs: total</b>	<b>100</b>		
Of which transportation, insurance and storage purchased separately 10			

VI. VALUE ADDED		TOTAL 1964 ( I£ 000 )	951
1. Wages & salaries (before income tax)			
- Employees in direct production	366		
- Other employees	160		
2. Other expenditures for employees	12		
3. Annual depreciation allowance			
4. Rental paid	53		
5. Sales & other indirect taxes (less subsidies)	-		
6. Other gross business income (before income tax)	150		

**SELECTED COEFFICIENTS**  
 - Mach., equip., instruments & tools per employee in direct production on 1st shift: I£ 11,050  
 - Value added per employee: I£ 7,200  
 - Annual wage per employee in direct production: I£ 4,100  
 - Variable input costs/gross production ratio: 0.71  
 - Gross profit/gross production ratio: 0.86  
 - Level of production at break-even point is approximately 03% of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN			
1. Recent Expansion		Gross acquisition	Scrapped or sold
From 1960 to 1964			
a. Total investment ( I£ 000 )	600	-	-
- Land	-	-	-
- Land improvements	-	-	-
- Buildings	-	-	-
- Other construction work	-	-	-
- Machinery & equipment	400	-	-
- Tools & instruments	-	-	-
- Vehicles	100	-	-
- Office furniture & fixtures	-	-	-
b. Corresponding increase:	From 1960 to 1964	1960	1964
In no. of employees	..	..	..
In annual gross production ( I£ million)	1.8	2.0	..

**2. Future Plan:** None  
 a. Investment proposed for the period 1965 to 1969  
 Total value ( ) \$  
 Of which: - Mach. & equipment \$  
 - Land improv. & bldg.  
 - Land  
 - Others  
 b. Net increase in no. of employees envisaged for the same period:  
 - Direct production:  
 - Auxiliary:  
 c. Purpose:

**VIII. SUPPLEMENT**

Israel : 370 - (3)

**MAJOR PRODUCTS:** Electric bulbs (incandescent and fluorescent; ordinary, high wattage, miniature and decoration lamps). Annual capacity output is over 3 million incandescent lamps and some 550,000 fluorescent lamps on one shift.

**EMPLOYING UNIT:** A new one-establishment enterprise. The enterprise just started its commercial production in 1964.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (IE 000)	2,293	2,115
1. Land	200	200
2. Land improvements	-	-
3. Buildings	500	480
4. Other construction works	-	-
5. Machinery & equipment	1,556	1,402
6. Tools & instruments	9	8
7. Vehicles	16	13
8. Office furniture & fixtures	12	12

Total Br. value	Avg. Age	Depr. rate	196 replace. value
IE 000.	(Yr.)	(%)	(\$)

**DETAIL OF I.5 (No.)****I Ordinary lamps unit ("Luxram Electric": 1500 bulbs/hr).**

Flare machine, 3 heads, 3/4 HP (\$7,100); steam making, 30 heads, 3/4 HP (\$22,000); peeling and exhausting, 20 and 30 heads, 1 HP (\$22,000); capping, 60 heads, 1/2 HP (\$31,000); control, 60 heads, 1 HP (\$5,000); cap filling, 1/2 HP (\$300); cutting, 1/3 HP (\$230).

**II High wattage lamps unit (250 bulbs/hr).**

Inserting, 4 heads, 1/3 HP (\$2,000); flare machine, 3 heads, 1/2HP (\$1,200); steam making, 12 heads, 1 HP (\$7,000); sealing, 6 heads, 1/3 and 1/2 HP (\$11,000); exhausting, 24 heads, 1/2 HP (\$11,200); capping, 5 heads, (\$1,200).

**III Miniature lamps unit (1,500 bulbs/hr).**

Bead mounting, 16 heads, 1/4 HP (\$18,000); sealing and exhausting, 18 heads and 36 heads, 1/3 and 1/2 HP (\$31,000); capping, 48 heads, 1/2 HP (\$14,000); cap filling, 12 heads, 1/2 HP (\$5,000).

**IV Decoration lamps unit (500-600 bulbs/hr).**

steam making, 15 heads, 1/2 HP (\$8,500); sealing, 9 heads, 1 HP (\$6,000); exhausting, 24 heads (\$11,200); capping, 40 heads, 1/2 HP (\$2,000).

**II. INVENTORY**

	Actual	Normal
<b>TOTAL VALUE</b> (IE 000)	506	+14

1. Direct production materials	350	+10
2. Other input materials	-	-
3. Work in process	20	-
4. Finished products	236	-20

- Normal inventories of finished products 11.7 % of annual gross production

- Seasonal variations: Seasonal high and low of item(1); +10% of the normal level in December and -10% in August. For finished products, +20% in September and -30% in December.

Capacity of electr. motors: .. KW

Total load, capacity of trucks: 3.5 t

The machines all imported (II and IV from Germany and I and III from U.K.); bought second-hand (II 5 years old, I and III 8 years old and IV 14 years old); all excellent operating conditions; annual depreciation rate is 15%.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities are excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> (m. 28)	130	-	-
1. Direct production (f. 90)	115	-	-
Annual total manhours (000)	(203)	( )	( )

- Unavailable -

2. Auxiliary activities (m. 10 f. 2) 12

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or other	Other	
		Unskilled	Skilled
1	2	-	-
-	4	6	-
-	-	-	-
-	-	-	108
-	-	-	-
-	-	-	-
-	-	4	5

- Average working hours per annum per direct production worker: 1,718 hours.

- Proportion of motors occupied: 90% on the 1st shift.

- Conventional process is employed. Degree of mechanization is high; Degree of automation is fair.

The equipment is capable of manufacturing bulbs of different wattages on the same line. It is designed

to make the small lot production profitable. However, with larger lots, the whole line would be more highly automated resulting in higher profit.

IV. ANNUAL PRODUCTION (1964)			
TOTAL VALUE OF PRODUCTION ( IE 000 )			2,021
Product	Unit	Quantity Produced	Unit Value ( IE )
<b>I. Incandescent bulbs:</b>			
a. 40 watt	000 pcs	605.9	340
b. 60 watt	000 pcs	723.6	380
c. 75 watt	000 pcs	519.6	470
d. 100 watt	000 pcs	552.8	550
<b>II Fluorescent bulbs</b>			
40-20 watt	000 pcs	425.7	2,330

\* After-tax prices are: a) IE 370, b) 460, c) 570, d) 670, e) 4,380 per thousand.

**CAPACITY OUTPUT:** Some 30% higher than the actual 1964 production level. The underutilization is due to the insufficient demand for the products. With sufficient demand all three shifts may be operated with annual manhours of 200,000 each on 2nd and 3rd shifts, increasing the output fourfold. Product-mix not profitably changed.

Unit value of product: Mark & price f.o.b. before sales tax  
 Unit value of material: Mark & price c.i.f.  
 - Fluorescent lamps are partly exported.  
 - Direct production materials (a) to (f) are imported; freight rates for (a) and (f) 40% and for (b) 10% of the c.i.f. values.

V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF CONSUMPTION ( IE 000 )			1,097
<b>1. Energy &amp; water: total</b> 49			
		Quantity consumed	Unit value ( IE )
- Electricity	000 Kwh	125	40
- Gas	ton	63	690
<b>2. Direct production materials: total</b> 929			
a. Bulbs	000 pc.	3,434	40-100
b. Caps	000 pc.	3,065	26.0
c. Filaments	000 pc.	4,427	10-20
d. Electrodes	000 pc.	9,282	3-4
e. Molybdenum	000 pc.	386	15-20
f. Tubes	000 pc.	478	120.0
g. Others (including those used for auxiliary activities)	( IE 000 )	304	..
<b>3. Packaging materials: total</b> 52			
- Paper Products	000 pcs	4,224	12
<b>4. Work performed by sub-contractors ( )</b> -			
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> 52			
<b>6. Material inputs for auxiliary activities: included in (2g)</b>			
<b>7. Non-factor service inputs: total</b> 15			
(For transportation, insurance and storage services purchased)			

VI. VALUE ADDED		TOTAL 1964 ( IE 000 )	924
1. Wages & salaries (before income tax)			
- Employees in direct production		476	
- Other employees		95	
2. Other expenditures for employees		159	
3. Annual depreciation allowance		194	
4. Rental paid		-	
5. Sales & other indirect taxes (less subsidies) (not included in total)		[ 1,132 ]	
6. Other gross business income (before income tax)		-	

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: IE 13,220
- Value added per employee: IE 7,100
- Annual wage per employee in direct production: IE 4,030
- Variable input costs/gross production ratio: 74.5%
- Gross profit/gross production ratio: - (at full capacity: 5.9%)
- Level of production at break-even point is approximately 100 % of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN			Gross acqui- sition	Scrapped or sold
1. <b>Recent Expansion:</b> Not applicable From 19 to 19				
a. Total Investment ( )				
- Land				
- Land improvements				
- Buildings				
- Other construction work				
- Machinery & equipment				
- Tools & instruments				
- Vehicles				
- Office furniture & fixtures				
b. Corresponding increase:				
In no. of employees		From 19	to 19	
In annual gross production				

2. <b>Future Plan</b>	
a. Investment proposed for the period 1967	
Total value	IE 700,000
Of which:	
- Mach. & equipment	100 \$
- Land improv. & bldg.	-
- Land	-
- Others	-
b. Net increase in no. of employees envisaged for the same period:	
- Direct production:	..
- Auxiliary:	..
c. Purpose:	Introduction of new products; new processes (conveyors and electrical controllers).

VIII. SUPPLEMENT

(Empty space for supplementary information)

**MAJOR PRODUCTS:** Insulated electrical wires and cables: Annual capacity output is in the vicinity of 2,000 tons (one-shift operation).

**REPORTING UNIT:** An independent one-establishment enterprise with total assets of ¥ 1,500 million and employees 320 as of 1964; founded in 1939.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( ¥ million )	486.6	343.2
1. Land (13,000 m <sup>2</sup> )	7.2	7.2
2. Land improvements	9.0	6.0
3. Buildings	60.0	43.0
4. Other construction works	165.0	165.0
5. Machinery & equipment	217.0	104.0
6. Tools & instruments	8.4	3.4
7. Vehicles	10.0	4.6
8. Office furniture & fixtures	10.0	10.0

**DETAIL OF I.5 (No.)**

	Total Bk. value bef. deprec.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)
a. Wire drawing machines (12)	6.00	14	B	16.2
b. Annealing furnaces (2)	.46	15	B	"
c. Tin coating baths (5)	1.50	20	B	"
d. Stranding machines (14)	21.00	2-17	B	"
e. Cabling machines (6)	7.80	1-2	B	"
f. Twisting & related machines (12)	24.00	2-15	B	"
g. Covering machines (3)	2.40	3-12	B	"
h. Copper taping machine (1)	2.00	6	B	"
i. Other taping machines (3)	2.60	10-12	B	"
j. Braiding machines (90)	4.50	15	B	"
k. Armouring machines (7)	3.50	13	B	"
l. Iron rope seals armouring machine (1)	2.20	5	B	"
m. Rubber rollers (8)	16.00	5	B	"
n. Rubber cutters (2)	.80	8-16	B	"
o. Rubber extruders (6)	12.00	12	B	"
p. Boiler (1)	1.00	10	B	"
q. Vulcanising vessels (3)	2.40	8-20	B	"
r. Lead coating machines (3)	30.00	8-20	B	"
s. Lead coating & stripping machines (2)	1.00	8-20	B	"
t. Lead melting furnaces (2)	1.00	10	B	"
u. Painting machines (3)	.60	3	B	"
v. Plastic extruders (16)	48.00	4-5	A	20.6
w. Cutters (3)	1.20	8	A	"
x. Plasticating machine (1)	10.00	4	A	"
y. Blender (1)	1.50	4	A	"

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> ( ¥ million )	289	+23 %
1. Direct production materials	84	+12
2. Other input materials	10	+12
3. Work in process	76	+27
4. Finished products	119	+12
- Normal inventories of finished products 8.9% of annual gross production		
- Seasonal variations: Insignificant.		

Capacity of electr. motors: 802 KW

Total load, capacity of trucks: 13 t

All machines except (x), which was imported, were domestically made.

Average age of machinery is about 7 years.

**ENVIRONMENTAL CONDITIONS:** Transportation, public utilities and educational facilities, excellent; health and recreational facilities, fair; residential facilities, poor.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	320	—	—
1. Direct production ( all male )	220	—	—
Annual total manhours (000)	( 574 )	( )	( )
a. Stranded wire	15		
b. Insulation	5		
c. Braiding	6		
d. Coating materials	5		
e. Rubber rolling, extending and covering	15		
f. Compounding	5		
g. Vulcanisation	5		
h. Lead sheathing	15		
i. Extension	15		
j. Cabling (communication cable)	7		
k. PVC extrusion	30		
l. Armouring	10		
m. Inspection	19		
n. Machinery	6		
o. Repairs	5		
p. Warehouse	13		
q. Measuring, packing and other general work	19		
r. Engineering control	25		
2. Auxiliary activities ( m. 50 / f. 50 )	100		
a. Management	90		
b. Miscellaneous	10		

**EDUCATIONAL BACKGROUND** (No. of employees)

Engl- RSSES	Univ. or higher		Sr. High sch. or equiv.		Others
	Other	Other	Other	Other	
<b>TOTAL</b>	27	38	65	170	
<b>Management</b>	2	8	-	-	
<b>Direct Production</b>					
Skilled	25	-	30	150	
Semi-skilled	-	-	-	-	
Unskilled	-	-	-	-	
<b>Auxiliary Activities</b>					
Skilled	-	30	50	-	
Semi-skilled	-	-	-	-	
Unskilled	-	-	5	-	
	-	-	-	5	

- Annual working hours per direct production worker: 2,600 hours.

- Motors and furnaces are 85% occupied.

- **Technological features:**  
g) Vulcanisation on continuous process.

h) Lead stripping capacity: 20,000 m/day

k) PVC extrusion capacity: 115 m/minute or 120 kg/hour

j) Maximum cabling capacity: General cable 80 m/minute basket type 150 m/hour; communication cable (RDW 0.65 x 16 P) 4,000 m/7 hours

- Mechanisation and automation: Considerably high standard, but inferior to today's most advanced level.

- Skilled workers are required for all shops.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)				
TOTAL VALUE OF PRODUCTION ( ¥ million ) <u>1,500</u>				TOTAL VALUE OF CONSUMPTION ( ¥ million ) <u>1,218</u>				
Product	Unit	Quantity Produced	Unit Value ( ¥ 000 )	1. Energy & water: total		Quantity consumed	Unit value ( ¥ 000 )	
a. Rubber and synthetic rubber insulated wire	ton	374	945.1	- Electricity	000 KWH	1,547	5	
b. Plastic insulated wire	ton	1,098	594.2	- Heavy oil	kl	420	6	
c. Power cable	ton	80	1,260.0	- Gas	000 m <sup>3</sup>	108	17	
d. Communication cable	ton	194	1,276.3	- Water	000 m <sup>3</sup>	9.6	5	
e. Other electric wire & cable	ton	17	7,944.6	2. Direct production materials: total			<u>1,071.6</u>	
f. Scrap	ton	1	70.0	a. Copper wire	ton	1,800	320	
<b>CAPACITY OUTPUT:</b>				b. Lead	"	1,400	110	
About ¥ 1,630 million or + 15% in value terms.				c. Crude rubber	"		198	
Capacity output achievable without any additional man-hours.				d. Neoprene	"	200	350	
The product - mix of capacity output is flexible to a considerable extent.				e. Butyl rubber	"		240	
Unit value of product: Market price f.o.b. before sales tax				f. PVC resins	"	380	100	
Unit value of material: Market price c.i.f.				g. PVC compounds	"	330	300	
- Products (a) to (d) are partly directly exported.				h. Polythylene	"	50	250	
- All production materials have a significant amount of import contents, and delivered by road with freight rate approximately 10% of c.i.f. value.				1. Others	¥ mil.	139.5	..	
				3. Packaging materials: total			<u>7.0</u>	
				50 tons of paper materials and 500 tons of wooden materials				
				4. Work performed by sub-contractors ( See VIII )			<u>54.0</u>	
				5. Repairs & maintenance (materials & services purchased)			<u>12.0</u>	
				6. Material inputs for auxiliary activities			<u>32.0</u>	
				For transport 15.0. For welfare 5.0. For administration 12.0.				
				7. Non-factor service inputs: total			<u>28.0</u>	
				- Transport, insurance, storage (not incl. in c.i.f. values) 1.0				
				- Communication, advertising and other business services purchased 27.0				
<b>VI. VALUE ADDED TOTAL 1966 ( ¥ million ) <u>282</u></b>				<b>SELECTED COEFFICIENTS</b>				
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 1,023,000				
- Employees in direct production				125	- Value added per employee: ¥ 882,000			
- Other employees				29	- Annual wage per employee in direct production: ¥ 568,000			
2. Other expenditures for employees				28	- Variable input costs/gross production ratio: 76.0% <sup>1/</sup>			
3. Annual depreciation allowance				29	- Gross profit/gross production ratio: 4.1%			
4. Rental paid (on buildings)				2	- (at full capacity : 6.0%)			
5. Indirect taxes (less subsidies)				7	- Level of production at break-even point is approximately 83 % of the 1964 actual level.			
6. Other gross business income (before income tax)				62				
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>								
1. Recent Expansion: See Future Plan.				2. Future Plan: (including the part already executed)				
From 19 to 19				a. Investment proposed for the period 1962 to 1966				
a. Total Investment ( )				Total value <u>¥ 380 million</u>				
- Land				Of which: - Mach. & equipment 28%				
- Land improvements				- Land improv. & bldg. 53				
- Buildings				- Land 12				
- Other construction work				- Others (removal expenses, etc.) 7				
- Machinery & equipment				b. Net increase in no. of employees envisaged for the same period:				
- Tools & instruments				- Direct production: -				
- Vehicles				- Auxiliary: -				
- Office furniture & fixtures				c. Purposes: Balanced expansion in a new locality.				
c. Corresponding increase: From 19 to 19								
In no. of employees								
In annual gross production ( )								
<b>VIII. SUPPLEMENT</b>				Contract work done by others: A subcontractor (with 100 employees) processed 500 tons of copper wire receiving a total fee of ¥ 36 million (which accounted for more than half of this subcontractor's annual total proceeds); another (with 130 employees) processed 140 kg. of canvas tape and received a fee of ¥ 8.4 million on a medium-term contract. There were other subcontract works amounting to ¥ 9.6 million.				
				1/ Excluding wages and salaries.				

YUGOSLAVIA : 370 - ( 1 )

An enterprise, founded in 1923, producing electric motors. Annual capacity output is some 250,000 units of varying sizes or 320,000 KW in total. About 15% of products are exported, while 20% of materials, such as isolation materials, brushes, bearings, tool steel, special copper, dynamo metal sheets, are imported. Located in large industrial centre; good communication lines.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
				1954	1955-56	1958-60	1961-63		
TOTAL (Drs. million)		3,240	3,657	-	190	690	1,691		
Buildings & land improvements		813	1,057						
Machinery & equipment		2,182	2,300	21	80	134	396		
Other capital assets		245	-						
				Calculated average age of fixed assets: 503 years					
				Electric motors: Total installed capacity: 1,546 KW					
				Of which actually operated in 1963: 1st shift 80 %; 2nd shift 54 %; 3rd shift 14.2 %					
<u>Major machinery crucial for determining the overall production capacity:</u>				<u>Technological features:</u> In addition to three factories engaging in the chain production of electric motors of various sizes, there is a factory specialized in the production of special tools, castings of non-ferrous materials, profiles of dynamo metal sheets (tin), etc. Mechanization is close to the European average. Only 10% of the total material inputs is supplied through contract work.					
- Motors: Semi-automatic equipment of latest model and of medium size (2 shifts).									
- Rotating electric motors: Universal and semi-automatic machines (2 shifts).									
About 80% of the machinery and equipment was imported.									
II. LABOUR (1963)		TOTAL no. of employees: 1,256			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Law	Others	Total
1. Factory workers:									
Total	834 persons	708	124	2	26	9	1	4	40
	(1,488 thous. manhrs.)	(1,265)	(216)	(7)	7	12	-	2	21
- Micro-motors production		110	-	-	59	35	-	23	117
- Small-size motors production		114	-	-	Primary school				1,078
- Large & medium size motors production		223	43	-	TOTAL actual consumption 1963				1,933
- Metal working factory		178	69	-	1. Energy inputs: total				31
- Maintenance & other ancillary		83	12	2	- Electricity				1,837 MWH
2. Non-factory workers:		422 persons			- Brown coal				359 t
	(731 thous. manhours)				- Liquid fuel				427 t
					- Coke				32 t
					2. Major production materials: total				1,600
					- Copper products				156 t
					- Aluminum products				69 t
					- Grey pig iron castings				888 t
					- Steel profiles				353 t
					- Metal sheets (heavy & medium)				79 t
					- Metal sheets (thin & fine)				37 t
					- Dynamo tin				1,940 t
					- Seamless pipes				4 t
					- Coated dynamo wire				186 t
					- Non-ferrous castings				90 t
					3. Repairs & maintenance: total				70
					4. Other material & non-factor service inputs				232
III. ANNUAL PRODUCTION & CAPACITY		Quantity		Value (Drs. Million)	V. VALUE ADDED (1963) (Drs. Million)				
TOTAL actual revenue output 1963				3,514*	TOTAL (except turnover tax)				1,548
- Asynchronous tri-phase machines		281pos/34,908KW		966	- Wages of factory workers				430
- Other motors over 70 KW		64 " / 7,984 "		385	- Salaries of non-factory workers				253
- Asynchronous tri-phase with sliding ring		641 " / 27,377 "		385	- Depreciation				218
- Similar machines for smaller capacity		11,013 " / 91,639 "		1,189	- Interests paid				258
- Asynchronous mono-phase short-circuit		3,504 " / 1,639 "		97	- Other accumulation (Turnover tax)				389
- Asynchronous tri-phase short-circuit		9,656 " / 6,278 "		261					33
- Collector machines		94 " / 45 "		10					
- Micro-motors		138,893 " / 7,260 "		320					
- Equipment for rotation motors over 70KW.		16 t		14					
- Equipment for rotation machines of 1.6 - 70 KW		32 t		54					
- Other machines up to 1.5 KW		33 t / 9,180KW		333					
* Includes turnover tax on sold products									
<u>Capacity output:</u>									
- Micro-motors		200,000 pos.		Overall rate of utilization is 56%.					
- Small motors		40,000 "							
- Medium size motors		4,000 "							
- Large motors		1,600 "							
- Other electric equipment		1,500 "							
Underutilization is due to stagnating demand in consequence of the country's investment restriction policies. Also, with renovation - expansion programme currently under way, debugging of the engineering processes is not quite completed. About 750 workers are required on 1st shift for full capacity operation.									
VI. SUPPLEMENT		Future plans:		SELECTED COEFFICIENTS					
A new mechanization programme is currently under way, which involves the introduction of new assembly lines and is expected to increase the production capacity by about 300%. Product assortment will remain unchanged in order to attain greater series of production.				- Mach. & equip. per factory worker on 1st shift: Drs. 3,250,000					
				- Value added per employee: Drs. 1,230,000					
				- Annual wage per factory worker: Drs. 517,000					
				- Variable input cost/gross production ratio: 59 %					
				- Gross accumulation/gross production ratio: 18.6 % (at full capacity: 28.2 %)					
				- Level of production at break-even point: 54 % of the 1963 actual level.					
* Of which Drs. 1.1 million retained by the enterprise									
* Gross accumulation includes "interests paid".									

A large enterprise, founded in 1946, producing electric motors, generators, transformers, switchboards and furnaces. Annual capacity output is altogether about 25,000 t of these products of which motors total to some 270,000 KW. About one-third of production is exported, while 30% of input materials, such as steel sections, dynamo and coated wires, electric-resistant wires, tin, coatings, etc, are imported. Good communication lines by rail and road; located in the vicinity of a sea harbour and near the main co-operating partners.

I. FIXED CAPITAL (end of 1965)	Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)				
			1953-54	1955-57	1958-60	1961-63	
TOTAL (Drs. million)	14,027	18,570	Gross expenditures	918	154	2,752	5,290
Buildings & land improvements	5,421	7,826	Retirements	358	696	1,658	4,329
Machinery & equipment	8,507	10,616	Calculated average age of fixed assets: 6.9 years				
Other capital assets	99	128	<b>Electric motors:</b>				
<b>Major machinery crucial for determining the overall production capacity:</b>			Total installed capacity: 11,539 KW				
- Large rotating machines & large transformers: Universal machines & machine tools for production by pieces (2 shifts)			Of which actually operated in 1965:				
- Small & medium motors: Semi-automatic lines for casting, forging, assembly & coating (2 shifts).			1st shift 100 %; 2nd shift 10 %; 3rd shift 0.8 %				
- Small transformers: Universal & semi-automatic machines for production of sheets, cores & coils (2 shifts).			<b>Technological features:</b> Large product-mix, considered as suitable in view of both technological and sales efficiency. 15-20% of material inputs are supplied through contract work. Mechanisation and automation are rated at 90% & 80%, respectively. In certain departments the small-serial production is employed, but generally piece-by-piece production.				
- Switching plants: Universal & semi-automatic machines for processing sheets and insulating materials.							
2% of machinery and equipment was imported.							

II. LABOUR (1965)	TOTAL no. of employees: 7,411		
	1st shift	2nd shift	3rd shift
1. Factory workers:			
Total	3,821 persons	624	51
(7,171 thous. manhrs.)	(5,919)	(1,156)	(96)
- Small electric motors	305	69	7
- Medium size electric motors	270	93	9
- Generators	353	105	10
- Transformers	439	128	7
- Thermo-electric apparatus	367	117	8
- Other shops	1,412	112	10
2. Non-factory workers:	3,610 persons		
(7,695 thous. manhours)			

Educational background of workers:	Total			
	Tech. Hgh. Sch.	Univ. or higher	Low	Others
Univ. or higher	295	101	33	24
Tech. Higher sch.	40	23	5	11
Secondary sch.	511	159	-	1,085
Primary school	-	-	-	5,144

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. million)
TOTAL actual revenue output 1965		23,092*
- Castings of aluminum and other nonferrous metals & alloys 1/	2,524 t	(299)
- Synchronous generators (over 70 KW)	249 pos / 164,051 KW	4,924
- Asynchronous 3-phase machines (large)	26 " / 618 "	17
- Asynchronous 3-phase machines (medium and small)	16,731 " / 92,033 "	750
- Collector machines (mostly large)	78 " / 11,433 "	200
- Power transformers (over 2,500 KVA)	63 " / 603,838 "	1,675
- Power transformers (under 2,500 KVA)	2,998 " / 519,127 "	2,797
- Other transformers	30 " / 84,509 "	285
- High tension switches (over 1 KW)	617 t / 7,000 pps	1,628
- Low voltage switches	335 t / 75,113 "	1,174
- Switchboards and other switching apparatus		
- Industrial electric furnaces	223 t / 4,134 KW	902
- Measuring transformers	229 t / 288 pos	410
- Other thermo-electric apparatus	745 t / 658,589 KW	849
- Other electrical machines and accessories	1,943 t	2,315
- Assembly and services	1,235 h	2,731

1/ Internal use, not included in total.

\* Includes turnover tax on sold products.

Capacity output:	Quantity	Value (Drs. million)	Overall rate of utilization is 68%.
- Large rotating machines	2,646 t		
- Medium rotating machines	3,862 t		
- Small rotating machines	7,492 t		
- Transformers	7,523 t		
- Thermo-electrical apparatus	1,650 t		
- Others	Drs. 4,349 mil.		

4,090 workers would be required on 1st. shift for full capacity operation.

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. million)
TOTAL actual consumption 1965		14,062
1. Energy inputs: total		667
- Electricity	12,071 KWH	251
- Coke	235 t	3
- Brown coal	2,578 t	13
- Lignite	893 t	6
- Liquid fuel (39 masout)	3,057 t	132
2. Major production materials: total		12,201
- Grey pig iron castings	1,114 t	369
- Non-ferrous metal castings	125 t	385
- Copper products	549 t	605
- Aluminum products	344 t	177
- Pickled sheet	2,514 t	327
- Thick and medium plates	3,102 t	310
- Thin and fine sheet	410 t	49
- Transformer & dynamo sheet	4,840 t	1,068
- Welded tubes	130 t	55
- Steel sections	705 t	155
- Dynamo, coated & electric resistant wires	396 t	603
- Tin & other non-ferrous metals	..	1,608
- Other iron & steel products	..	2,780
- Coatings & insulating materials	280 t	176
- Special instruments and devices	..	1,490
- Other various materials	..	2,045
3. Repairs & maintenance: total		616
4. Other material & non-factor service inputs		558

V. VALUE ADDED (1965)	(Drs. million)
TOTAL (except turnover tax)	8,847
- Wages of factory workers	2,483
- Salaries of non-factory workers	2,438
- Depreciation	615
- Interests paid	1,790
- Other accumulation (Turnover tax)	1,521 (183)

VI. SUPPLEMENT Underutilization is 70% due to deficiencies in raw material supply, the rest to the imbalance between the different production capacities.

Future plans: a) Introduction of new products; transformers and generators of larger capacity; electrical equipment for mining, electric traction & switches of 380 KV.

b) Introduction of assembly lines for the production of small machines and group-production assembly methods for medium machines.

## SELECTED COEFFICIENTS

- Mach. & equip. per factory worker on 1st shift:	Drs: 3,370,000
- Value added per employee:	Drs. 1,190,000
- Annual wage per factory worker:	Drs. 548,000
- Variable input cost/gross production ratio:	67 %
- Gross accumulation/gross production ratio:	14.5 %
(at full capacity):	20.3 %
- Level of production at break-even point:	56 % of the 1965 actual level.

1/ 1,000 Drs. 112 retained by the enterprise for its own use.

2/ 1,000 Drs. 112 included interest paid.

An enterprise, founded in 1952, producing electric bulbs, small batteries and motors. Annual capacity output is about Drs. 8,200 million worth of products (of which light bulbs and tubes about 28,000,000 pcs. or Drs. 5,400 million) on 3-shift operation. 6% of products are exported, but 65% of input materials, like glass bulbs, sockets, spirals, electrodes, apron, coil filaments, MO wire, WO wire, etc., are imported. Location is good with respect to communication lines.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)		1,532	1,650	65	191	85	71			
Buildings & land improvements		480	624							
Machinery & equipment		1,050	1,026	33	87	87	17			
Other capital assets		2	-							
<b>Major machinery crucial for determining the overall production capacity:</b>				Calculated average age of fixed assets: <u>6.5</u> years						
- Light bulbs: Automatic machines of medium capacity (2 shifts).				<b>Electric motors:</b>						
- Mercury and similar bulbs: Semi-automatic machines for assembly of small capacity (2 shifts).				Total installed capacity: <u>63</u> KW						
- Fluorescent tubes: Semi-automatic machines of medium capacity (2 shifts).				Of which actually operated in 1963:						
34% of machinery and equipment were imported.				1st shift <u>100</u> %; 2nd shift <u>76</u> %; 3rd shift <u>2.5</u> %						
<b>Technological features:</b> The degree of mechanization and automation is rated at 65% and 50% respectively. Product-mix is relatively large, involving the production of batteries and electric motors. There seems to be room for improvement in the alignment of machine capacity for different processes, which accounts for a 2-3% reduction in capacity utilization.										
II. LABOUR (1963)		TOTAL no. of employees: 1,734			Educational background of workers:					
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Law	Others	Total	
1. Factory workers:					Univ. or higher	22	20	3	33	78
Total 1,374 persons		807	504	63	Tech. Higher sch.	-	4	-	-	4
(2,789 thous. manhrs.)		(1,635)	(1,020)	(132)	Secondary sch.	46	41	-	88	175
					Primary school	-	-	-	1,577	1,577
- Fluorescent shops including starters and high current mercury bulbs production.		117	99	3	IV. INTERMEDIATE INPUTS					
- Batteries production		118	109	6	Quantity		Value (Drs. Million)			
- Electric bulbs		101	55	14	TOTAL actual consumption 1963					
- Spiralization, standardization		50	125	30	2,560					
- Special section		78	52	10	1. Energy inputs: total					
- Other shops, service shops		243	64	-	- Electricity					
2. Non-factory workers:		360	persons	-	3,427 Mwh					
(847 thous. manhours)					- Brown coal					
					800 t					
					- Liquid fuel					
					54 t					
III. ANNUAL PRODUCTION & CAPACITY		Quantity		Value (Drs. Million)	2. Major production materials: total					
TOTAL actual revenue output 1963		4,803 *			- Glass tubes (small)					
- Electric motors: asynchrone mono-phase and tri-phase machines		12,905 pcs	487		49t					
- Bulbs for strong current		11,840,000 pcs	2,112		- Glass tubes (other)					
- Bulbs for weak current		4,333,000 pcs	390		93t					
- Fluorescent tubes		757,000 pcs	559		- Glass bulbs					
- Bulbs for pocket batteries		644,000 pcs	191		15,237,000 pcs					
- Armature		43t, 2,680 pcs	164		- Glass sticks					
- Amortizers		76t, 41,754 pcs	92		14t					
- Pocket batteries		1,038 t	694		- Filaments					
- Radio batteries		79 t	69		94,000 pcs					
- Other galvanic elements		72 t	19		- Sockets					
- Services sold		40,000 h	26		17,598,000 pcs					
* Includes turnover tax on sold products.					- Electrodes					
Capacity Output:		Drs. million			11,884,000 pcs					
Light bulbs and tubes		5,430	Overall rate of utilization is 66%.		- Wolfram wire					
Batteries		1,270			1,095,000 pcs					
Other galvanic elements (including internal use)		1,540			- Dynamo metal sheets					
Underutilization due to lack of balance among the capacities of different machines and to high dependency on imported materials.					21t					
No. of workers required on 1st shift for full utilization of existing capacity is 1,160.					- Aluminium castings					
					37 t					
					- Zinc cups					
					21,523,000 pcs					
					- Special sticks					
					24,950,000 pcs					
					- Other galvanic elements					
					..					
					113					
					3. Repairs & maintenance: total					
					137					
					4. Other material & non-factor service inputs					
					137					
VI. SUPPLEMENT		Future Plans		V. VALUE ADDED (1963) (Drs. Million)						
a) To raise the degree of mechanization and automation up to the level comparable to the European standard.				TOTAL (except turnover tax)						
b) Introduction of new products in the field of sockets and high current bulbs.				1,986						
c) Expansion of the capacity of production of the intermediate materials which are now being imported.				- Wages of factory workers						
				636						
				- Salaries of non-factory workers						
				325						
				- Depreciation						
				76						
				- Interests paid						
				147						
				- Other accumulation (of which 260 internally retained)						
				302						
				- (Turnover tax)						
				(267)						
				<b>SELECTED COEFFICIENTS</b>						
				- Mach. & equip. per factory worker on 1st shift: Drs. 1,270						
				- Value added per employee: Drs. 1,145						
				- Annual wage per factory worker: Drs. 463						
				- Variable input cost/gross production ratio: 64 %						
				- Gross accumulation/gross production ratio: 21 %						
				(at full capacity) 25 %						
				- Level of production at break-even point: 49 % of the 1963 actual level.						
				* Gross accumulation includes interest paid.						



An enterprise, founded in 1931, producing electric light bulbs. Annual capacity output is about 16,000,000 bulbs and fluorescent tubes on a 3-shift basis. 6% of the output is exported but most input materials are more or less dependent on imports. The communication lines are favourable.

## I. FIXED CAPITAL

(end of 1965)

	Original purchase value	1965 replacement value
TOTAL (Drs. million)	940	1,090
Buildings & land improvements	216	280
Machinery & equipment	721	807
Other capital assets	3	3

Major machinery crucial for determining the overall production capacity:

Bulbs for strong current: Automatic machine for production of bulbs (medium capacity; 2 shifts).

Bulbs for weak current and mercury bulbs: Universal and semi-automatic assembly machines (2 shifts).

Fluorescent tubes: Semi-automatic machines for assembly (medium capacity; 2 shifts)

(83% of machinery was imported)

Capital expenditures in the past years: (Drs. million)

	1953-54	1955-57	1958-60	1961-63
Gross expenditures	18	102	280	458
Retirements	36	89	78	129

Calculated average age of fixed assets: 5.5 years

Electric motors:

Total installed capacity: 327 KV

Of which actually operated in 1965:

1st shift 100%; 2nd shift 30%; 3rd shift 4%

Technological features: Product-mix is relatively simple.

The extent of the mechanisation and automation is close to the European standard and rated at 75% and 60%, respectively. Automatic machines are mostly of medium capacity.

## II. LABOUR

(1965)

TOTAL no. of employees: 665

	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:			
Total 516 persons	434	78	4
(12.9 thous. manhrs.)	(1,005)	(192)	(12)

- Preparatory shop	92	6	-
- Glass works	12	4	4
- Bulbs and fluorescent tubes	315	68	-
- Auxiliary shop	15	-	-

2. Non-factory workers: 149 persons  
(369 thous. manhours)

Educational background of workers:

	Techn.	Non.	Low	Others	Total
Univ. or higher	7	3	1	1	12
Tech. Higher sch.	-	-	-	5	5
Secondary sch.	24	9	-	18	51
Primary school	-	-	-	597	597

## IV. INTERMEDIATE INPUTS

	Quantity	Value (Drs. Million)
TOTAL actual consumption 1965		1,252

1. Energy inputs: total		77
- Electricity	911 Mwh	15
- Coke	471 t	10
- Hard coal	2,667 t	48
- Lignite	745 t	4

2. Major production materials: total 990

- Glass	130 t	52
- Bulbs	14,250,000 pos.	171
- Base (sockets)	14,900,000 pos.	149
- Molybdenum wire	1,850,000 m	13
- Wolfram wire	10,500,000 m	42
- Fluorescent tubes	680,000 pos	43
- Fluorescent powder	5 t	34
- Boxes	10,484,000 pos	136
- Others	..	350

3. Repairs &amp; maintenance: total 34

4. Other material &amp; non-factor service inputs 151

## V. VALUE ADDED (1965)

(Drs. Million)

TOTAL (except turnover tax)	979
- Wages of factory workers	298
- Salaries of non-factory workers	115
- Depreciation	57
- Interests paid	42
- Other accumulation	512 1/2
(Turnover tax)	(152)

## III. ANNUAL PRODUCTION &amp; CAPACITY

	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1965		2,378 *

- Light bulbs for strong current	8,823,000 pos	1,142
- Light bulbs for weak current	2,475,000 pos	159
- Fluorescent tubes	650,000 pos	650
- Mercury bulbs	12,000 pos	12
- Coated bulbs	1,000 pos	-
- Starters	524,000 pos	107
- Others	-	443

\* Includes turnover tax on sold products.

Capacity output:

- Bulbs for strong current	11,030,000 pos	Overall rate of utilisation is 79%.
- Bulbs for weak current	3,257,000 pos	
- Fluorescent tubes	765,000 pos	
- Mercury tubes	15,000 pos	
- Starters	691,000 pos	

No. of workers required on 1st shift for full utilisation of the existing capacity is estimated to be 555.

## VI. SUPPLEMENT

Future Plans

Further increase in mechanization and automation is envisaged. As a result, a new 2-shift work system will be introduced.

SELECTED COEFFICIENTS

- Mech. & equip. per factory worker on 1st shift: Drs.	1,860,000
- Value added per employee: Drs.	1,460,000
- Annual wage per factory worker: Drs.	481,000
- Variable input cost/gross production ratio:	59 %
- Gross accumulation/gross production ratio:	2/25 %
(at full capacity)	28 %
- Level of production at break-even point:	39 % of the 1965 actual level.
1. Of which Drs. 193 million internally retained.	
2. Gross accumulation includes interest paid.	

An enterprise, founded in 1927, producing electric cables and wires. Annual capacity output is about 15,000 t of cables and wires on a 3-shift basis. About 14% of products are sold on foreign markets and 9% of input materials (copper, tin, steel, wire, varnishes) are imported. Located relatively far from the source of basic raw material supply.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-65		
TOTAL (Drs. million)		1,869	2,080	163	32	541	335		
Buildings & land improvements		473	615	23	136	133	235		
Machinery & equipment		1,396	1,465	Retirements					
Other capital assets		-	-	Calculated average age of fixed assets: 7.3 years					
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Electric motors:</b> 1,53 KW					
Electric cables and wires: A number of semi-automated machines of relatively small capacity for rolling, drawing, winding and coating (3 shifts).				Total installed capacity: _____ KW Of which actually operated in 1965: 1st shift 70%; 2nd shift 46%; 3rd shift 27%					
				<b>Technological features:</b> Drawing of wires by the system of pressing through matrices; insulation with rubber and plastic materials by injection; lacquering by continuous passing through furnaces. The extent of mechanization and automation is fairly low though satisfactory to compete in the domestic market.					
II. LABOUR (1965)		TOTAL no. of employees:			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Tech.	Econ.	Low	Others	Total
1. Factory workers:		286	191	17	12	12	2	3	29
Total 584 persons		(1355 thous. manhrs.)	(659)	(444)	(252)	-	1	-	3
- Metal processing		69	53	24	35	12	4	31	82
- Cables		95	95	45	-	-	-	7.5	7.5
- Windings		40	35	35	IV. INTERMEDIATE INPUTS				
- Auxiliary shops		66	8	3	Quantity		Value (Drs. Million)		
- Transportation		16	-	-	TOTAL actual consumption 1965				
2. Non-factory workers:		236 persons	(553 thous. manhours)		1. Energy inputs: total 154				
					- Electricity 5,479 kwh 74				
					- Brown coal 235 t 1				
					- Liquid fuel 130 t 67				
					- Lignite 3,012 t 12				
					2. Major production materials: total 5,141				
					- Rolled copper 3,913 t 3,133				
					- Aluminium products 376 t 231				
					- Refined lead 1,105 t 191				
					- Rubber products 211 t 117				
					- Tin 13 t 19				
					- PVC material 239 t 551				
					- Varnishes 267 t 323				
					- Steel wire 966 t 268				
					- Others .. 303				
					3. Repairs & maintenance: total 70				
					4. Other material & non-factor service inputs 56				
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1965) (Drs. Million)				
TOTAL actual revenue output 1965			8,734 *		TOTAL (except turnover tax) 1,958				
- Drawn copper wire 1		3,787 t	(4,398)		- Wages of factory workers 400				
- Bare Al-Fe wires 1		472 t	(268)		- Salaries of non-factory workers 214				
- Bare copper wires 1		35 t	(57)		- Depreciation 33				
- Steel ropes 1		797 t	(469)		- Interests paid 213				
- Dynamo wires insulated with paper or cotton		316 t	469		- Other accumulation (Turnover tax) 1,443 1/2				
- Dynamo wires insulated with lac, silk or cotton		29 t	130						
- Lac-coated wire		1,161 t	1,803						
- Other insulated conductors		3,459 t	4,044						
- Lead cables for high voltage current		2,758 t	2,217						
- Other electrical installation materials		42 t	71						
* Internal use, not included in total.									
* Including turnover tax on sold products.									
Capacity Output:									
- Drawn copper wire and bare copper ropes		4,035 t	Overall rate of utilization is 86..						
- Bare Al-Fe wire		75 t							
- Steel ropes		1,050 t							
- Dynamo wires		1,920 t							
- Lead cable and other insulated conductors		7,000 t							
- Others		50 t							
347 workers are required on 1st shift for full capacity operation.									
VI. SUPPLEMENT		Causes of Underutilisation:			SELECTED COMPARISONS				
1) Lack of capacity balance between production processes.					- Mach. & equip. per factory worker on 1st shift: Drs. 5,120,000				
2) Insufficient supply of copper, lead and aluminium.					- Value added per employee: Drs. 2,330,000				
Futures Plans:					- Annual wage per factory worker: Drs. 685,000				
a) Aluminium conductor will be introduced as new product.					- Variable input cost/gross production ratio: 69 %				
b) New production processes will be introduced. Consequently, the degree of automation is expected to increase from some 20% - 30% and the overall production capacity will be increased.					- Gross accumulation/gross production ratio: 16 2/3 % (at full capacity 17 %)				
1) Of which Drs. 374 million is internal fund.					- Level of production at break-even point: 52 % of the 1965 actual level.				
					2) Gross accumulation includes interests paid.				

An enterprise, founded in 1947, producing electrical installation materials and parts for household appliances. Capacity output is about 2,000 t of fuses, switches, sockets, plugs, lamps, etc., on partial three-shift operation. About 7% of products are exported, while some 12% of input materials are imported.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 re- placement value	Capital expenditures in the past years: (Drs. million)						
TOTAL (Drs. million)		757	909	1953-54	1955-57	1958-60	1961-63			
Buildings & land improvements		253	379	259	69	111	171			
Machinery & equipment		496	520	59	36	37	84			
Other capital assets		8	10	Retirements						
				Calculated average age of fixed assets: 7.8 years						
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Electric motors:</b>						
- Products other than lamps and tubes: Universal machine tools for cutting and bending and some special machines for assembly work (2 shifts).				Total installed capacity: 510 KW						
- Lamps and tubes (related to electrical installation): Specialized lamp-making equipment supplemented by universal machine tools (2 shifts).				Of which actually operated in 1965:						
3% of machinery was imported.				1st shift 100%; 2nd shift 66%; 3rd shift 33%						
				<b>Technological features:</b> Specialised primarily in the production of electric installation materials such as sockets, fuses, switches, etc.; production of parts of household appliances is only of a recent origin and is considered as having weaker potentiality of future expansion. Mechanisation and automation are rather below the European standard.						
II. LABOUR (1965)		TOTAL no. of employees: 982			Educational background of workers:					
		1st shift	2nd shift	3rd shift	Techn. High.	Low	Others	Total		
1. Factory workers:										
Total	641 persons	430	163	48	17	14	2	1	34	
	(1521 thous. manhrs.)	(1077)	(384)	(120)						
- Bakelite production		57	33	30						
- Metal processing		85	48	18						
- Galvanisation		14	6	-						
- Assembly of electric products		125	60	-						
- Assembly of electric wires		37	16	-						
- Tool shop		36	-	-						
- Others		76	-	-						
2. Non-factory workers:		341 persons								
		(719 thous. manhours)								
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	IV. INTERMEDIATE INPUTS						
TOTAL actual revenue output 1965 *		4,634		Quantity		Value (Drs. Million)				
- Installation fuses	352t/3,959,000 pos		502	TOTAL actual consumption 1965						
- Installation switches	111t/2,204,000 pos		513	2,010						
- Sockets	245t/2,544,000 pos		1,120	1. Energy inputs: total						
- Sockets for bulbs	45t/1,695,000 pos		179	- Electricity 1,650 Mwh 21						
- All plugs	71t/1,850,000 pos		484	- Brown coal 562 t 3						
- Tubes and accessories for boiler installation	304t/11,340,000 pos		320	- Liquid fuel 15 t 2						
- Lamps and other installation materials	58t/142,000 pos		105	2. Major production materials: total 1,746						
- Ignition distributors for vehicles	42t/523,000 pos		133	- Brass strips and bars 319 t 367						
- Parts for household electric appliances	175t/4,216,000 pos		965	- Cold rolled strips 484 t 57						
- Special baking apparatus	2,296 pos		5	- Iron and steel products 17 t 4						
- Services	..		308	- Copper wire 30 t 42						
Includes turnover tax on sold products.				- Plastic materials 287 t 121						
Capacity output:				- Insulation materials 489 t 206						
- Electric installation materials and lamps	29,199,000 pos	Overall rate of utilization: 81%		- Screw propellers and springs 159,301 pos 292						
- Ignition distributors for vehicles	770,000 pos			- Other materials .. 627						
- Parts for household appliances	5,208,000 pos			3. Repairs & maintenance: total 80						
Underutilization due to insufficient demand and supply of production materials. 430 workers would be sufficient on 1st shift for full capacity operation.				4. Other material & non-factor services inputs 158						
VI. SUPPLEMENT		Future Plans		V. VALUE ADDED (1965)		Value (Drs. Million)				
Since 1963 a long-term expansion programme is under way, according to which capacity will reach a 2.5 times larger level by 1970. Mechanisation will be raised up to 90%, especially for mass production of electric installation materials.				TOTAL (except turnover tax)		1,772				
1. Gross accumulation includes interests paid.				- Wages of factory workers		506				
				- Salaries of non-factory workers		251				
				- Depreciation		38				
				- Interests paid		108				
				- Other accumulation (of which 306 internally retained)		869				
				- Turnover tax		852				
				SELECTED COEFFICIENTS						
				- Mech. & equip. per factory worker on 1st shift: Drs. 1,210,000						
				- Value added per employee: Drs. 1,805,000						
				- Annual wage per factory worker: Drs. 790,000						
				- Variable input cost/gross production ratio: 60%						
				- Gross accumulation/gross production ratio: 1/26%						
				(at full capacity) 28.5%						
				- Level of production at weak-even point: 35% of the 1965 actual level.						

An enterprise, founded in 1945, producing household electric appliances and transformer stations. Annual capacity output is 3,000 t of appliances and equipment on partial three-shift operation. 7 % of produce is sold on foreign markets, while 10 % of material, such as pickled sheets, welded tubes, thermostats and switches, are imported. Good communication lines with the domestic and foreign markets.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)					
TOTAL (Drs. million)		2,272	2,597	1953-54	1955-57	1958-60	1961-63		
Buildings & land improvements		844	1,097	100	216	187	1,300		
Machinery & equipment		1,428	1,500	92	145	143	201		
Other capital assets		-	-	Retirements					
				Calculated average age of fixed assets: 4.2 years					
<b>Major machinery crucial for determining the overall production capacity:</b>		<b>Electric motors:</b>							
Household appliances: Universal type machine tools, semi-automatic specialized machines and mechanized assembly lines (2 shifts).		Total installed capacity: 1,852 kW							
Prefabricated transformer stations: Universal type machine tools (cutting, bending and pressing) for the production of metal structures (2 shifts).		Of which actually operated in 1965:							
		1st shift 80 %; 2nd shift 42 %; 3rd shift 4 %							
(24 % of the equipment was imported.)		<b>Technological features:</b> Composed of several departments, specialised in the production of cookers, refrigerators, washing machines, dryers and prefabricated transformer stations. The product-mix has gradually increased since 1945 to meet the changing demand patterns. Mechanization is not quite up-dated. Automation is rated at 40 % - 60 %.							
II. LABOUR (1965)		TOTAL no. of employees:			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn.	Elem.	Low	Others	Total
1. Factory workers:					Univ. or higher	26	2	1	23
Total 1,824 persons		1,399	394	31	Tech. Higher sch.	14	10	1	25
(2,374 thous. manhrs.) (2,203) (624) (48)					Secondary sch.	96	29	-	125
- Electric appliances for household use		564	374	31	Primary school	-	-	2,423	2,423
- Switchboard plant		84	20	-	IV. INTERMEDIATE INPUTS				
- Plastic materials		55	-	-	Quantity		Value (Drs. Million)		
- Services (serial production)		26	-	-	TOTAL actual consumption 1965				
- Assembly on site		633	-	-	1. Energy inputs: total				
- Transportation		37	-	-	- Electricity				
2. Non-factory workers:		778 persons			- Brown Coal				
(1,405 thous. manhours)					- Liquid fuel				
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		2. Major production materials: total				
TOTAL actual revenue output 1965			10,080*		- Rolled iron & steel products				
- Electric cookers		32,439 pcs.	1,725		- Drawn iron & steel products				
- Electric heaters		25,893 "	289		- Grey pig iron castings				
- Electric radiators		594 "	25		- Steel castings				
- Absorption refrigerators		2,302 t/33,420 "	2,643		- Copper and brass products				
- Compression refrigerators		700 t/11,682 "	1,396		- Pickled sheets				
- Washing machines		351 t/ 3,074 "	666		- Aluminium products				
- Clothes dryers		190 t/ 5,823 "	320		- Rolled products				
- Open switch boards		70 t/464 field	239		- Drawn electric wire				
- Enamelled cookers for coal and wood fuel		217 t/ 2,899 pos.	84		- Dyestuffs, varnishes & chemicals				
- Fittings for gas & steam and other metal structures		1,280 t	938		- Plastic materials - polystyrens				
- Prefabricated transformer stations		457 t	534		- Special resins				
- Assembly of transformer stations		..	1,221		- Others				
* Including turnover tax on sold products.					3. Repairs & maintenance: total				
<b>Capacity output:</b>					4. Other material & non-factor service inputs				
- Cookers (Dept.I) 2,000 t					V. VALUE ADDED (1965) (Drs. Million)				
- Refrigerators (Dept.II) 4,000 t					TOTAL (except turnover tax)				
- Washing machines (Dept.II) 300 t					- Wages of factory workers				
- Laundry equipment (Dept.III) 500 t					- Salaries of non-factory workers				
- Electric equipment (Dept.IV) 550 t					- Depreciation				
- Assembly of transformer stations + 6 %					- Interests paid				
Underutilization due to the bottleneck caused sometimes by the fact that about 30 % of input materials are being supplied through contract work. About 1,200 persons would be sufficient on 1st shift for full capacity operation.		Overall rate of utilization is 88 %.			- Other accumulation (of which 456 internal fund) (Turnover tax)				
VI. SUPPLEMENT		Future plans:		SELECTED COEFFICIENTS					
A significant capacity expansion programme is under way, which will lead to an increase in mechanization of many processes and stronger specialization as to the product mix.				- Mach. & equip. per factory worker on 1st shift: Drs. 1,780,000					
1/ Due to the existing tendency of overemployment, wages are assumed as fixed costs.				- Value added per employee: Drs. 1,440,000					
2/ Gross accumulation includes interests paid.				- Annual wage per factory worker: Drs. 633,000					
				- Variable input cost/gross production ratio: 1/ 51 %					
				- Gross accumulation/gross production ratio: 2/ 16.5 % (at full capacity) 21.2 %					
				- Level of production at break-even point: 67 % of the 1965 actual level.					

An enterprise, founded in 1954, producing household electric boilers and ovens. Annual capacity is about 90,000 boilers and 70 ovens on a 2-shift basis. Only 1/2 of the products is exported, while 9% of production materials, e.g. steel sheets, are imported. Good railway and road communications.

I. FIXED CAPITAL (end of 1963)	Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)			
			1953-54	1955-57	1958-60	1961-63
TOTAL (Drs. million)	262	396	4	14	24	178
Buildings & land improvements	264	289	1	8	1	27
Machinery & equipment	98	107				
Other capital assets	-	-				

**Major machinery crucial for determining the overall production capacity:**

Small boilers and ovens: Semi-automatic machines specialized in cutting, bending and surface protection of sheet metals (1 or 2 shifts).  
Large boilers and ovens: Universal machine tools of small capacity and machines for enamelling and other surface protection with partial automation (1 or 2 shifts).

3/4 of machinery was imported.

**Electric motors:**

Total installed capacity: 252 kW  
Of which actually operated in 1963:

1st shift 98%; 2nd shift 68%; 3rd shift - %

**Technological features:** Relatively small establishment with a simple product-mix. The core processes in the metal working and finishing shops are moderately automated (about 60%). Some 40% of the production materials are supplied through contract work.

II. LABOUR (1963)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:	134	25	-
Total 155 persons	(29 <sup>1</sup> thous. manhrs.)	(48)	(-)
- Mechanical treatment	32	-	-
- Welding	14	11	-
- Polishing	11	5	-
- Assembly	35	9	-
- Ancillary	38	-	-
2. Non-factory workers:	64 persons		
	(95 thous. manhours)		

**Educational background of workers:**

	Techn.	Elem.	Low	Others	Total
Univ. or higher	1	-	-	-	1
Tech. Higher sch.	-	-	-	-	-
Secondary sch.	7	4	-	1	12
Primary school	-	-	-	213	213

**III. ANNUAL PRODUCTION & CAPACITY**

	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1963		2,002*
- Electric boilers	56,792 pcs	1,977
- Electric ovens	20 pcs	25

\* Includes turnover tax on sold products.

Capacity output:	Quantity	Value (Drs. Million)	(overall utilization is 63%)
- Electric boilers	90,000 pcs		}
- Electric ovens	70 pcs		

- Underutilization is partly (1/3) attributable to lack of balance among the capacities of production processes, another third to the difficulties in securing the flow of supply of raw materials.

142 would be required on 1st shift for full capacity operation.

**IV. INTERMEDIATE INPUTS**

	Quantity	Value (Drs. Million)
TOTAL actual consumption 1963		1,197
1. Energy inputs: total		14
- Electricity	401 kWh	10
- Brown coal	332 t	3
- Liquid fuel	11 t	7
2. Major production materials: total		1,031
- Steel sheets	1,758 t	299
- Flat iron	114 t	29
- Insulating materials	120 t	68
- Welding materials	25 t	17
- Wire goods	30 t	19
- Black tubes	60 t	15
- W <sup>o</sup> tubes	14 t	9
- Paints and polishing materials	22 t	74
- Protecting materials	28 t	327
- Packaging	222 t	33
- Other materials	..	145
3. Repairs & maintenance: total		28
4. Other material & non-factor service inputs		124

**V. VALUE ADDED (1963) (Drs. Million)**

TOTAL (except turnover tax)	685
- Wages of factory workers	128
- Salaries of non-factory workers	56
- Depreciation	9
- Interests paid	45
- Other accumulation 1/	417
(Turnover tax)	(120)

**VI. SUPPLEMENT Future Plans**

- Washing machines and air conditioners are among the new products to be produced in the near future.
- The second stage of reconstruction investment takes place in the near future and the degree of automation will be raised up to 70-80% of the world advanced standard.

1/ Gross accumulation includes interests paid.

**SELECTED CONCLUSIONS**

- Mach. & equip. per factory worker on 1st shift: Drs. 823,000
  - Value added per employee: Drs. 3,130,000
  - Annual wage per factory worker: Drs. 826,000
  - Variable input cost/gross production ratio: 62 %
  - Gross accumulation/gross production ratio: 2/24.5 % (at full capacity 29 %)
  - Level of production at break-even point: 35 % of the 1963 actual level.
- 1/ Of which Drs. 157 million belongs to the enterprise's own funds.

**MAJOR PRODUCTS:** Motorcycles and scooters: complete and spare parts. Annual capacity output is about 6,000 to 6,500 motorcycles and 3 wheeled auto-rickshaws, with two shifts.

**REPORTING UNIT:** A one-establishment enterprise, founded in 1962, with total assets of Rs. 28 million (net worth Rs. 7 million) and employees 1,533 as of 1965.

### I. FIXED CAPITAL ASSETS (end of 1965)

TOTAL BOOK VALUE (Rs. million)	Before deprec.	After deprec.
	13.16	8.49
1. Land	0.12	0.12
2. Land improvements	-	-
3. Buildings	2.21	1.62
4. Other construction works	0.26	0.18
5. Machinery & equipment	7.75	4.63
6. Tools & instruments	2.02	1.42
7. Vehicles	0.36	0.21
8. Office furniture & fixtures	0.44	0.31

#### DETAIL OF I.5 (No.)

	Total Bk. value	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1965 replace. value
a. Central lathes (11)		5	A		
b. Vertical millers (6)		4	"		
c. Horizontal millers (4)		4	"		
d. Radial drills (8)		7	"		
e. Surface grinders (5)		7	"		
f. Shaping machines (4)		7	"		
g. Boring machines (4)	Rs. 6.5 million	5	"	10%	Rs. 7.1 million
h. Presses (3)		10	"		
i. Guillotines (2)		9	"		
j. Press brakes (1)		9	"		
k. Planing machines (1)		9	"		
l. Pipe bending machines (2)		9	"		
m. Die sinking machines (1)		7	"		

### II. INVENTORY

(end of 1965)	Actual	Normal
TOTAL VALUE (Rs. million)	17.30	- 18 %
1. Direct production materials	13.89	- 22
2. Other input materials		
3. Work in process	2.21	+ 2
4. Finished products	1.20	- 11

- Normal inventories of finished products 3.7% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 1,560 KW  
 Electr. furnaces & similar: 75 KW  
 Total load, capacity of trucks: 6 t  
 Capacity of diesel electricity generation: 250 KW

(kept as stand by arrangement; negligible production in 1964).

(d), (h) and (l) were partly domestically produced; the rest imported.

Average age of machinery is 6.3 years.

#### GENERAL CONDITIONS:

Transportation, public utilities and community facilities, all excellent.

### III. LABOUR (1965 average)

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED	1,311	218	4
1. Direct production (all male)	639	176	-
Annual total manhours (000)	(1,705)	(345)	(-)
a. Machine shop	198	50	-
b. Press shop	60	21	-
c. Frame building	60	22	-
d. Heat treatment	3	3	-
e. Tinkering	74	2	-
f. Polishing	7	6	-
g. Plating	2	1	-
h. Paints shop	61	8	-
i. Assembly	130	42	-
j. Machine fabrication	44	21	-
2. Auxiliary activities (m. 716 f. 2)	672	42	4
a. General engineering	202	32	-
b. Technical and managerial control	470	10	4

#### EDUCATIONAL BACKGROUND (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Other
50	60	440	983
<b>Management</b>			
50	40	60	-
<b>Direct Production</b>			
-	-	25	375
<b>Semi-skilled</b>			
-	-	10	240
<b>Unskilled</b>			
-	-	-	165
<b>Auxiliary Activities</b>			
-	20	315	25
<b>Semi-skilled</b>			
-	-	30	130
<b>Unskilled</b>			
-	-	-	48

- Actual hours worked per annum per direct production worker: 2,545 hours.

#### Technological features:

- Milling, shaping, facing, drilling, turning and grinding.
- Forming by pressing.
- Welding.
- Finishing.
- Spray painting.
- Assembling of mechanical conveyors.
- Bending of tubes and fixing of angles and channels, etc.

- Mechanization of (a), and (b) excellent; of (h) and (i) fair; of (c) and (j) poor; and of (e) outdated. Automation of (b) fair; of (j) poor; of the rest outdated.

- **Skilled workers** in direct production are: millers, turners, fitters, die sinkers, welders, painters, etc. Those in auxiliary activities: accountants, sales and purchase assistants and administrative assistants.

**IV. ANNUAL PRODUCTION (1965)**TOTAL VALUE OF PRODUCTION ( Rs. million ) 29.54

Product	Unit	Quantity Produced	Unit Value (Rs.)
e. Motor cycles	Nos.	4,948	3,620
b. Scooters	Nos.	1,192	2,532
c. Auto-rickshaws (3 wheelers)	Nos.	94	4,152
d. Industrial engine	Nos.	3,561	797
e. Spare parts	Rs.mil.	3.68	..
f. Mechanical conveyors and other miscellaneous items manufactured for order	"	1.22	..
g. Scraps	"	.34	..

**CAPACITY OUTPUT:**

No higher than the 1965 actual production level. Proportions of products (a) to (c) can be changed without difficulty according to demand pattern. The level of output was almost doubled since the enterprise first started commercial production in 1962.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.  
- Cold rolled and deep drawn sheets are directly imported with freight rate 1.5% of c.i.f. value. Most of the materials are priced higher than elsewhere owing to heavy taxation at various points which altogether amounts to some 40% of the c.i.f. value.

**VI. VALUE ADDED TOTAL 1965 ( Rs. million ) 8.51**

1. Wages & salaries (before income tax)	
- Employees in direct production	1.70
- Other employees	2.75
2. Other expenditures for employees	0.42
3. Annual depreciation allowance	1.10
4. Rental paid	-
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	2.54

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
<b>1. Recent Expansion</b>		
From 1963 to 1965		
a. Total Investment ( Rs. million )	5.98	0.02
- Land	-	-
- Land improvements	-	-
- Buildings	0.17	-
- Other construction work	-	-
- Machinery & equipment	3.56	-
- Tools & instruments	2.25	0.02
- Vehicles	-	-
- Office furniture & fixtures	-	-
b. Corresponding increase:	From 1963	to 1965
In no. of employees	1,400	1,533
In annual gross production (Rs. million)	21.82	29.54

**V. INTERMEDIATE INPUTS (1965)**TOTAL VALUE OF CONSUMPTION ( Rs. million ) 21.03

Item	Unit	Quantity consumed	Unit value (Rs.)
<b>1. ENERGY &amp; WATER: * total</b>			
* Water is drawn from its own tube well.			
- Electricity	Thous. KWH	15.36	130
- Petroleum	Thous. lit.	121	795
- Other fuel oils	Thous. lit.	22	141
- Lubricating oil	Thous. lit.	91	1,440
<b>2. Direct production materials: total</b>		18.71	
a. M.S. plates, sheets, strips, flats, squares & rounds.	ton	544	10,197
b. Steel tubes	"	148	3,236
c. Rubber tyres	000 No.	13.0	10,000
d. Rubber tubes	000 No.	13.5	9,000
e. Ferrous castings	ton	213	4,712
f. Non-ferrous castings	"	167	10,520
g. Components, spare parts and other accessories	Rs. thous.	13.24	..
h. Paints	ton	128	3,904
i. Oxygen and acetylene	000 cu.m.	21.0	4,500
j. Others	Rs.mil.	9.07	..
<b>3. Packaging materials: total</b>			Nil/Nil
4. Work performed by sub-contractors ( )			-
5. Repairs & maintenance (materials & services purchased)			0.84
6. Material inputs for auxiliary activities			0.28
Stationery, etc.	0.14		
Maintenance of machines.	0.14		
7. Non-factor service inputs: total			0.77
Transportation insurance and storage services	0.18		
Communications, advertising and other business services	0.59		

**SELECTED COEFFICIENTS (in 1965 replacement value)**

- Mach., equip., instruments & tools/per employee in direct production on 1st shift: Rs. 16,700
- Value added per employee: Rs. 5,550
- Annual wage per employee in direct production: Rs. 2,090
- Variable input costs/gross production ratio: 70.5%
- Gross profit/gross production ratio: 8.6%
- Level of production at break-even point is approximately 71 % of the 1965 actual level.

**2. Future Plan :**

- a. Investment proposed for the period 1964 to 1969  
Total value ( Rs. million ) 4.0  
Of which: - Mach. & equipment 81 \$  
- Land improv. & bldg. 5  
- Land 1  
- Others 13
- b. Net increase in no. of employees envisaged for the same period: - Direct production: 70  
- Auxiliary: 20
- c. Purposes: Introduction of new products and balanced expansion of the existing capacity in the same location.

**VIII. SUPPLEMENT**

Structure of liquid assets and current liabilities (as of 1965; Rs. million).

Cash on hand and in banks	0.10	Taxes payable	0.48
Accounts receivable	2.14	Accounts payable	17.03
		Proposed dividends	0.53

**MAJOR PRODUCTS:** Bicycles. Annual capacity output (with one shift) is about 110,000 units.

**REPORTING UNIT:** An enterprise, founded in 1956, with total assets of Rs. 4.3 million (net worth Rs. 0.6 million and employees 249 as of 1965).

I. FIXED CAPITAL ASSETS	End of 1964		End of 1965	
	After deprec.		After deprec.	
(Rs. thousand)	1,393	1,322		
<b>TOTAL BOOK VALUE</b>				
1. Land (50,000 sq. m.)			772	765
2. Land improvements			-	-
3. Buildings (total floor space 15,000 sq.m.)			-	-
4. Other construction works			535	481
5. Machinery & equipment			1	1
6. Tools & instruments			60	53
7. Vehicles			25	22
8. Office furniture & fixtures				
	<b>Total</b>	<b>Avr. Age</b>	<b>Depr. rate</b>	<b>1965 replace value</b>
		(Yr.)	(%)	

DETAIL OF 1.5 (No.)	Total Rs. value aft. deprec.	Avr. Age (Yr.)	Depr. rate (%)	1965 replace value	
a. Enamelling plant	Rs. 500 thousand	..	B	10%	Rs. 600 thousand
b. Electroplating plant					
c. Degreasing plant					
d. Debrassing plant					
e. Spokes plant					
f. Mudguard plant					
g. Shop equipment					

II. INVENTORIES	Actual	Normal
(end of 1965)		
<b>TOTAL VALUE (Rs. thous.)</b>	800	- 24 %
1. Direct production materials	134	- 11
2. Other input materials	448	- 34
3. Work in process	218	- 9
4. Finished products		
- Normal inventories of finished products 1.8 % of annual gross production		
- Seasonal variations:	None	

Capacity of electr. motors: 199 KW  
 Total load, capacity of trucks: - t  
 a) and e) totally, the rest partly imported.

**GENERAL COMMENTS:** Transportation and public utilities, excellent; community facilities, fair.

III. LABOUR (1965 average)	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	249		
1. Direct production (all male)	211		
Annual total manhours (000)	(612)	( )	( )
a. Enamelling shop	31		
b. Electroplating shop	24		
c. Degreas. shop	22		
d. Debrassing shop	18		
e. Spokes and hubs shop	56		
f. Mudguard shop	32		
g. Axles and cups shop	28		
2. Auxiliary activities (all male)	38		

EDUCATIONAL BACKGROUND (No. of employees)			
Regi- bases	Other	Univ. or higher	Sr. High sch. or equiv. Others
		TOTAL	8
Management		1	2
Direct Production		5	-
Skilled		-	21
Semi-skilled		-	73
Unskilled		-	91
Auxiliary Activities		-	-
Skilled	6	5	-
Semi-skilled	-	-	8
Unskilled	-	-	11

- Actual hours worked per annum per direct production worker: 2,900.

- Proportion of motors occupied: 65% for 1st shift.

- Mechanization and automation are generally fair.

- Skilled workers in direct production are: machine operators, welders, fitters, electricians, etc. Those in auxiliary activities are: administrative assistants, accountants and sales and purchase assistants.



**IV. ANNUAL PRODUCTION (1965)**TOTAL VALUE OF PRODUCTION (Rs. thousand) 10,931

Product	Unit	Quantity Produced	Unit Value (Rs.)
a. Bicycles	Number	82,672	129.8
b. Parts, tools, etc.	Rs. thous.	191	..

**CAPACITY OUTPUT:**

30% higher than the 1965 actual

production level with additional 61,000 manhours on 1st shift. Insufficient supply of raw and intermediate materials is responsible for the underutilization.

Product-mix flexible in assembly parts (forks, frames, etc)

Unit value of product: market value f.o.b. before sales tax  
Unit value of material: market price c.i.f.

- Products are only partly exported.

- Direct production materials (g) and part of (c) and (f) are imported; the rest are mostly domestically produced with significant amounts of imports contents.

**V. INTERMEDIATE INPUTS (1965)**TOTAL VALUE OF CONSUMPTION (Rs. thousand) 8,684

1. Energy & water: total (including Rs. 15,200 of other liquid fuels and 21 t of charcoal at Rs. 320/t.)	Quantity	Unit	Value (Rs.)
- Electricity	000 kwh	545.3	110
- Coal	Ton	382	61
- Petroleum	000 litre	19.4	950
- Lubricating oil	"	16.2	940
<b>2. Direct production materials: total</b>			<b>1,120</b>
a. M.S. plates, sheets, etc.	Ton	410	1,140
b. Steel tube	"	423	2,590
c. Steel material	"	125	1,025
d. Rubber tyres	000 Nos.	162	5,650
e. Rubber tube	"	162	2,050
f. Paints	Ton	23	6,085
g. Nickel salt	kg	1,300	70
h. Acetylene (in jare)	No.	2,800	9.5
i. Consumable stores	Rs. thous.	90	..
j. Others	"	4,380	..
<b>3. Finishing materials: total</b>			<b>559</b>
a. Paper and paper products	Ton	40	434
b. Wooden cases	000 No.	14	14,000
c. Others	Rs. thous.	189	..
<b>4. Work performed by sub-contractors</b>			<b>..</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>			<b>63</b>
a. Machinery			46
b. Building			17
<b>6. Material inputs for auxiliary activities</b>			<b>170</b>
Stationery, printing, etc.			
<b>7. Non-factor service inputs: total</b>			<b>193</b>
a. Transportation, insurance and storage services			49
b. Communication, advertising & other business services			144

**VI. VALUE ADDED**TOTAL 1965 (Rs. thousand) 2,247

1. Wages & salaries (before income tax)	412
- Employees in direct production	(..)
- Other employees	(..)
2. Other expenditures for employees	102
3. Annual depreciation allowances	78
4. Rental paid (incl. royalties Rs. 6 thous.)	22
5. Sales & other indirect taxes (less subsidies) (not included in total)	[880]
6. Other gross business income (before income tax)	1,633

**EMPLOYED COEFFICIENTS**

(in 1965 replacement value)

- Mach., equip., instruments & tools/per employee in direct production on 1st shift:	Rs. 3,040
- Value added per employee:	Rs. 9,020
- Annual wage per employee:	Rs. 1,650 <sup>1/</sup>
- Variable input costs/gross production ratio:	78.7% <sup>2/</sup>
- Gross profit/gross production ratio:	15.0%
(at full capacity: 16.4%)	
- Level of production at break-even point is approximately	28 % of the 1965 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition	% of repair
From 1963 to 1965		
a. Total Investment (Rs. thousand)	979	
- Land	-	-
- Land improvements	-	-
- Buildings	577	17
- Other construction work	-	-
- Machinery & equipment	325	20
- Tools & instruments	-	-
- Vehicles	65	15
- Office furniture & fixtures	12	5
b. Corresponding increase:	From 1963	to 1965
In no. of employees	228	249
In annual gross production		+ 65%

**2. Future Plan**

a. Investment proposed for the period 1967 to 1970	Total value (Rs. million)	1.5
Of which:	- Mach. & equipment	85 %
	- Land improv. & bldg.	10
	- Land	5
	- Others	-
b. Net increase in no. of employees envisaged for the same period:	- Direct production:	120
	- Auxiliary:	20
c. Purposes:	Introduction of racing bicycles, light running bicycles with gear arrangements; introduction of the process of eliminating brazing welding; expansion of the electrostatic plating shop, etc.	

**VIII. SUPPLEMENT**

Liquid assets and short term liabilities (end of 1965; Rs. thousand)

a. Cash on hand and in bank	1	a. Taxes payable	64
b. Marketable securities and bonds	91	b. Accounts payable	567
c. Accounts receivable	1,235	c. Borrowing from commercial banks	2,312
d. Advance to staff, etc.	9		

<sup>1/</sup> Average wages and salaries per employee.

<sup>2/</sup> Half of wages and salaries are taken as variable cost.

**MAJOR PRODUCTS:** Bicycles. Annual capacity output (with one shift) is about 23,000 bicycles.

**REPORTING UNIT:** An enterprise, founded in 1952, having total assets of Rs. 1.2 million (net worth Rs. 0.5 million) and employees 87 as of 1965.

**I. FIXED CAPITAL ASSETS**

	End of 1964 after deprec.	End of 1965 After deprec.
<b>TOTAL BOOK VALUE</b> ( 000 Rs. )	480	429
1. Land	5	5
2. Land improvements	-	-
3. Buildings	76	68
4. Other construction works	-	-
5. Machinery & equipment	331	298
6. Tools & instruments	24	20
7. Vehicles	24	20
8. Office furniture & fixtures	20	18

**DETAIL OF I.5 (No.)**

- a. Enamelling plant  
b. Electroplating plant  
c. Degreasing plant  
d. Debrassing plant  
e. Spokes plant  
f. Mudguard plant  
g. Shop equipment

Total Bk. value after deprec.	Avg. Age (Yr.)	Depr. Oper. rate Cond. (%)	1965 replac. value
Rs. 325,000	10	B 12 %	Rs. 350,000

**II. INVENTORIES**

(end of 1965)	Actual	Normal
<b>TOTAL VALUE</b> ( 000 Rs. )	384	- 22 %
1. Direct production materials	384	- 22
2. Other input materials		
3. Work in process	-	-
4. Finished products	-	-
- Normal inventories of finished products - % of annual gross production		
- Seasonal variations: ..		

Capacity of electr. motors: 184 KW

Total load, capacity of trucks: - t

All machines were domestically produced.

**GENERAL CONDITIONS:**

Transportation and water facilities, excellent. Electricity, fair.

Community facilities, poor.

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	87	-	-
1. Direct production ( all male )	83	-	-
Annual total manhours (000)	( 212 )	( )	( )
a. Enamelling shop	12	-	-
b. Electroplating shop	10	-	-
c. Degreasing shop	8	-	-
d. Debrassing shop	7	-	-
e. Spokes and hubs shop	22	-	-
f. Mudguard shop	13	-	-
g. Axles & cups shop	11	-	-
2. Auxiliary activities (all male )	-	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or Other	Sr. High sch. or Other	Other
84	2	1	84
<b>Management</b>			
-	1	1	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	21
<b>Semi-skilled</b>			
-	-	-	30
<b>Unskilled</b>			
-	-	-	32
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	1	-	-
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	-	1

- Actual hours worked per annum per direct production worker: 2,554 hours.

- Motors are fully occupied on the first shift.

- Mechanization and automation are generally fair.

- Skilled workers in direct production are: machine operators, welders, fitters, electricians, etc.

Those in auxiliary activities are: administrative assistants, sales and purchase assistants and accountants.

**IV. ANNUAL PRODUCTION (1965)**TOTAL VALUE OF PRODUCTION ( 000 Rs. ) 2,491

Product	Unit	Quantity Produced	Unit Value (Rs.)
a. Men's bicycles	No.	18,939	128.8
b. Ladies' bicycles	"	261	129.9
c. Children's bicycles	"	99	128.8
d. Others	000 Rs.	5	..

**CAPACITY OUTPUT:** 20 % higher than the 1965 actual production level with additional 9,600 hours on the first shift and sufficient supply of raw and intermediates materials. This in turn is constrained by a bottleneck in the electroplating shop. An investment of Rs. 50,000 on electroplating would raise the capacity by 50 % over the present production. Product-mix is flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price o.i.f.

Direct production material (h) is directly imported; (a) to (g) made domestically with significant import contents, (i) with little import contents. Freights are estimated as Rs. 300 to 600 per ton. Delivery mostly by railroad and road.

**V. INTERMEDIATE INPUTS (1965)**TOTAL VALUE OF CONSUMPTION ( 000 Rs. ) 1,741

1. Energy & water* total	Quantity consumed	Unit value (Rs.)
* Water is drawn from the tubewell of the establishment		
- Coal	ton	125
- Electricity	000 kWh.	119
- Fuel Oils	000 litre	44.7
- Lubricating oil	litre	537
<b>2. Direct production materials: total</b>		<b>1,441</b>
a. M.S. plates, sheets, etc.	ton	80
b. Steel tubes	"	90
c. Rubber tyres	000 No.	35
d. Rubber tubes	000 No.	34
e. Rims	000 prs.	18
f. Hubs	000 prs.	19
g. Painte	ton	5
h. Electroplating compound	kg	1,245
i. Welding material	kg	184
j. Consumable stores	000 Rs.	33
k. Others	000 Rs.	392
<b>3. Packaging materials: total</b>		<b>71</b>
a. Timber	cu. metre	211
b. Others	000 Rs.	20
<b>4. Work performed by sub-contractors ( )</b>		<b>..</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>		<b>110</b>
a. Parts and materials		97
b. Services purchased		13
<b>6. Material inputs for auxiliary activities</b>		<b>3</b>
Stationery and printing		
<b>7. Non-factor service inputs: total</b>		<b>86</b>
a. Transportation, insurance & storage		55
b. Communication, advertising and other business services		31

**VI. VALUE ADDED TOTAL 1965 ( 000 Rs. ) 750**

1. Wages & salaries (before income tax)	164
- Employees in direct production	(..)
- Other employees	(..)
2. Other expenditures for employees	10
3. Annual depreciation allowance	45
4. Rental paid	-
5. Sales & other indirect taxes (less subsidies) (not included in total)	[212]
6. Other gross business income (before income tax)	531

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 4,277 (Rs. 4,610 <sup>1/</sup>)
- Value added per employee: Rs. 8,621
- Annual wage per employee in direct production: Rs. 1,885 <sup>2/</sup>
- Variable input costs/gross production ratio: 65.2 %
- Gross profit/gross production ratio: 21.3 % (at full capacity 23.4 %)
- Level of production at break-even point is approximately 39 % of the 1965 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition	% of repairs
From 1963 to 1965		
a. Total Investment ( 000 Rs. )	381	
- Land	-	-
- Land improvements	-	-
- Buildings	51	25
- Other construction work	-	-
- Machinery & equipment	290	20
- Tools & instruments	7	65
- Vehicles	24	20
- Office furniture & fixtures	9	-
b. Corresponding increase:	From 1963	to 1965
In no. of employees	81	87
In annual gross production (incl. tax)	1.65	2.70
( Rs. million)		

**2. Future Plan: None**

- a. Investment proposed for the period 19 to 19
- Total value ( )
- Of which: - Mach. & equipment %
- Land improv. & bldg.
- Land
- Others
- b. Net increase in no. of employees envisaged for the same period: - Direct production:
- Auxiliary:

**c. Purpose:****VIII. SUPPLEMENT**Liquid assets and short-term liabilities

(end of 1965; 000 Rs.)

a. Cash on hand and in banks	8	a. Taxes payable	17
b. Marketable securities & bonds	9	b. Accounts payable	185
c. Accounts receivable	383		

<sup>1/</sup> Using the 1965 replacement value; <sup>2/</sup> Half of wages and salaries are taken as variable costs.  
<sup>2/</sup> Average of wages and salaries;

**MAJOR PRODUCTS:** Bicycles : Annual capacity is rated at 290,000 bicycles on one-shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets ¥ 2,300 million (net worth ¥ 500 million) and employees 500 as of 1964. Founded in 1918.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( ¥ million )	382.1	262.7
1. Land (9,700 m <sup>2</sup> )	60.8	60.8
2. Structure	5.7	3.4
3. Buildings (total floor space 8,900 m <sup>2</sup> )	208.5	152.4
4. Other construction works	-	-
5. Machinery & equipment	16.0	10.2
6. Tools & instruments	22.6	8.4
7. Vehicles	45.5	19.5
8. Office furniture & fixtures	23.0	8.0

DETAIL OF I.5 (No.)	Total bk. value bef. deprec.	Avr. Age (Yr.)	Oper. rate (%)	Depr. rate (%)	1964 replace. value
a. Motor-driven precision lathes (1)	.45	4	A	17.5	.40
b. Projection welders (2)	1.88	3	"	"	1.80
c. Horizontal oil hydraulic press equipment (1)	.56	2	"	"	.50
d. Pipe cutting equipment (2)	1.14	1	"	"	1.10
e. Heat boring machine (1)	.65	1	"	"	.70
f. Wheel assembling machine (1)	1.30	2	"	"	1.30
g. Air-boxers (3)	.37	4	B	"	.40
h. Trolley hoists (3)	.39	5	"	"	.40
i. Air drivers (14)	.30	2	A	"	.30
j. Slat conveyors (2)	1.80	2.9	A,B	"	2.00
k. Vibration testing machine (1)	.24	7	B	"	.30
l. Carbon analyser (1)	.28	7	"	"	.30
m. Transport conveyor (1)	1.30	2	A	"	1.30
n. Transport lift (1)	1.20	2	"	"	1.30
o. Others	4.14	..	..	..	..

**II. INVENTORIES** (end of 1964)

	Actual	Normal
<b>TOTAL VALUE</b> ( ¥ million )	263	-10 %
1. Direct production materials	58	-10
2. Other input materials	7	-20
3. Work in process	26	-10
4. Finished products	172	-10

- Normal inventories of finished products 5.5% of annual gross production

- Seasonal variations: Seasonal high (+ 70% above the normal) is attained in March and seasonal low (-20%), in September for (1) to (4).

Capacity of electr. motors: 300 KW

Total load, capacity of trucks: 2 t

All the machines were domestically produced. Average age of machinery (74% of total) is 2.6 years.

**GENERAL CONDITIONS:**

Transportation, public utilities, and educational facilities, excellent. Residential, health and recreational facilities, fair.

**III. LABOUR** (1964 average)

	1st shift			2nd shift			3rd shift		
	No.	Rate	Rate	No.	Rate	Rate	No.	Rate	Rate
<b>TOTAL EMPLOYED</b>	500	-	-	-	-	-	-	-	-
1. Direct production ( m. 140 )	200	-	-	-	-	-	-	-	-
Annual total manhours (000)	(427)	( )	( )	( )	( )	( )	( )	( )	( )
a. Cutting and processing of steel pipes	20								
b. Welding	10								
c. Coating with paint	10								
d. Frame assembling	30								
e. Wheel assembling	40								
f. Complete body assembling	60								
g. Mechanical article department	20								
h. Others	10								
2. Auxiliary activities ( m. 220 )	300								
a. Control of factory	10								
b. Management (including office work)	290								

**EDUCATIONAL BACKGROUND** (No. of employees)

Engi- neers	Other	Univ. or higher	Sr. High sch. or equiv.	Other
TOTAL	140	140	220	
<b>Management</b>				
(included in auxiliary).				
<b>Direct Production</b>				
Skilled				
Semi-skilled				
Unskilled				
- - - - - 110				
- - - - - 80				
- - - - - 10				
<b>Auxiliary Activities</b>				
Skilled				
- 90 80 10				
Semi-skilled				
- 50 55 10				
Unskilled				
- - - 5 -				

- Actual hours worked per annum per direct production worker: 2,135 hours.

- Proportion of motors occupied: 80% on 1st shift.

**Technological features:**

- Simple machine processing.
- Electric welding.
- Electrostatic painting and infrared drying.
- ,e) and f) Line assembly by conveyors.
- Machine processing.

- Mechanisation and automation generally excellent, except in (a) and (g) which are rated fair.

- Skilled workers in direct production are those engaged in wheel assembly and stretch chain making. Those in auxiliary activities are engaged in testing and accounting.

**IV. ANNUAL PRODUCTION (1964)**TOTAL VALUE OF PRODUCTION ( ¥ million ) 2,785

Product	Unit	Quantity Pro- duced	Unit Value ( ¥ mil.)
a. Bicycles, sports models	000 No.	56.1	13.3
b. Bicycles, light weight roadsters	"	76.5	12.6
c. Bicycles, roadsters	"	50.3	12.4
d. Bicycles, juvenile models	"	21.9	6.8
e. Bicycles, export models	"	16.4	7.2
f. Machine supplies	¥ million	184	..

**CAPACITY OUTPUT:**

30% higher than the 1964 actual level with additional 10 workers on 1st shift. Product mix is flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Bicycles and mechanical articles are partly exported.
- The direct production materials are all domestically produced with significant amounts of import contents. They are delivered by roads with freight rates 10 - 15% of c.i.f. value.

**V. INTERMEDIATE INPUTS (1964)**TOTAL VALUE OF CONSUMPTION ( ¥ million ) 2,146

1. Energy & water: total	Quantity Unit	Unit Value ( ¥ mil.)
- Electricity	000 KWH	300
2. Direct production materials: total		1,669
a. Steel pipes	ton	201.4
b. Round bars	"	89.1
c. Steel casting	"	45.0
d. Rims	000 No.	187.3
e. Handle bars	"	189.9
f. Tires and tubes	"	186.2
g. Saddles	"	187.5
h. Others (including materials for auxiliary activities)	¥ million	1,196
3. Packaging materials: total		92
Paper case	231,500 ( ¥ 395/ pc.)	
4. Work performed by sub-contractors ( see V111 )		162
5. Repairs & maintenance (materials & services purchased)		6
Of which services purchased	¥ 5.3 million.	
6. Material inputs for auxiliary activities (included in 2-h.)		
7. Non-factor service inputs: total		215
Transportation, insurance and storage (purchased separately)	¥ 119 million.	

**VI. VALUE ADDED**TOTAL 1964 ( ¥ million ) 639

1. Wages & salaries (before income tax)	
- Employees in direct production	80
- Other employees	206
2. Other expenditures for employees	120
3. Annual depreciation allowance	43
4. Rental paid ( land ¥ 21 mil., bldg. ¥ 13 mil.)	34
5. Indirect taxes (business tax)	15
(less subsidies)	
6. Other gross business income (before income tax)	141

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 193,000
- Value added per employee: ¥ 1,274,000
- Annual wage per employee in direct production: ¥ 400,000
- Variable input costs/gross production ratio: 71.0%
- Gross profit/gross production ratio: 5.1% (at full capacity : 10.6%)
- Level of production at break-even point is approximately 81 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition	Scrapped or sold
From 1962 to 1964		
a. Total Investment ( ¥ million )	168.4	
- Land	8.2	
- Land improvements	2.5	
- Buildings	154.2	
- Other construction work	-	
- Machinery & equipment	3.5	
- Tools & instruments	-	
- Vehicles	-	
- Office furniture & fixtures	-	
b. Corresponding increase:	From 1960	to 1962
In no. of employees	350	500
In annual gross production ( ¥ 000 million)	2.2	2.8

**2. Future Plan**

- a. Investment proposed for the period 1965 to 1966  
Total value ( ¥ million ) 5
- Of which: - Mach. & equipment 100 ¥  
- Land improv. & bldg. -  
- Land -  
- Others -
- b. Net increase in no. of employees envisaged for the same period:  
- Direct production: -  
- Auxiliary: -
- c. Purpose: Introduction of new processes.

**VIII. SUPPLEMENT**

Structure of liquid assets and short term liabilities (end of 1964; ¥ million).

Cash on hand and in bank 714; accounts receivable 929; prepaid expenses 29. Taxes payable 13; accounts payable 826  
short-term loans from commercial banks 746.

A subcontractor (with 70 employees) was engaged in making 168,000 frame forks from steel round bars, receiving fees ¥ 63.5 million. Brase was supplied by the subcontractor himself as an additional material. Another subcontractor (with 60 employees) was engaged in painting 139,500 sheet frames receiving ¥ 41 million. Both of them were more than 50% dependant on the establishment in terms of their annual proceeds. Other small subcontractors also worked for this enterprise for a total fee of ¥ 57.5 million in 1964.



IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)					
TOTAL VALUE OF PRODUCTION ( ¥ million ) <u>830.1</u>				TOTAL VALUE OF CONSUMPTION ( ¥ million ) <u>720.8</u>					
Product	Unit	Quantity Produced	Unit Value ( ¥ )	1. <u>Energy &amp; water: total</u>		Quantity consumed	Unit value ( ¥ )		
a. Roadsters	pos.	9,400	10,800	- Electricity	000 KWH	50	6,000		
b. Roadsters for women	"	17,510	10,100	2. <u>Direct production materials: total</u>			<u>552.1</u>		
c. Light weight roadsters	"	36,200	10,900	a. Frames	pos.	76,400	2,900		
d. Sports models	"	6,000	13,100	b. Tyres & tubes for bicycles	"	80,600	850		
e. Juvenile models	"	4,300	6,300	c. Rims	"	77,200	530		
f. Export models	"	5,000	5,200	d. Handle bars	"	71,400	440		
g. Parts and accessories for bicycles	000 ¥	25,500	..	e. Brakes	"	87,100	400		
CAPACITY OUTPUT: 30% higher than the 1964 actual production level with 10 additional workers on the 1st shift. Product - mix is flexible; especially (a) to (e) could preferably be increased at significantly higher rates than (f) for full capacity operation.				3. <u>Finishing materials: total</u>					<u>30.2</u>
Unit value of product: Market value f.o.b. before sales tax. Unit value of material: Market price full c.i.f.				- Paper and paper products				pos.	67,000 450
IV : (f) mostly exported; the rest partly exported. (g) is also partly used for the production of exports.				4. <u>Work performed by sub-contractors (see VIII )</u>					<u>37.2</u>
V.2: All production materials are domestically produced with a significant amount of import contents. Freight rates range from 20% for (a), 20 to 10% for (j), 10 to 5% for (b), to 5% for the rest. Delivery mostly by road.				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>					<u>..</u>
VI. VALUE ADDED TOTAL 1964 ( ¥ million ) <u>109.3</u>				- Parts and materials ¥ 300,000					
1. Wages & salaries (before income tax)				- Services purchased ¥ 100,000					
- Employees in direct production				6. <u>Material inputs for auxiliary activities</u>					<u>..</u>
- Other employees				7. <u>Non-factor service inputs: total</u>					<u>100.6</u>
2. Other expenditures for employees				- Transportation, insurance and storage services ¥ 22,300					
3. Annual depreciation allowance				- Communication, advertising and other business services ¥ 78,300					
4. Rental paid (land & buildings)				SELECTED COEFFICIENTS					
5. Business tax				- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 482,000 ( ¥ 640,000 1/ )					
6. Other gross business income (before income tax)				- Value added per employee: ¥ 1,051,000					
VII. EXPANSION: HISTORY & PLAN				- Annual wage per employee in direct production: ¥ 451,000					
1. <u>Recent Expansion</u> : Mons. From 19 to 19				- Variable input costs/gross production ratio: 77.6 %					
a. Total Investment ( )				- Gross profit/gross production ratio: 3.7%					
- Land				- (at full capacity : 8%)					
- Land improvements				- Level of production at break-even point is approximately 83 % of the 1964 actual level.					
- Buildings				2. <u>Future Plan</u>					
- Other construction work				a. Investment proposed for the period 1965 to 1967					
- Machinery & equipment				Total value ( ¥ million ) <u>90</u>					
- Tools & instruments				Of which: - Mach. & equipment				10	¥
- Vehicles				- Land improv. & bldg.				40	
- Office furniture & fixtures				- Land				50	
c. Corresponding increase: From 19 to 19				- Others				-	
In no. of employees				b. Net increase in no. of employees envisaged for the same period:					
In annual gross production ( )				- Direct production:				50	persons
				- Auxiliary:				-	
VIII. SUPPLEMENT				c. Purpose: Largely balanced expansion of the existing capacity in a new locality.					
Liquid assets and short-term liabilities (end of 1964: ¥ million)									
Cash on hand and in bank 187.8				Taxes payable 15.0					
Accounts receivable 250.1				Accounts payable 294.7					
Prepaid expenses 12.0				Short-term borrowing from commercial bank 148.0					
Work performed by subcontractors (details of V.4): A completely subordinated subcontractor (with 20 employees) painted 76,500 pieces of frames and other parts supplied by this enterprise.									
1/ The numerator is the estimated 1964 replacement value.									

An enterprise, founded in 1954, producing motor scooters. Annual capacity output is 38,000 scooters and more than 8,500 motors and other parts with two shifts (pig iron shop works three shifts). 14 % of products are exported, and 11 % of materials (such as pickled metal sheets, tubes, non-ferrous metal products and parts for scooters) are imported. Communication lines are not very good with respect to domestic and foreign markets.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)																																																																																																		
				1953-54	1955-57	1958-60	1961-63																																																																																															
TOTAL (Drs. million)		6,614	7,536	7	2,857	2,047	681																																																																																															
Buildings & land improvements		2,220	2,886	-	-	131	986																																																																																															
Machinery & equipment		3,891	4,100																																																																																																			
Other capital assets		503	550																																																																																																			
<p><u>Major machinery crucial for determining the overall production capacity:</u></p> <p><u>Scooters:</u> Semi-automatic lines for production of metal parts, pressure castings, surface coating, painting and assembly (2 shifts).</p> <p><u>Special motors:</u> Same machines as used for scooters, but of smaller scales (2 shifts).</p> <p>(About three quarters of machinery and equipment were imported.)</p>				<p>Calculated average age of fixed assets: <u>6.8</u> years</p> <p><u>Electric motors:</u></p> <p>Total installed capacity: <u>1,334</u> KW</p> <p>Of which actually operated in 1965:</p> <p>1st shift <u>98</u> %; 2nd shift <u>39</u> %; 3rd shift <u>2</u> %</p> <p><u>Technological features:</u> Serial production of medium scale. The degree of mechanisation and automation is, reportedly, close to an 80 % level. Product-mix is appropriate from the standpoint of both technological and sales efficiency.</p>																																																																																																		
<p>II. LABOUR (1965)</p> <p>TOTAL no. of employees: <u>1,952</u></p> <table border="1"> <thead> <tr> <th></th> <th>1st shift</th> <th>2nd shift</th> <th>3rd shift</th> </tr> </thead> <tbody> <tr> <td>1. Factory workers:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total 1,431 persons</td> <td>946</td> <td>471</td> <td>14</td> </tr> <tr> <td>(2,480 thous. manhrs.)</td> <td>(1,640)</td> <td>(816)</td> <td>(24)</td> </tr> <tr> <td>- Processing of pig iron</td> <td>53</td> <td>22</td> <td>11</td> </tr> <tr> <td>- Production of parts from metal sheets</td> <td>202</td> <td>156</td> <td>-</td> </tr> <tr> <td>- Mechanical processing</td> <td>257</td> <td>198</td> <td>-</td> </tr> <tr> <td>- Assembly</td> <td>198</td> <td>22</td> <td>-</td> </tr> <tr> <td>- Tool shop</td> <td>129</td> <td>8</td> <td>-</td> </tr> <tr> <td>- Auxiliary shops</td> <td>107</td> <td>65</td> <td>3</td> </tr> <tr> <td>2. Non-factory workers:</td> <td>521 persons</td> <td></td> <td></td> </tr> <tr> <td></td> <td>(1,361 thous. manhours)</td> <td></td> <td></td> </tr> </tbody> </table>			1st shift	2nd shift	3rd shift	1. Factory workers:				Total 1,431 persons	946	471	14	(2,480 thous. manhrs.)	(1,640)	(816)	(24)	- Processing of pig iron	53	22	11	- Production of parts from metal sheets	202	156	-	- Mechanical processing	257	198	-	- Assembly	198	22	-	- Tool shop	129	8	-	- Auxiliary shops	107	65	3	2. Non-factory workers:	521 persons				(1,361 thous. manhours)					<p><u>Educational background of workers:</u></p> <table border="1"> <thead> <tr> <th></th> <th>Tech. High.</th> <th>Elem.</th> <th>Low</th> <th>Others</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Univ. or higher</td> <td>15</td> <td>4</td> <td>2</td> <td>1</td> <td>22</td> </tr> <tr> <td>Tech. Higher sch.</td> <td>-</td> <td>2</td> <td>-</td> <td>5</td> <td>7</td> </tr> <tr> <td>Secondary sch.</td> <td>72</td> <td>23</td> <td>-</td> <td>26</td> <td>121</td> </tr> <tr> <td>Primary school</td> <td>-</td> <td>-</td> <td>-</td> <td>1,802</td> <td>1,802</td> </tr> </tbody> </table>					Tech. High.	Elem.	Low	Others	Total	Univ. or higher	15	4	2	1	22	Tech. Higher sch.	-	2	-	5	7	Secondary sch.	72	23	-	26	121	Primary school	-	-	-	1,802	1,802																	
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<p>VI. SUPPLEMENT</p> <p><u>Future plans:</u></p> <p>a) Elimination of bottlenecke. b) Introduction of new equipment to increase serial output. c) To raise the degree of mechanisation and automation to a 90 % level.</p> <p>1/ Of which Drs. 295 million are funds belonging to the enterprise. 2/ Gross accumulation includes interests paid.</p>				<p>V. VALUE ADDED (1963) (Drs. Million)</p> <table border="1"> <thead> <tr> <th></th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>TOTAL (except turnover tax)</td> <td>4,005</td> </tr> <tr> <td>- Wages of factory workers</td> <td>1,265</td> </tr> <tr> <td>- Salaries of non-factory workers</td> <td>585</td> </tr> <tr> <td>- Depreciation</td> <td>427</td> </tr> <tr> <td>- Interests paid</td> <td>687</td> </tr> <tr> <td>- Other accumulation</td> <td>1,041 1/</td> </tr> <tr> <td>(Turnover tax)</td> <td>(477)</td> </tr> </tbody> </table> <p><u>SELECTED COEFFICIENTS</u></p> <table border="1"> <tbody> <tr> <td>- Mech. &amp; equip. per factory worker on 1st shift: Drs.</td> <td>4,330,000</td> </tr> <tr> <td>- Value added per employee: Drs.</td> <td>2,050,000</td> </tr> <tr> <td>- Annual wage per factory worker: Drs.</td> <td>884,000</td> </tr> <tr> <td>- Variable input cost/gross production ratio:</td> <td>50.5 %</td> </tr> <tr> <td>- Gross accumulation/gross production ratio:</td> <td>19.7 %</td> </tr> <tr> <td>(at full capacity)</td> <td>21.2 %</td> </tr> <tr> <td>- Level of production at break-even point:</td> <td>60 % of the 1963 actual level.</td> </tr> </tbody> </table>					Value	TOTAL (except turnover tax)	4,005	- Wages of factory workers	1,265	- Salaries of non-factory workers	585	- Depreciation	427	- Interests paid	687	- Other accumulation	1,041 1/	(Turnover tax)	(477)	- Mech. & equip. per factory worker on 1st shift: Drs.	4,330,000	- Value added per employee: Drs.	2,050,000	- Annual wage per factory worker: Drs.	884,000	- Variable input cost/gross production ratio:	50.5 %	- Gross accumulation/gross production ratio:	19.7 %	(at full capacity)	21.2 %	- Level of production at break-even point:	60 % of the 1963 actual level.																																																																	
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An enterprise producing clocks and water gauges. Founded in 1950. Annual capacity output is around 0.6 million pieces of table clocks; 60,000 pieces of water gauges and etc. on partial two shifts operation. Parts for the clocks are of foreign origins; 5% of the output is directly exported.

I. FIXED CAPITAL (end of 1965)	Original purchase value	1965 re- placement value	Capital expenditures in the past years: (Drs. million)			
			1953-54	1955-57	1958-60	1961-63
TOTAL (Drs. million)	925	1,066	205	78	96	375
Buildings & land improvements	366	476	24	43	55	88
Machinery & equipment	557	590				
Other capital assets	2	-				
<p><u>Major machinery crucial for determining the overall production capacity:</u></p> <p><u>Clocks:</u> universal and semi-automatic machines for assembly. Equipment for finishing (2 or 1 shifts).</p> <p><u>Water gauges:</u> universal machines for assembly and finishing (2 or 1 shifts).</p> <p>77% of machinery and equipment were imported.</p>			<p>Gross expenditures</p> <p>Retirements</p> <p>Calculated average age of fixed assets: 6.6 years</p> <p><u>Electric motors:</u></p> <p>Total installed capacity: 443 KW</p> <p>Of which actually operated in 1965:</p> <p>1st shift 100 \$; 2nd shift 88 \$; 3rd shift 7 \$</p> <p><u>Technological features:</u></p> <p>Production of clock involves cutting, surface protection, etc. The core process of water gauge production is the moulding of plastic masses. The degree of automation is rather low compared to the world standard. Product mix is from the standpoint of technological efficiency considered as too large. Good communication lines.</p>			

II. LABOUR (1965)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. <u>Factory workers:</u>			
Total 687 persons	552	115	20
(1,200 thous. manhrs.) (960)	(204)	(36)	
- Pressing and other metal processing	61	34	20
- Assembly	190	33	-
- Special machine operation	51	27	-
- Galvanisation	65	21	-
- Finishing of gauges	29	-	-
- Auxiliary	156	-	-
2. <u>Non-factory workers:</u> 335 persons			
(718 thous. manhours)			

Educational background of workers:	Total				
	Techn. High.	Elem.	Low	Others	Total
Univ. or higher	14	6	2	2	24
Techn. Higher sch.	3	-	2	1	6
Secondary sch.	23	18	-	23	64
Primary school	-	-	-	928	928

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. Million)
	TOTAL actual consumption 1965	
1. <u>Energy inputs:</u> total		13
- Electricity	567 kWh	12
- Liquid fuel	9 t	1
2. <u>Major production materials:</u> total		792
- Rolled ferrous products	231 t	51
- Drawn ferrous products	28 t	31
- Non-ferrous metal products	138 t	138
- Others *	..	572
* Of which Drs. 85 million were imported.		
3. <u>Repairs &amp; maintenance:</u> total		20
4. <u>Other material &amp; non-factor service inputs</u>		209

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1965 *		2,196
- Table clocks	559,484 pos.	1,240
- Wall clocks	567 "	7
- Laboratory clocks	4,504 "	14
- Water gauges	53,649 "	671
- Other installation material	9 t	153
- Pieces of furniture	3,242 pos.	39
- Other products	..	72
* Including turnover tax on sold products.		

V. VALUE ADDED (1965)	(Drs. Million)
TOTAL (except turnover tax)	974
- Wages of factory workers	369
- Salaries of non-factory workers	185
- Depreciation	41
- Interests paid	90
- Other accumulation (Turnover tax)	289

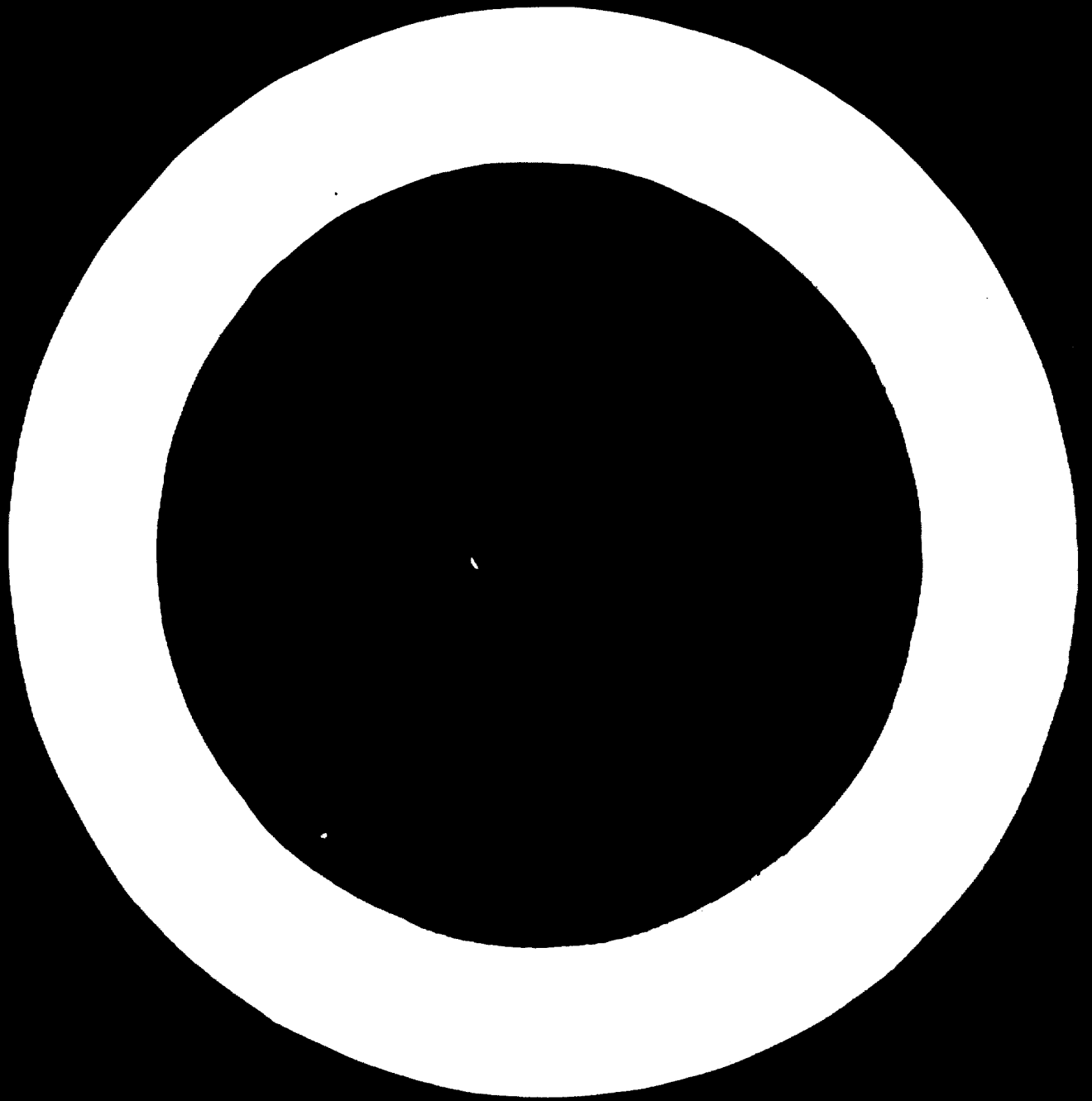
Capacity output:		Overall rate of utilization is 96%
- Table clocks	580,000 pos.	
- Water gauges	60,000 pos.	
- Staircase automatic switches	10,000 pos.	
- Others	175,000,000 Drs.	
Underutilization due to disparities between capacities of different processes, especially shortage of cutting tools. The supply of raw materials is often delayed. Optimum number of factory workers on the 1st. shift for full utilization is estimated to be no more than 530.		

SELECTED COEFFICIENTS	
- Mach. & equip. per factory worker on 1st shift:	Drs. 1,475,000
- Value added per employee:	Drs. 953,000
- Annual wage per factory worker:	Drs. 537,000
- Variable input cost/gross production ratio:	40 %
- Gross accumulation/gross production ratio:	18.8 %
(at full capacity)	20.4 %
- Level of production at break-even point:	68 % of the 1965 actual level.

VI. SUPPLEMENT	Future plans:
1/ Of which Drs. 98 million are funds belonging to the enterprise.	Improvement of the existing production processes, specifically over-hauling of the facilities for galvanisation and automatic finishing.
2/ The denominator - 400 (i.e. excludes the workers on "auxiliary shop").	
3/ Wages and salaries are considered as fixed costs.	
4/ Gross accumulation includes interests paid.	

An enterprise producing pencils, pens and other office supplies. Founded in 1937. Annual capacity output is 0.5 million gross pencils and 1.25 million pieces of pens on three-shift operation (scale shop is working only on one shift). 12% of the material expenditures (timber, dyes, graphite and golden pens) are imported; products are 30% for domestic use.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 re- placement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		700	1,110	22	99	79	91		
Buildings & land improvements		235	306	19	89	56	91		
Machinery & equipment		451	804						
Other capital assets		14	-						
<b>Major machinery crucial for determining the overall production capacity:</b>									
Pencils: machinery for the processing of timber and automatic machinery for plastics filling and preening (2 shifts); Pens and propelling pencils: semi-automatic machinery of smaller capacity for the processing of plastics.									
Almost one third of machinery and equipment is of foreign origins.									
				Calculated average age of fixed assets: 9 years					
				Electric motors: 759 KW					
				Total installed capacity: _____ KW					
				Of which actually operated in 1963:					
				1st shift 95 %; 2nd shift 33 %; 3rd shift 7 %					
				Technological features: Mechanised, large-scale production of pens and pencils. Mechanisation and automation fall short by about 25% and 50%, respectively. For other articles, the scale of production depends on demand: Production of 230 different articles altogether seems to impose a strain on technological efficiency. Good communication line with the source of raw materials.					
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn. Econ.	Low	Others	Total	
1. Factory workers:									
Total	664 persons	444	156	64	12	10	2	5	29
	(1283 thous. manhrs.)	(839)	(312)	(132)	-	1	-	-	1
- Pencils		140	59	25	8	21	1	2	32
- Soles		49	-	-	-	-	-	-	789
- Miscellaneous school supplies		80	35	17	-	-	-	-	789
- Pencil refillers		20	10	5					
- Processing of timber		85	35	15					
- Inks		34	10	-					
- Ancillary services		36	7	2					
2. Non-factory workers:		187 persons							
		(377 thous. manhours)							
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	IV. INTERMEDIATE INPUTS					
TOTAL actual revenue output 1963 *		2,686		Quantity		Value (Drs. Million)			
- Pencils		492,000 gross	1,194	TOTAL actual consumption 1963					
- Pens		1,130,000 pce	630	1. Energy inputs: total					
- Propelling pencils		451,000 pce	111	- Electricity					
- Soles		451,000 pce	26	- Wasted timber					
- Erasers		2,980,000 pce	64	2. Major production materials: total					
- Pencil sharpeners		437,000 pce	25	- Timber					
- Pencil refillers		53,000 pce	130	- Round timber					
- Ink, Indian ink, etc.		2,212,000 btle.	208	- Other out timber					
- Faint brushes		617,000 pce.	24	- Timber boards					
- Others		..	274	- Plastic masses					
				- Dyes					
				- Metals (plates)					
				- Packaging materials (glass, paper and plastics)					
				- Others					
				3. Repairs & maintenance: total					
				4. Other material & non-factor service inputs					
				V. VALUE ADDED (1963) (Drs. Million)					
				TOTAL (except turnover tax)					
				- Wages of factory workers					
				- Salaries of non-factory workers					
				- Depreciation					
				- Interests paid					
				- Other accumulation					
				(Turnover tax)					
				VI. SUPPLEMENT Future Plans					
				a) Introduction of drawing and writing supplies for professional use;					
				b) Mechanization of production of pencils, especially in respect to packaging, internal transport and assembly-line system;					
				c) Overhauling of the plastic-processing shop.					
				1. Of which Drs. 113 million are funds belonging to the enterprise.					
				2. Wages and salaries are considered as fixed costs in the vicinity of current operation scale.					
				SELECTED COEFFICIENTS					
				- Mech. & equip. per factory worker on 1st shift: Drs. 1,810,000					
				- Value added per employee: Drs. 1,197,000					
				- Annual wage per factory worker: Drs. 605,000					
				- Variable input cost/gross production ratio: 2/ 45.5%					
				- Gross accumulation/gross production ratio: 3/ 18.4%					
				(at full capacity 23.1%)					
				- Level of production at break-even point: 2/66 % of the 1963 actual level.					
				3/ Gross accumulation includes interests paid.					



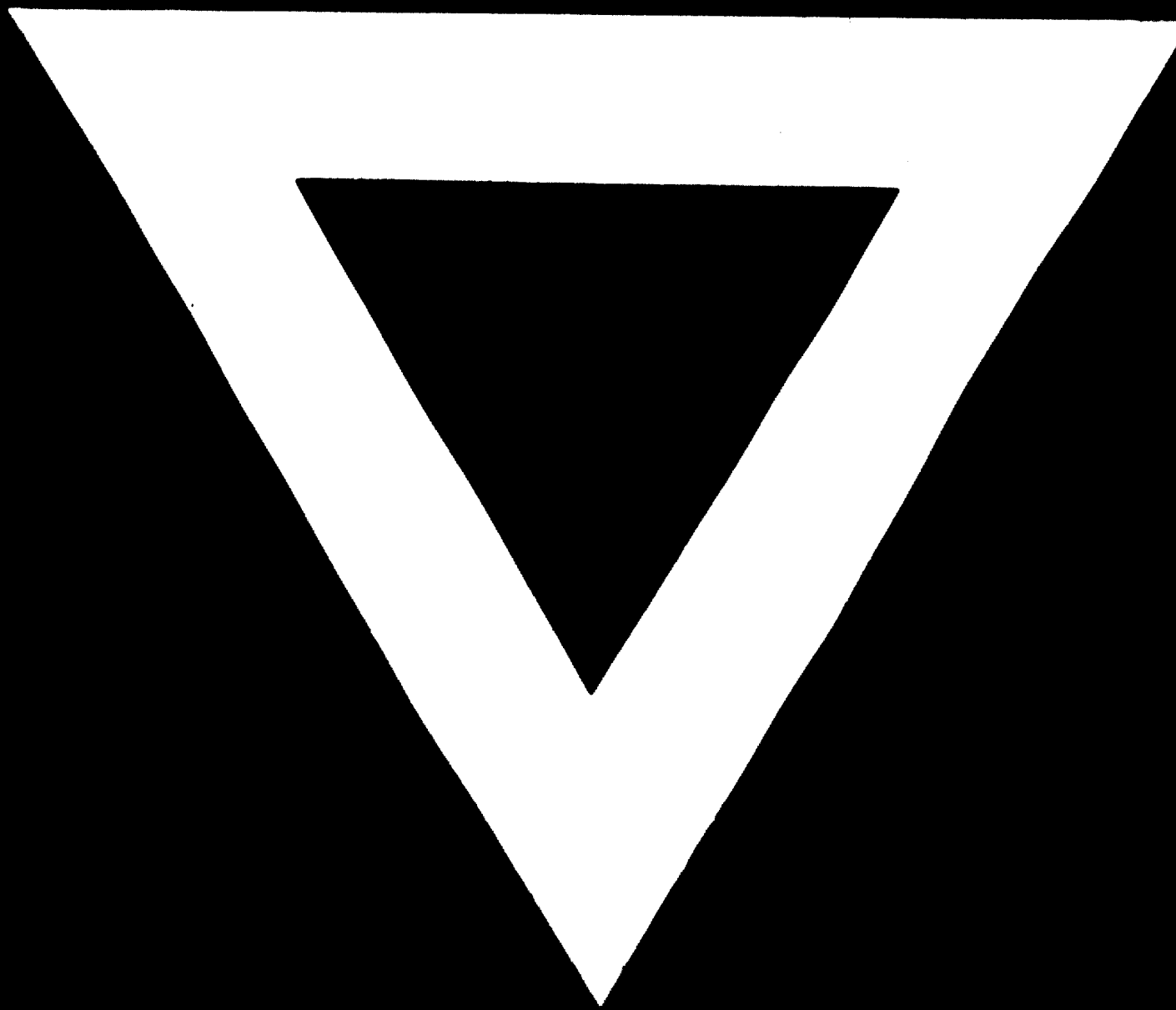
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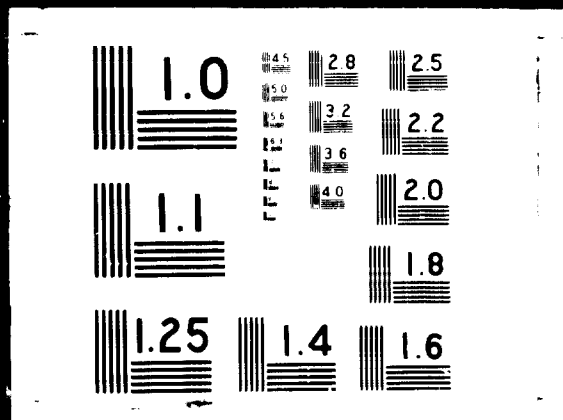
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<i>Pais</i>	<i>Clasificación</i>	<i>Principales productos</i>	<i>Vol.</i>	<i>Pág.</i>
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## INTRODUCCIÓN

1. Este segundo volumen de *Perfiles* es una adición al *Volumen I* publicado a comienzos de 1968<sup>1</sup>. Los dos volúmenes se refieren a los mismos países y en ambos se presentan los datos en idéntica forma.

2. El presente volumen contiene muestras adicionales de establecimientos modelo correspondientes a los 19 (CUCI 3 cifras) grupos industriales representados en el Volumen I, así como a establecimientos clasificables bajo otros grupos industriales, como los siguientes: 232 (fábricas de tejidos de punto); 243 (prendas de vestir); 251/252 y 260 (industrias de la madera y fabricación de muebles); 291 (curtidurías); 300 (fabricación de productos de caucho); 312 (aceites y grasas vegetales y animales); 331 (productos de arcilla para construcción); 332 (fabricación de vidrio); 339 (productos de hormigón, asbesto y yeso); y 370 (maquinaria, accesorios y artículos eléctricos). En este volumen se presenta un total de 461 muestras de establecimientos de cinco países (Francia, India, Israel, Japón y Yugoslavia), incluso los 290 establecimientos ya incluidos en el Volumen I. Para conveniencia del lector, el Volumen II contiene una lista consolidada de los establecimientos incluidos en ambos volúmenes.

3. La *Nota Técnica I* (Criterios seguidos para la selección de establecimientos) y la *Nota Técnica II* (Notas explicativas sobre los datos recopilados) incluidas en el Volumen I, se aplican igualmente a este volumen sin modificación alguna y no se reproducen en el presente trabajo. Para facilitar la consulta, se repiten en los párrafos siguientes ciertos puntos de especial importancia.

4. Como se explica en la *Introducción* al Volumen I, el objeto fundamental de la serie es presentar un "zoológico" de ejemplares vivos de establecimientos industriales que puede ser estudiado por diversos interesados con distintos fines. Aquí cabe repetir que lo que se desea "no es imponer a quienes consulten la serie la idea apresurada de que se trata de ejemplares "representativos" sino invitarles más bien a familiarizarse con la multitud de posibilidades que existen en la realidad". Aunque este concepto pueda ser considerado la característica especial del criterio que ha inspirado la reunión

de esos datos, es preciso al mismo tiempo interpretarlo también como una advertencia contra la posibilidad de atribuir equivocadamente a esos "perfiles" un sentido que no tienen.

5. Esto quiere decir que los datos se han recogido con mucha fidelidad en cada establecimiento o empresa seleccionados procurando que reflejen el rendimiento anual real; y sin hacer más que una "normalización" limitada de las observaciones. En la mayor parte de los casos esa normalización consistió en corregir errores obvios de información y las desviaciones transitorias o anomalías triviales que hubieran hecho confusa la estructura básica de las explotaciones productivas. Los ajustes hechos fueron generalmente de menor importancia. Los datos recopilados incluyen varios factores particulares de establecimientos determinados, como mercados, dirección, métodos contables y otras condiciones relacionadas con los antecedentes y el medio ambiente. El lector de los *Perfiles* que tenga interés en la delimitación explícita de las "normas" de programación para industrias determinadas deberá hacer sus propios análisis preliminares, de acuerdo con sus necesidades particulares, estableciendo comparaciones entre establecimientos, países e industrias. Cuando la colección de datos presentados en esta serie sea suficientemente amplia, la ONUDI preparará un digesto analítico, cuya forma no ha sido aún determinada, para facilitar la compulsa por los interesados que no sean expertos.

6. Quizá sea conveniente volver a explicar cómo se enfoca en los *Perfiles* el concepto indicativo de "rentabilidad", ya que a pesar de la explicación dada en la *Nota Técnica II*, algunas de las solicitudes de aclaraciones recibidas de los lectores hacen pensar que se trata de un punto más bien débil del sistema seguido para la presentación de los datos. Puede considerarse que los "Otros ingresos comerciales brutos" (Sección VI. Partida 6) están constituidos por el impuesto sobre los ingresos de las sociedades, los dividendos, las utilidades no distribuidas (cifra neta menos las asignaciones para amortización) y los intereses pagados por las deudas de la empresa. Esta suma ha de corresponder a la relación producción-consumo durante el año estudiado y no a las constancias de la relación efectiva ingresos-gastos en ese mismo período. Como se explica en la

<sup>1</sup> Organización de las Naciones Unidas para el Desarrollo Industrial, *Perfiles de Establecimientos Industriales* Vol. I (ID/SER. E/4; N° de venta E. 67.II.B.17; 5 dólares EE.UU.)

*Nota Técnica II* (Vol. I), esto implica que las variaciones netas de las existencias durante el año estudiado son evaluadas a los mismos precios utilizados para valorar las ventas y compras efectuadas durante ese año. Las ganancias de capital relacionadas con las existencias y otros haberes, si existen, así como los ingresos obtenidos de la venta de equipo considerado de desecho, se omiten de esta denominación contable orientada hacia la producción<sup>2</sup>.

7. Se ha de observar también que la partida "utilidades brutas" que figura entre los *Coefficientes Seleccionados* es idéntica a la de "otros ingresos comerciales brutos" de la Sección VI, partida 6. Esta terminología se aparta de la convencional. Para ciertos fines, quizá sea preferible que las "utilidades brutas" estén representadas por "otros ingresos comerciales brutos" más la "asignación anual para amortización". En el caso de los perfiles correspondientes a Yugoslavia, los "intereses pagados" por las deudas de la empresa se presentan separadamente de "otras

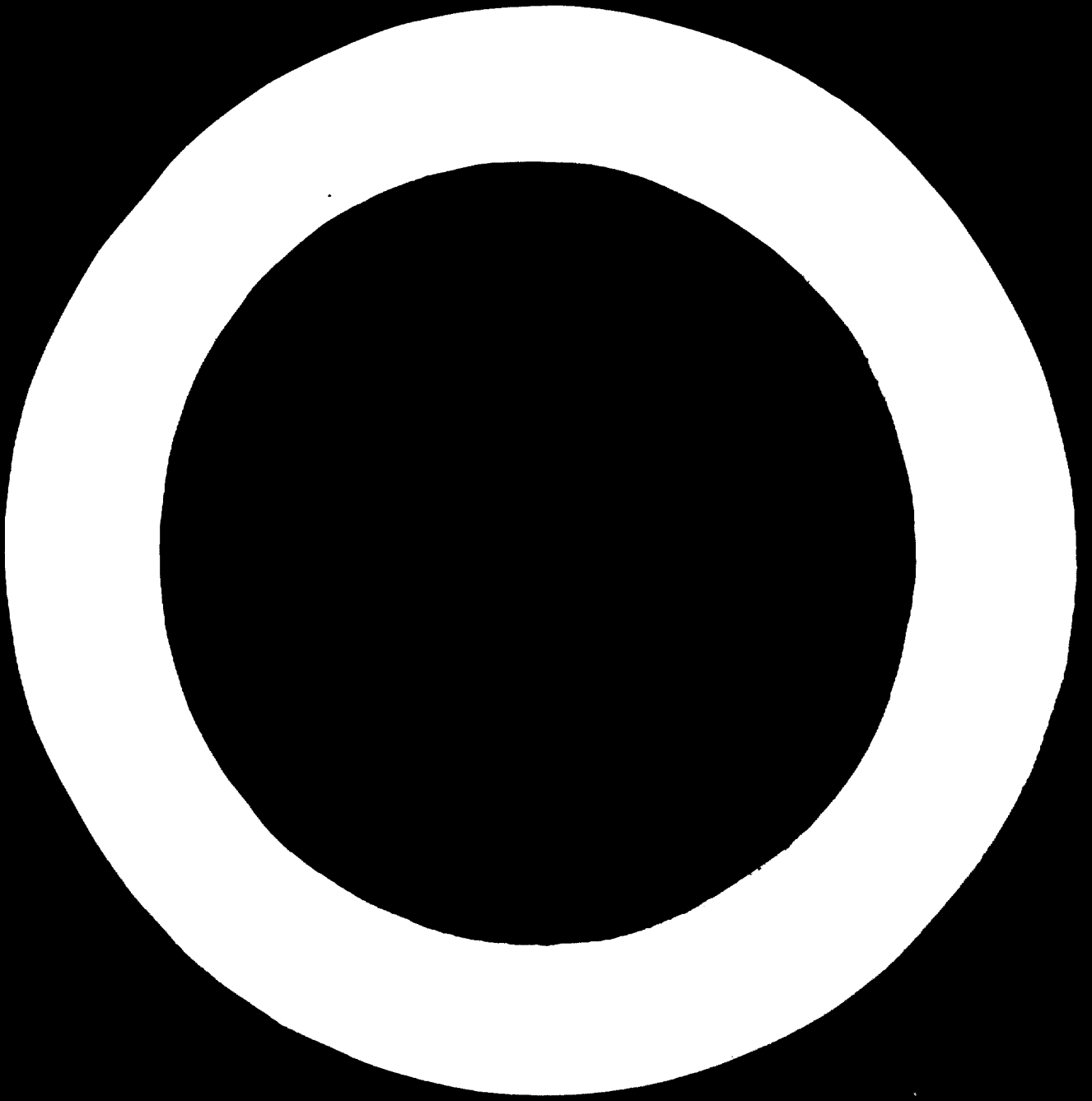
<sup>2</sup> El volumen anual de producción depende en realidad de la política de control de existencias aplicada por la empresa en el año de referencia, la que a su vez refleja la tendencia cambiante de la demanda. Pero los datos presentados en los *Perfiles* no suponen en general ningún ajuste arbitrario en relación con el desequilibrio entre el nivel real de producción y el nivel deseado.

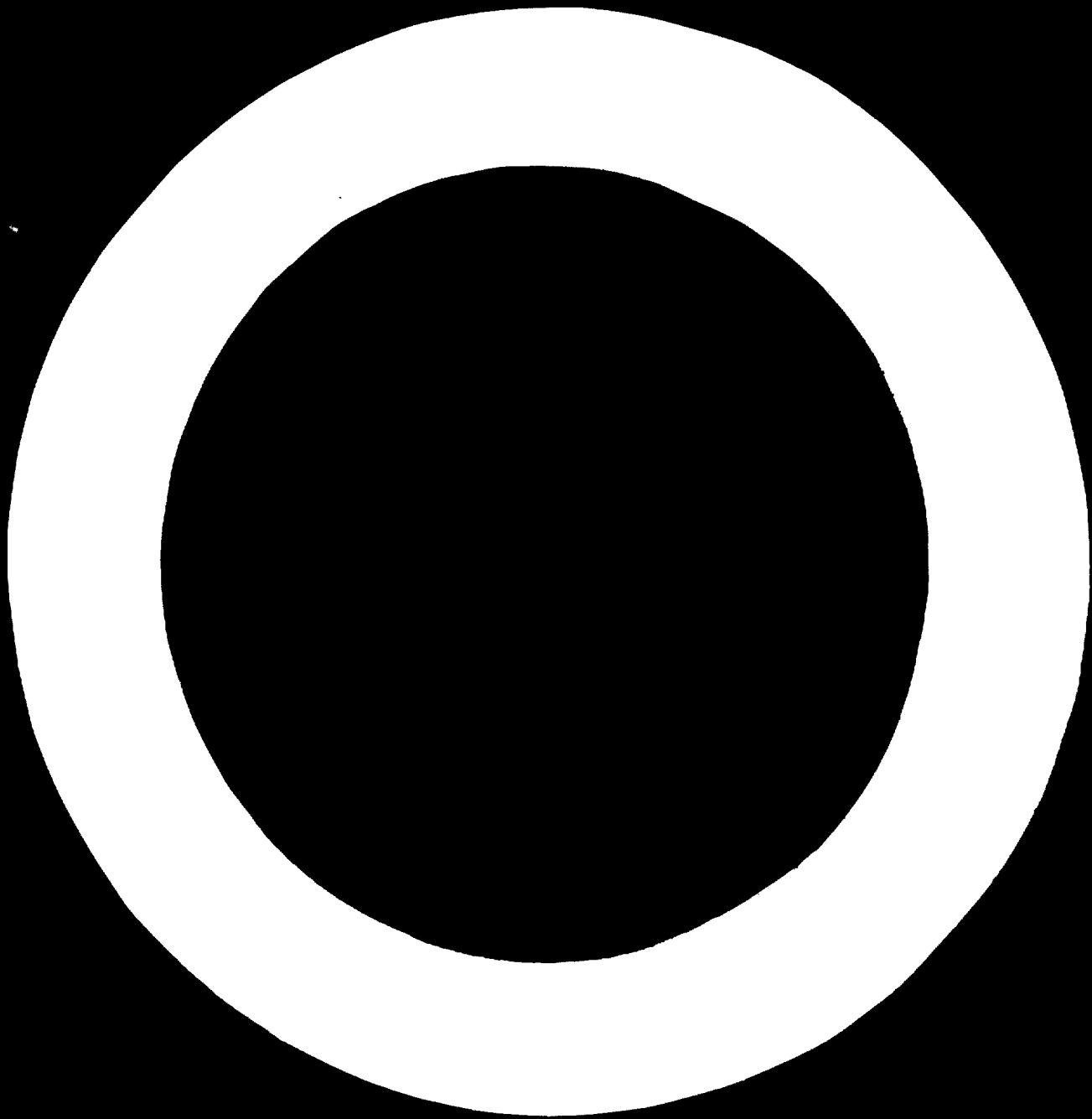
acumulaciones". Como no se dispone de una distinción similar en el caso de los otros cuatro países, la expresión "acumulaciones brutas" utilizada en los *Coefficientes Seleccionados* se aplica a la suma de "otras acumulaciones" más los "intereses pagados" a fin de facilitar la comparación.

8. El "umbral de rentabilidad" significa simplemente un ejercicio aritmético basado en el curso hipotético, altamente simplificado, que sigan los gastos de corta duración variables/fijos, entendiéndose también aquí que las utilidades incluyen el interés. Se espera poder presentar, en volúmenes posteriores de los *Perfiles* algunas observaciones concretas sobre el primer "umbral de rentabilidad" alcanzado por un establecimiento determinado en su fase inicial de funcionamiento.

9. Toda pregunta, observación, crítica o sugerencia que desee hacerse en relación con los *Perfiles*, puede dirigirse a:

Industrial Programming Section  
United Nations Industrial Development  
Organization  
Felderhaus, Rathausplatz 2  
Viena, A-1010, Austria





**Организация Объединенных Наций по  
промышленному развитию  
Вена**

**Сборник по промышленному планированию  
и программированию № 5**

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**ПРОФИЛИ  
ОБРАБАТЫВАЮЩИХ  
ПРЕДПРИЯТИЙ**

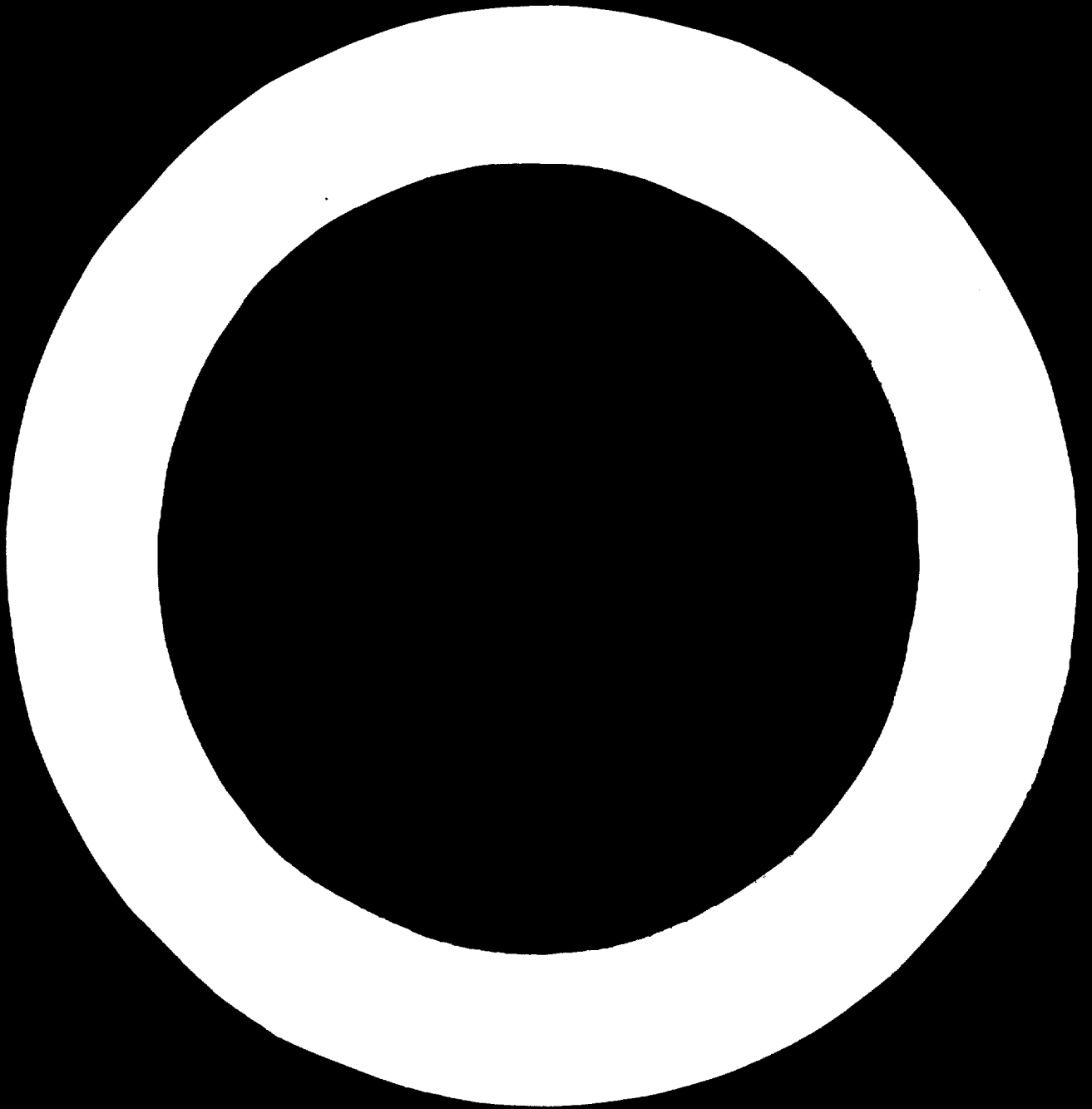
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**Том II**



**ОРГАНИЗАЦИЯ ОБЪЕДИНЕННЫХ НАЦИЙ**

**Нью-Йорк, 1968 год**

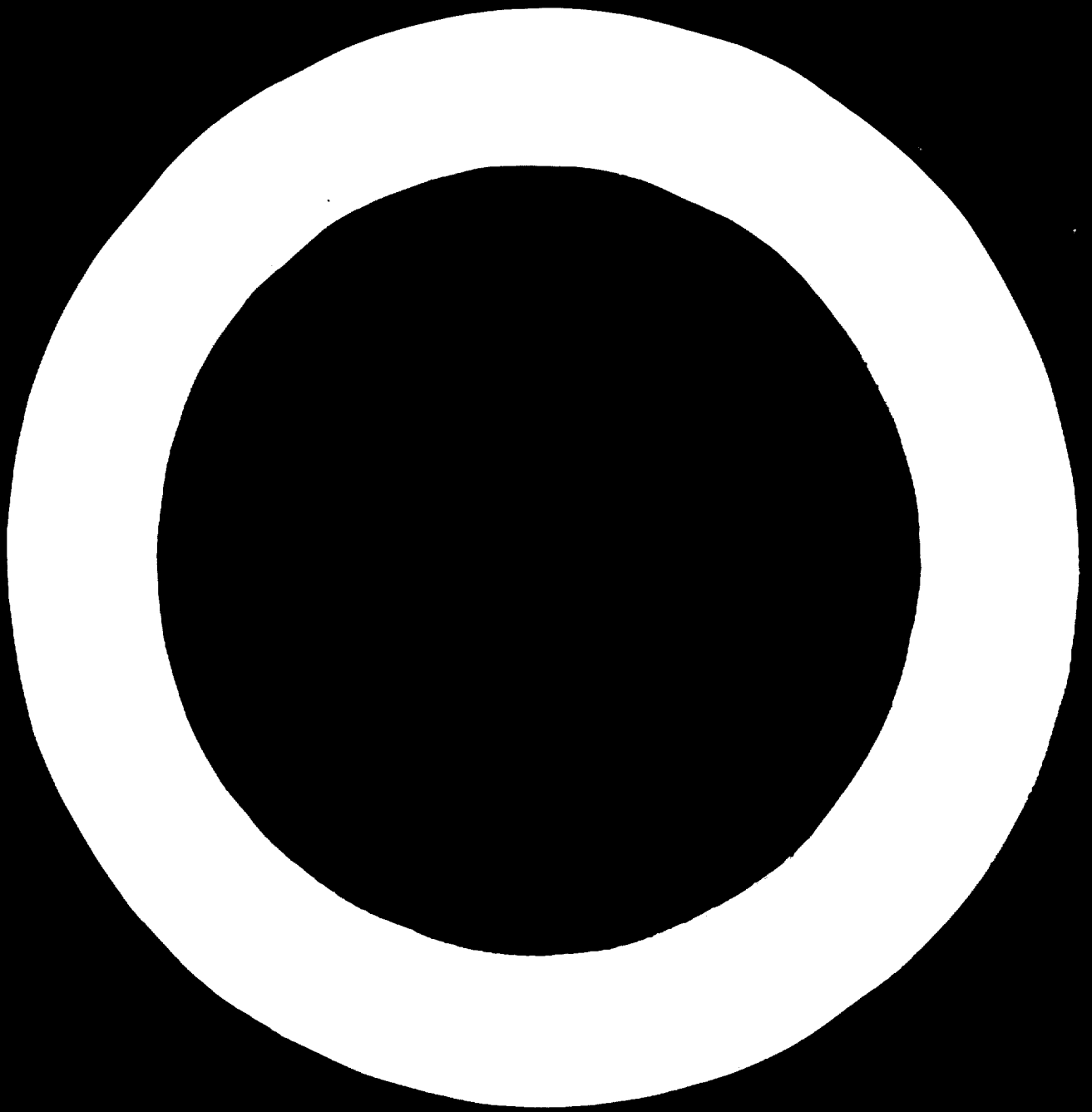


## ПРЕДИСЛОВИЕ

Этот документ является вторым изданием сборников *„Профилей“*, которые были разработаны ЮНИДО в качестве составной части ее службы накопления информации в области промышленного программирования и планирования проектов. Подготовка материалов для первого и второго томов стала возможной благодаря внебюджетному финансовому взносу правительства Швеции. ЮНИДО еще раз желает выразить свою благодарность правительству Швеции за эту ценную помощь и поблагодарить группу консультантов и руководителей отдельных предприятий, которые сотрудничали в подготовке *сборников*.

Том III этой серии, содержащий сводную информацию различных групп стран в несколько пересмотренном виде, находится в настоящее время в стадии разработки и будет опубликован в начале 1969 года.





## ПРОФИЛИ ПРЕДПРИЯТИЙ ОБРАБАТЫВАЮЩЕЙ ПРОМЫШЛЕННОСТИ

Сводный перечень предприятий, упоминаемых в томе I и томе II

Страна	Классификация	Основные продукты	Том	Страница
ПРОИЗВОДСТВО МОЛОЧНЫХ ПРОДУКТОВ				
Франция	: 202-(1)	Молоко, стерилизованное и пастеризованное, йогурт, свежие сливки и сыр . . . . .	I	16
Франция	: 202-(2)	Молоко стерилизованное, пастеризованное и порошковое, масло и т.д. . . . .	I	18
Франция	: 202-(3)	Пастеризованное молоко, масло, сливки и т.д. . . . .	I	20
Франция	: 202-(4)	Порошковое молоко, сыр, казеин и т.д. . . . .	II	364
Индия	: 202-(1)	Молоко пастеризованное и порошковое, мороженое, масло и ги . . . . .	I	22
Индия	: 202-(2)	Пастеризованное молоко, масло, ги, сливки и т.д. . . . .	I	24
Израиль	: 202-(1)	Стерилизованное молоко, сливки, обезжиренный творог, масло и т.д. . . . .	I	26
Израиль	: 202-(2)	Творог, сыр, сметана, масло, мороженое и т.д. . . . .	I	28
Израиль	: 202-(3)	Мороженое . . . . .	I	30
Югославия:	202-(1)	Молоко порошковое, сгущенное и сгущенное стерилизованное, яичный порошок, и т.д. . . . .	I	32
Югославия:	202-(2)	Порошковое молоко и яичный порошок, сыр, масло и т.д. . . . .	I	33
Югославия:	202-(3)	Йогурт, масло, сыр, мороженое и т.д. . . . .	I	34
Югославия:	202-(4)	Масло, сыр и другие молочные продукты . . . . .	II	366
КОНСЕРВИРОВАНИЕ ПИЩЕВЫХ ПРОДУКТОВ				
Индия	: 203-(1)	Консервирование фруктов и овощей . . . . .	I	36
Израиль	: 203-(1)	Консервирование фруктов и овощей . . . . .	I	38
Израиль	: 203-(2)	Консервирование фруктов и овощей . . . . .	I	40
Япония	: 203/4-(1)	Консервирование рыбы и фруктов . . . . .	I	42
Япония	: 203/4-(2)	Консервирование рыбы и фруктов . . . . .	I	44
Япония	: 203/4-(3)	Консервирование рыбы . . . . .	I	46
Югославия:	204-(1)	Консервирование рыбы и производство сухой рыбной муки . . . . .	II	368
Югославия:	203/1-(2)	Обработка и упаковка овощей и мяса (включая консервирование) . . . . .	II	369
Югославия:	203/211-(3)	Консервирование овощей, обработка фруктов и производство алкогольных напитков . . . . .	II	370
ПРОИЗВОДСТВО ИЗДЕЛИЙ МУКОМОЛЬНОЙ ПРОМЫШЛЕННОСТИ				
Индия	: 205-(1)	Пшеничная мука (и отруби) . . . . .	I	48
Индия	: 205-(2)	Пшеничная мука (и отруби) . . . . .	I	50
Израиль	: 205-(1)	Пшеничная мука (и отруби) . . . . .	I	52
Израиль	: 205-(2)	Пшеничная мука (и отруби) . . . . .	I	54
Израиль	: 205-(3)	Пшеничная мука (и отруби) . . . . .	I	56
Израиль	: 205-(4)	Пшеничная мука (и отруби) . . . . .	II	372
Япония	: 205-(1)	Пшеничная мука (и отруби) . . . . .	I	58
Япония	: 205-(2)	Пшеничная мука (и отруби) . . . . .	I	60
Югославия:	205-(1)	Пшеничная мука (и отруби) . . . . .	I	62
Югославия:	205-(2)	Пшеничная мука (и отруби) . . . . .	I	63
Югославия:	205-(3)	Пшеничная и кукурузная мука и мучные продукты . . . . .	I	64
Югославия:	205-(4)	Пшеничная мука и мучные продукты . . . . .	II	374

Страна	Классификация	Основные продукты	Том	Страница
<b>САХАРО-РАФИНАДНЫЕ ЗАВОДЫ</b>				
Франция	: 207-(1)	Свекловичносахарные заводы	I	66
Франция	: 207-(2)	Свекловичносахарные заводы	I	68
Индия	: 207-(1)	Тростниковосахарные заводы	II	376
Индия	: 207-(2)	Тростниковосахарные заводы	I	72
Израиль	: 207-(1)	Свекловичносахарные заводы	I	74
Япония	: 207-(1)	Тростниковосахарные заводы	I	76
Япония	: 207-(2)	Тростниковосахарные заводы	I	78
Югославия:	207-(1)	Свекловичносахарные заводы	I	79
Югославия:	207-(2)	Свекловичносахарные заводы	I	80
Югославия:	207-(3)	Свекловичносахарные заводы	II	378
Югославия:	207-(4)	Свекловичносахарные заводы	II	379
Югославия:	207-(5)	Свекловичносахарные заводы	II	380
Югославия:	207-(6)	Свекловичносахарные заводы, а также фабрики по производству спирта и спиртных напитков из сахара	II	380
<b>ПРЯДЕНИЕ, ТКАЧЕСТВО И АППРЕТУРА ТЕКСТИЛЬНЫХ ТОВАРОВ</b>				
Франция	: 231-(1)	Шерстяная и синтетическая пряжа и ткани	I	82
Франция	: 231-(2)	Хлопчатобумажная нить и пряжа	I	84
Франция	: 231-(3)	Льняная пряжа	I	86
Франция	: 231-(4)	Пряжа и нить из шерстяных и синтетических волокон	II	382
Франция	: 231-(5)	Хлопчатобумажная пряжа	II	384
Индия	: 231-(1)	Хлопчатобумажная пряжа и ткань, полотенца, палатки и другие готовые изделия	I	88
Индия	: 231-(2)	Хлопчатобумажная пряжа, ткань и готовые текстильные товары	I	90
Индия	: 231-(3)	Джутовые мешки, джутовая ткань и другие фабричные изделия из джута	I	92
Индия	: 231-(4)	Джутовая пряжа, ткань и мешки	I	94
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Югославия:	319-(2)	Пенициллин, стрептомицин и другие антибиотики	I	179
Югославия:	319-(3)	Спички	I	180
Югославия:	319-(4)	Мыло и другие моющие и туалетные средства	II	600
Югославия:	319-(5)	Мыло и другие моющие и туалетные средства	II	601
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Индия	: 331-(3)	Огнеупорный кирпич	II	610
Индия	: 331-(4)	Стекловолокно, огнеупорные продукты и глиняные трубы	II	612
Израиль	: 331-(1)	Черепица (белая и цветная)	II	614
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Индия	: 334-(3)	Цемент	I	190
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Израиль	: 334-(1)	Цемент	I	196
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Югославия	: 334/339-(1)	Цемент и изделия из асбестоцемента	II	625
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Югославия	: 334-(3)	Цемент	II	627
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<b>БЕТОН. ИЗДЕЛИЯ ИЗ АСБЕСТА И ГИПСА И Т.Д.</b>				
Франция	: 339-(1)	Стекловолокно (силикатное волокно для тканей, столбов, фитилей, шаров и т.д.)	II	630
Франция	: 339-(2)	Детали из бетона (небольшие балки, штукатурка для готовых перекрытий, бетонные блоки и трубопроводы)	II	632
Франция	: 339-(3)	Бетонные детали (блоки, балки, трубы, материалы, покрытия для настила и т.д.)	II	634
Индия	: 339-(1)	Асбестоцементные детали (листы, балки, трубы и т.д.)	II	636
Индия	: 339-(2)	Асбестоцементные детали (листы, балки, трубы и т.д.)	II	638
Индия	: 339-(3)	Асбестоцементные детали (листы, балки, трубы и т.д.)	II	640
Израиль	: 339-(1)	Асбестоцементные детали (листы, трубы и формы для опалубки)	II	642
Израиль	: 339-(2)	Детали из бетона (трубы, шпалы, столбы и бруски)	II	644
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Югославия:	339-(2)	Детали из бетона (шпалы, столбы, трубы, плиты и т.д.)	II	657
Югославия:	339-(3)	Детали из бетона (шпалы, столбы, плиты и т.д.)	II	658
Югославия:	339-(4)	Асбестоцементные детали (плиты, желоба, трубы и т.д.)	II	659
ПРОКАТКА, ВОЛОЧЕНИЕ И ЛИТЬЕ ЧЕРНЫХ МЕТАЛЛОВ				
Франция :	341-(1)	Металлическая ковка и готовые инструменты	I	200
Франция :	341-(2)	Волочение (нержавеющая стальная проволока)	I	202
Индия :	341-(1)	Чугунолитейный и сталелитейный завод с металлообрабатывающими и фрезерными цехами, производящими дробилки для тростника и электромоторы	I	204
Индия :	341-(2)	Сварные трубы, бесшовные трубы и хладнокатаные полосы	I	206
Индия :	341-(3)	Чугунолитейный завод для машин и запчастей (ручные краны, полиспасты, тележки подъемника, токоприемники и т.д.)	I	208
Индия :	341-(4)	Чугунолитейный и сталелитейный завод с механическим цехом, производящим инвентарь, строительные товары, болты, гайки и т.д.	I	210
Израиль :	341/350-(1)	Чугунолитейный завод с металлообрабатывающими цехами, производящими канализационную и санитарную арматуру, бетономешалки, насосы и т.д.	I	212
Япония :	341-(1)	Стальные литейные изделия и изделия из чугуна	I	214
Япония :	341-(2)	Специальное чугунное и стальное литье	I	216
Япония :	341-(3)	Чугунное литье (станины для машин, станины для двигателей и т.д.)	I	218
Япония :	341-(4)	Ковкий чугун для автомобилей	I	220
Япония :	341-(5)	Литые изделия из чугуна и стали (формы для заготовок, поддоны, штампованные матрицы и насосы)	I	222
Япония :	341-(6)	Стальные плиты, трубы и рельсы	II	660
Япония :	341-(7)	Стальные литые трубы и трубы большого диаметра	II	662
Югославия:	341-(1)	Серый чугун и термически обработанное железо; также станки, фитинги, кухонная утварь и т.д.	I	224
ПРОКАТКА, ВОЛОЧЕНИЕ И ЛИТЬЕ ЦВЕТНЫХ МЕТАЛЛОВ				
Франция :	342-(1)	Продукты проката и волочения алюминия (пластины, листы, рулоны, фольга, сутунки и т.д.)	I	226
Франция :	342-(2)	Медные и латуинные трубы	I	228
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Франция :	342-(4)	Медные и латуинные трубы	I	232
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Индия :	342-(3)	Листы, полосы, диски, круги и проволока из алюминия и меди	II	668
Израиль :	342-(1)	Прокат алюминия (фольга, листы, полосы и диски)	I	238
Израиль :	342/350-(2)	Трубы и профили из алюминия; а также окна и двери, изготовленные из алюминия	I	240
Япония :	342-(1)	Бруски, стержни, проволока, трубы и трубы большого диаметра из меди и латуни	I	242
Югославия:	342-(1)	Прока. и волочение цинка и латуни (листы, полосы, бруски, проволока, трубы и т.д.)	I	244

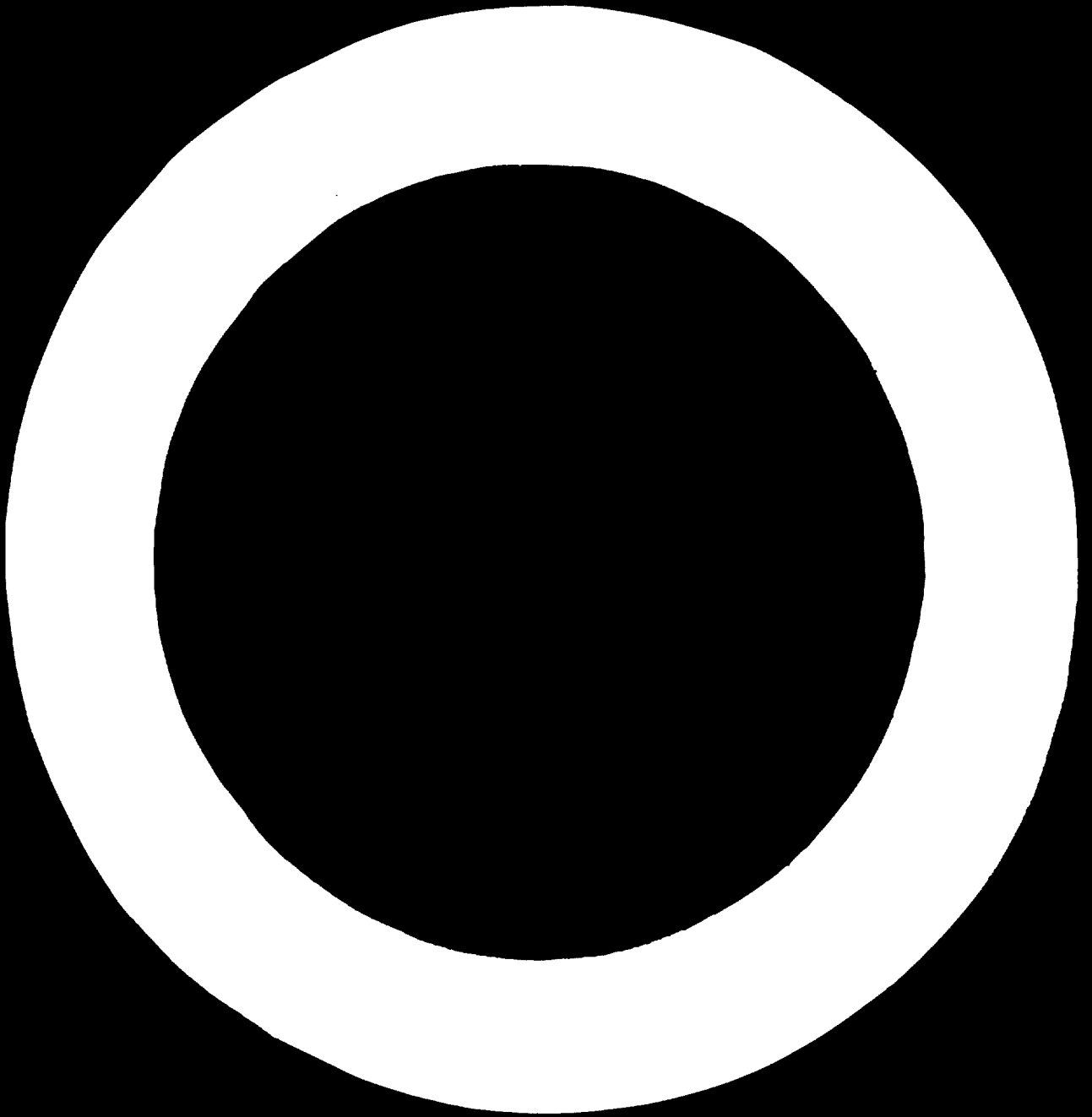
Страна	Классификация	Основные продукты	Том	Страница
ПРОКАТКА, ВОЛОЧЕНИЕ И ЛИТЬЕ ЦВЕТНЫХ МЕТАЛЛОВ (ПРОДОЛЖЕНИЕ)				
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Югославия:	342-(3)	Прокат, волочение и горячая штамповка алюминия и сплавов (листы, полосы, бруски, проволока, трубы большого диаметра, секции и т.д.) .....	I	246
Югославия:	342-(4)	Продукты волочения цветных металлов (проволока в изоляционной оплетке, продукты из меди и медных сплавов, алюминиевые и стальные тросы и т.д.) .....	II	670
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Франция :	250-(6)	Проволока (оцинкованная, с медным покрытием, подвергнутая отпуску, обработанная и т.д.) и изделия из проволоки (решетки для заборов, сварные сетки и т.д.) .....	I	258
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Франция :	350-(10)	Болты, гайки, винты и шайбы .....	II	678
Франция :	350-(11)	Чаиы и баки из чугуна .....	II	680
Франция :	350-(12)	Мебель для учреждений и металлические бочки .....	II	682
Франция :	350-(13)	Резка, штамповка металла и инструменты .....	II	684
Франция :	350-(14)	Опрыскиватели, чайники, ведра и другие металлические изделия, применяемые в сельском хозяйстве и в домашнем хозяйстве .....	II	686
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Индия :	350-(3)	Готовые конструкции, резервуары для хранения, трубы и т.д. (с монтажным обслуживанием) .....	I	264
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Япония	: 350-(14)	Болты и гайки . . . . .	II	708
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Югославия:	350-(7)	Литые и кованые инструменты, применяемые в сельском хозяйстве . . . . .	II	713
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Франция	: 360/381-(4)	Дизельные двигатели (для судов и для промышленных целей) .....	II	726
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Франция	: 360-(8)	Прессы .....	II	734
Индия	: 360-(1)	Центробежные насосы .....	I	308
Индия	: 360-(2)	Центрифуги, кристаллизаторы, передвижные лебедки и т.д. ....	I	310
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Страна	Классификация	Основные продукты	Том	Страница
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Япония	: 383-(1)	Кузова автобусов.....	I	348
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<b>ГРУППЫ ПРОМЫШЛЕННЫХ ИЗДЕЛИЙ, НЕ ИМЕЮЩИЕ ОПРЕДЕЛЕННОЙ СПЕЦИФИКАЦИИ</b>				
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## ВВЕДЕНИЕ

1. Настоящий том II сборника является дополнением к тому I, который был опубликован в начале 1968 года.<sup>1</sup> Охват стран и форма представления информации идентичны в обоих томах.

2. В настоящий том входят дополнительные выборочные предприятия по девятнадцати промышленным группам (Международная стандартная промышленная классификация в трехзначных цифрах), указанным в томе I, а также предприятия, которые классифицируются по другим группам промышленности таким, как: 232 (трикотажные фабрики); 243 (швейные изделия); 251 252 и 260 (деревобрабатывающая и мебельная промышленность); 291 (кожевенные заводы); 300 (производство резины); 312 (растительные и животные масла и жиры); 331 (изделия из строительной глины); 332 (производство стекла); 339 (цемент, асбест, изделия из гипса) и 370 (электрооборудование, электроприборы и средства подвода электроэнергии). В целом, включено 461 выборочное предприятие из пяти стран (Израиль, Индия, Франция, Югославия и Япония), включая 190 предприятий, которые ранее вошли в том I. Для удобства том II включает сводный список предприятий, встречающихся в обоих томах.

3. *Техническая записка I* (Критерии по отбору предварительных предприятий) и *Техническая записка II* (Объяснительные записки по собранной информации), которые представлены в томе I, также прилагаются к настоящему тому без изменений и здесь не будут воспроизведены. Путем напоминания некоторые положения особой важности повторяются в следующих пунктах.

4. Как объясняется во введении к тому I, цель этих сборников заключается в предоставлении свода существующих образцов промышленных предприятий, которые могут изучаться различными специалистами для различных целей. Здесь стоит повторить, что этот свод предназначен „не для того, чтобы навязать специалистам поверхностные знания о представительных экземплярах, а чтобы предложить им ознакомиться с рядом возможностей, существующих в реальной действительности“. Поскольку сборник может рассматриваться в качестве уни-

кальной особенности подхода к этим сводным данным, в то же самое время его следует почитать как предупреждение против панвного употребления.

5. То есть информация была собрана по каждому отобранному предприятию или учреждению, довольно точно отражая данные о действительной ежегодной работе: были предприняты небольшие усилия по „нормализации“ обследований. Усилия по нормализации в большинстве случаев заключались в удалении явных ошибок в сообщаемых сведениях и тех временных нарушений или незначительных аномалий, которые как-то могли исказить основной шаблон производственной нагрузки. Таким образом, внесенные поправки были в общем незначительными. Собранная информация относится к ряду факторов, свойственных указанным предприятиям таким как рынки, управление, практика учета и другим историческим и окружающим условиям. Специалисту, который пользуется информацией сборников и который заинтересован в четком разграничении „норм“ программирования по конкретным отраслям промышленности, предлагается провести свой собственный предварительный анализ, основываясь на исследовании отдельного предприятия, отдельной страны и/или отдельной отрасли промышленности, в соответствии с его конкретными нуждами. Поскольку масштаб собранной в этих сборниках информации становится достаточно большим, ЮНИДО намерена создать несколько видов аналитических справочников и помочь специалистам.

6. Вероятно, следует вновь указать, в частности, способ, с помощью которого в сборниках рассматривается концепция, указывающая на „рентабельность“, поскольку, несмотря на объяснения, которые уже даны в технической записке II, некоторые из вопросов, полученных от специалистов, пользующихся томом I, наводят на мысль, что в настоящем изложении информации это вызывает довольно много ошибок. Можно считать, что статья „Прочие валовые коммерческие поступления“ (раздел VI, пункт 6) включает общий подоходный налог, дивиденды, нераспределенную прибыль (чистая сумма скидки за амортизацию) и проценты, выплачиваемые по финансовым обязательствам. Эта сумма согласуется с годовым соотношением производства и

<sup>1</sup> Организация Объединенных Наций по промышленному развитию, *Профиль промышленности предприятий*, том I (ID SER E 4, в продаже под № E 67 II B 17, VII, 46 стр., \$ 40,00).



потребления, а не с действительными годовыми данными о доходах и расходах. Как объясняется в технической записке II (том I, стр. 12 английского текста), это означает, что чистые изменения в товарных запасах оцениваются по тем же ценам, которые применяются при купле-продаже в течение указанного года. Прирост капитала, связанный с товарными запасами и другими активами, если таковые имеются, а также доходы, получаемые от продажи отбракованного оборудования, опущены из этого расчетного указателя производства.<sup>2</sup>

7. Следует также заметить, что „валовая прибыль“, о которой говорится под рубрикой „Выборочные коэффициенты“, идентична „прочим валовым коммерческим поступлениям“, о которых говорится в разделе VI, пункт 6. Эта терминология действительно отличается от обычной. По некоторым причинам было предпочтительнее, чтобы выражение „валовая прибыль“ было представлено статьями „прочие валовые коммерческие поступления“ плюс „ежегодная скидка на амортизацию“. В отношении югославских профилей „выплачиваемые проценты“ по

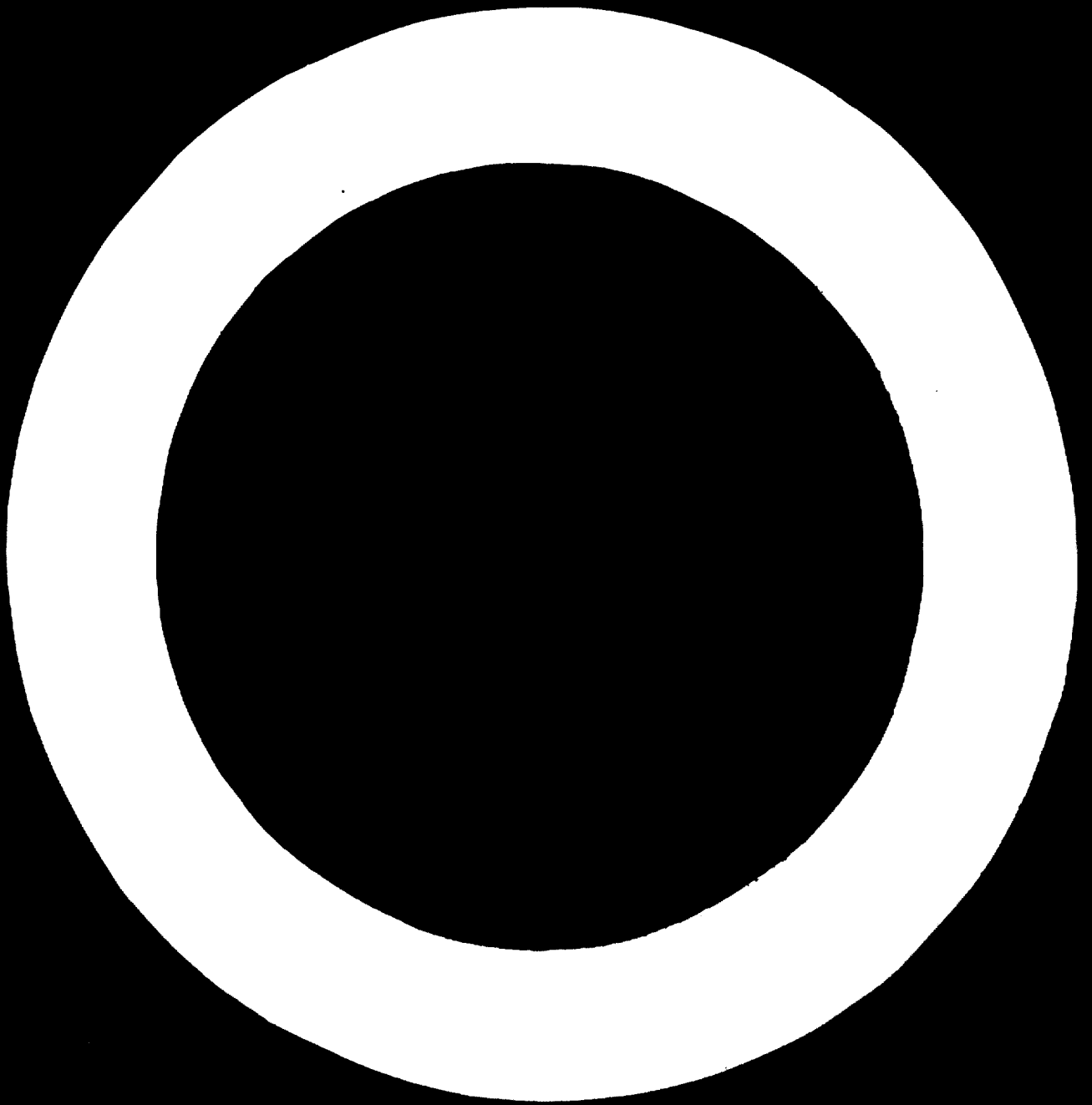
<sup>2</sup> Годовой объем производства в основном зависит от конкретной политики по контролю над товарными запасами, принятой на данный год, которая в свою очередь отражает изменение тенденции спроса. Но информация в сборниках, как правило, не включает в себя какой-либо произвольной поправки на разрыв между действительным и желаемым уровнем производства.

финансовым обязательствам приводятся отдельно от „прочих накоплений“. Поскольку такого разграничения не проводится в случаях с другими четырьмя странами, то термин „валовая сумма накоплений“, о котором говорится под рубрикой „Выборочные коэффициенты“, получается в результате сложения данных по статьям „прочие накопления“ и „выплачиваемые проценты“ в целях сопоставления.

8. „Точка равновесия“ означает лишь простое арифметическое действие, основанное на крайне упрощенном предположении поведения краткосрочных текущих и фиксированных расходов, причем вновь предполагается, что доход включает проценты. Есть надежда, что в последующие выпуски *сборников* будут включены некоторые фактические наблюдения в отношении первого положения равновесия (расходов и доходов), достигнутого данным предприятием на его начальной стадии работы.

9. Любые вопросы, касающиеся *сборников*, а также комментарии, критические замечания и предложения следует направлять по адресу:

Секция промышленного программирования  
Организация Объединенных Наций по промышленному развитию  
Фельдерхаус, Ратхаусплац 2  
Вена, А-1010, Австрия.



France : 202 - (4)

**MAJOR PRODUCTS:** Powdered milk, soft cheese, casein etc. Capable of processing annually 30 - 35 million litres milk on one shift, amounting to some Frs. 46 million in revenue terms.

**REPORTING UNIT:** A branch of a three-establishment enterprise with capital stock Frs. 0.8 million and employees 350 as of 1964. This establishment was founded in 1956.

**I. FIXED CAPITAL ASSETS** (end of 1964)

TOTAL BOOK VALUE (Frs.million)	Before deprec.		After deprec.	
	880		367	
1. Land	.09		.09	
2. Land improvements	-		-	
3. Buildings	1.15		.95	
4. Other construction works	-		-	
5. Machinery & equipment	5.40		1.94	
6. Tools & instruments	-		-	
7. Vehicles	1.29		.40	
8. Office furniture & fixtures	.87		.29	
	<b>Total</b>	<b>Avg. Age</b>	<b>Depr. rate</b>	<b>196 replace value</b>
		(Yr.)	(%)	
<b>DETAIL OF 1.5 (No.)</b>				
a. Equipment for pasteurization	.13	4	A	.15
b. Equipment for creaming	.13	3	A	.15
c. Equipment for stocking	.16	3	A	.18
d. Equipment for refrigeration	.30	4	A	.40
e. Equipment for vapor making	.30	2	A	.32
(sub total)	1.02			1.20

**II. INVENTORIES**

(end of 1964)	Actual	Normal
TOTAL VALUE (Frs. mill)	2.47	.. \$
1. Direct production materials	2.09	
2. Other input materials	-	
3. Work in process	-	
4. Finished products	.38	

Actual inventories of finished products 8% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 1,000 KW

Total load, capacity of trucks: 12 t (b) & part of (a) were imported; the rest domestically produced. Average age of machinery listed is 3.7 years.

**GENERAL CONDITIONS:**

Transportation, community facilities and water facilities, excellent; electricity facilities, fair.

**III. LABOUR** (1964 average)

TOTAL EMPLOYED	1st shift	2nd shift	3rd shift
	266		
1. Direct production ( .. )	132		
Annual total manhours (000)	(4510)	( )	( )
a. Collection of milk	40		
b. Treatment	5		
c. Moulding	30		
d. Demoulding	30		
e. Drying cabinet	12		
f. Packing	45		
g. Labelling	8		
h. Maintenance	22		
2. Auxiliary activities ( .. )	74		
a. Supervision of production	7		
b. Administration	10		
c. Publicity	25		
d. Laboratory	32		

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	
		Engi-ners	Other
3	71	-	192
<b>Management</b>			
3	4	-	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	15
<b>Semi-skilled</b>			
-	-	-	5
<b>Unskilled</b>			
-	-	-	182
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	20	-	-
<b>Semi-skilled</b>			
-	47	-	-
<b>Unskilled</b>			
-	-	-	-

- Actual hours worked per employee: 2,352 hours.

- Proportion of motors occupied: 85%

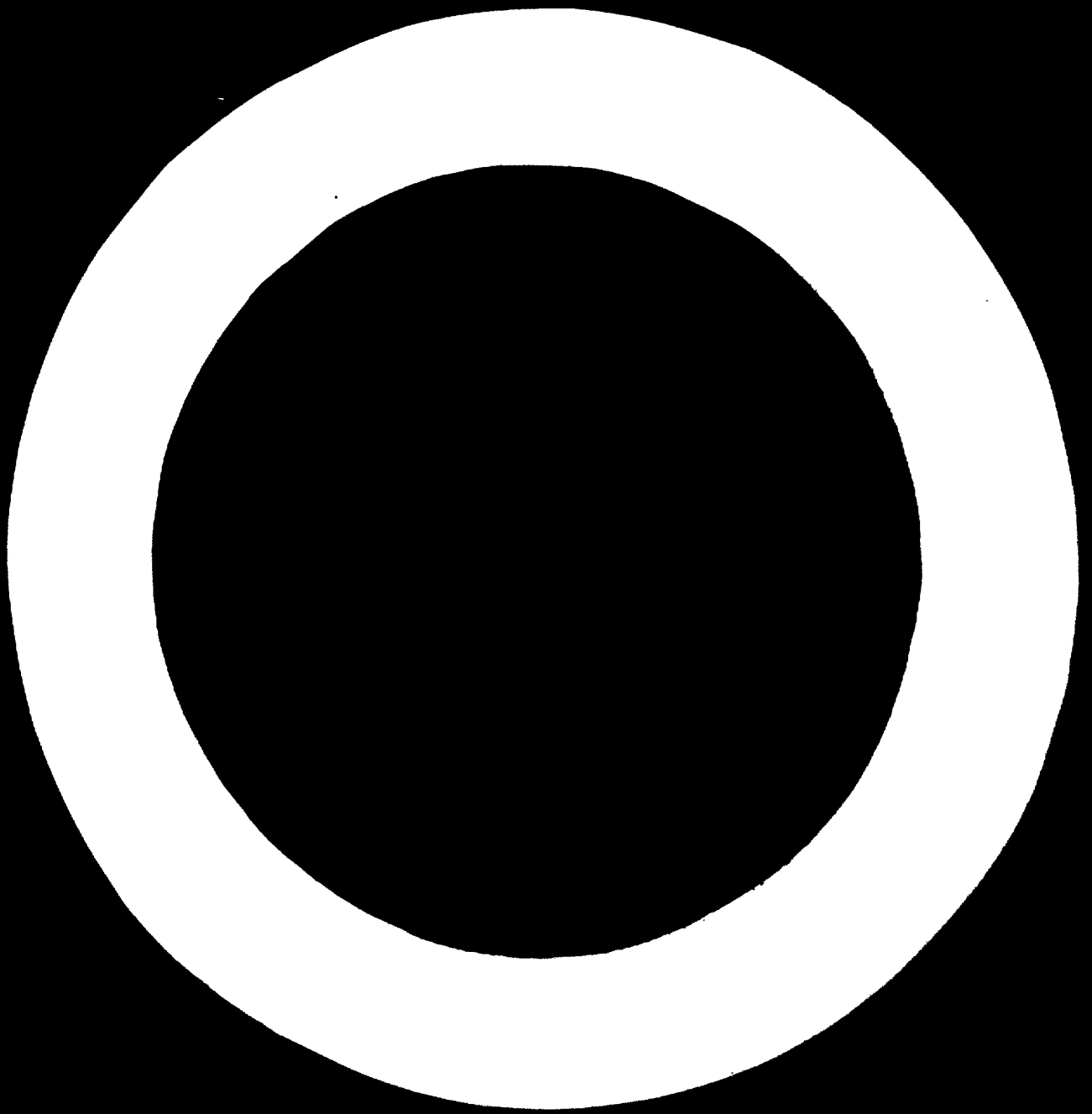
- Degree of mechanization: b) poor; c) & f) fair.

- Skilled workers in direct production are engaged in transformation of milk and maintenance. Those in auxiliary activities are in laboratory, production control, administrative and commercial service.

IV. ANNUAL PRODUCTION (1964)		45.91		V. INTERMEDIATE INPUTS (1964)		38.36			
TOTAL VALUE OF PRODUCTION (Fr. million)		(45.80)*		TOTAL VALUE OF CONSUMPTION (Fr. million)		38.36			
Product	Unit	Quantity	Unit Value (Fr.)		Quantity	Unit Value (Fr.)			
a. Cheese, soft kind	}	t 21,700	1,870 (avg)	1. <u>Energy &amp; water: total</u>	0.44				
b. Miscellaneous fresh milk products									
c. Casein						- Electricity	..		
d. Powdered milk						2. <u>Direct production materials: total</u>	32.41		
e. Others	Fr. mill.	5.31	..	a. Milk	000 litre	33,368	423		
				b. Others (including packaging materials)	Fr. mill.	18.21	..		
* Excluding sales tax									
<b>CAPACITY OUTPUT:</b> Close to the 1964 actual production constrained by the shortage of milk and water. Product-mix cannot profitably be changed.									
Unit value of product: Market value f.o.b. after sales tax. Unit value of material: Market price c.i.f.									
- Cheese is partly exported directly.									
- Milk is collected from the producers at collection centres. The transportation from there to the processing factory is considered as part of the direct production line.									
VI. VALUE ADDED		TOTAL 1964 (Fr. mill)		7.44		<b>SELECTED CONTRACTS</b>			
1. Wages & salaries (before income tax)				- Mech., equip., instruments & tools per employee in direct production on 1st shift: Frs. 28,176. (Fr. 33,000 <sup>1/2</sup> )					
- Employees in direct production		2.94		- Value added per employee: Frs. 32,876					
- Other employees		0.65		- Annual wage per employee in direct production: 15,312					
2. Other expenditures for employees (incl. royalties)		2.43		- Variable input costs/gross production ratio: 78%					
3. Annual depreciation allowance		1.06		- Gross profit/gross production ratio: 1.3%					
4. Rental paid (land 0.06; buildings 0.24)		0.30		- Level of production at break-even point is approximately 99 % of the 1964 actual level.					
5. Sales & other indirect taxes (less subsidies) (not included in total)		[0.1]							
6. Other gross business income (before income tax)		0.06							
VII. EXPANSION: HISTORY & PLAN		Gross acquisition		Scrapped or sold		2. <u>Future Plan</u>			
1. <u>Recent Expansion</u>		From 19 60 to 19 64				a. Investment proposed for the period 1964 to 1966			
a. Total Investment (Fr. mill.)		6.83				Total value (Fr. thous)			
- Land		-				Of which: - Mech. & equipment 60 %			
- Land improvements		-				- Land improv. & bldg. 30			
- Buildings		-				- Land 10			
- Other construction work		-				- Others ..			
- Machinery & equipment		6.83				b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments		-				- Direct production: 70			
- Vehicles		-				- Auxiliary: 30			
- Office furniture & fixtures		-				c. Purpose: Introduction of new products; expansion of the production of special cheeses; expansion of the capacity in a new locality.			
b. Corresponding increase:		From 19 60 to 19 64							
In no. of employees		200		266					
In annual gross production (incl. (Fr. mill.) tax)		20.00		45.91					
VIII. SUPPLEMENT									
1/ Using the 1964 replacement value.									
2/ Details not revealed. Possibly includes part of the remuneration for management and wages for non-regular workers.									

An enterprise producing butter and other milk products; founded in 1946; annual capacity output is 1,100 t of butter and cheese and 8,000 t of other dairy products (18,000 - 20,000 kl in terms of fresh milk to be processed) on one-shift operation. Aluminium tracks and foils are imported.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)			
TOTAL (Drs. million)		2,314	2,813	1953-54	1955-57	1958-60	1961-63
Buildings & land improvements		917	1,200	Gross expenditures	34	337	197
Machinery & equipment		1,242	1,400	Retirements	49	87	205
Other capital assets		155	213	Calculated average age of fixed assets: 8 years			
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Electric motors:</b>			
Butter: rotating churns (1 shift);				Total installed capacity: 204 KW			
Cheese: vats (1 shift).				Of which actually operated in 1963:			
(40 % of machinery and equipment were imported)				1st shift 100 %; 2nd shift - %; 3rd shift - %			
				<b>Technological features:</b> Located in the vicinity of the source of raw materials which are brought in by lorries. Conventional process with rotating churns for butter and vats for cheese. Mechanisation and automation fall short by about 40 % each. Production of cheese is not mechanised, but can compete in the domestic market.			
II. LABOUR (1963)		TOTAL no. of employees: 391		Educational background of workers:			
1. Factory workers:		1st shift	2nd shift	3rd shift	Techn. Econ.	Low	Others
Total 293 persons		293	-	-	Univ. or higher	-	3
(650 thous. manhrs.)		(650)	(-)	(-)	Tech. Higher sch.	-	-
					Secondary sch.	-	2
					Primary school	-	386
2. Non-factory workers: 98 persons		(220 thous. manhrs.)		TOTAL actual consumption 1963 799			
				1. Energy inputs: total 17			
				- Electricity 349 Mwh 10			
				- Lignite 1,943 t 7			
				2. Major production materials: total 550			
				- Fresh milk* 11,649 kl 550			
				* In addition to this, 29,000 kl of milk was bought and sold without further processing.			
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	3. Repairs & maintenance: total 22			
TOTAL actual revenue output 1963*			1,104	4. Other material & non-factor service inputs 193			
- Butter 284 t 307				V. VALUE ADDED (1963) (Drs. Million)			
- Cheese 205 t 29				TOTAL (except turnover tax) 322			
- Other milk products 3,095 t 768				- Wages of factory workers 156			
* Including turnover tax on sold products.				- Salaries of non-factory workers 58			
<b>Capacity output:</b>				- Depreciation 72			
Butter 365 t } Rate of				- Interest paid 14			
Cheese 720 t } utilisation				- Other accumulation 22			
Other dairy products 8,000 t } ie 62 %				(Turnover tax) (-)			
Underutilisation due to seasonal changes in the supply of raw materials. Assuming a continuous supply of raw materials the optimum number of workers on the first shift for full utilisation is estimated to be 370.				VI. SUPPLEMENT Future plans:			
1. Special packaging of sterilised milk.				SELECTED COEFFICIENTS			
2. Introduction of a continuous process for sterilised milk, butter, cream and brick cheese.				- Mach. & equip. per factory worker on 1st shift: Drs. 4,778,000			
				- Value added per employee: Drs. 824,000			
				- Annual wage per factory worker: Drs. 532,000			
				- Variable input cost/gross production ratio: 65.5 %			
				- Gross accumulation/gross production ratio: 3.3 %			
				(at full capacity) 15.1 %			
				- Level of production at break-even point: 91 % of the 1963 actual level.			
1/ Gross accumulation includes 'interests paid'.							



An old enterprise <sup>making</sup> canned fish and fish flour. Capable of handling about 10,000 t of fish; also can produce 2,400 t of cans annually on partial two shifts operation. Fresh fish, metal sheets, tin cans, cellophans etc. (45% of the material expenditures) are imported; 76% of the output is directly exported. The enterprise was founded in 1927.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)						
				1955-57	1958-60	1961-63				
TOTAL (Drs. million)		2,596	2,816	Gross expenditures	29	32	143			
Buildings & land improvements		732	952	Retirements	49	48	100			
Machinery & equipment		1,768	1,768	Calculated average age of fixed assets: 10.4 years						
Other capital assets		96	96	<b>Electric motors:</b>						
<b>Major machinery crucial for determining the overall production capacity:</b>				Total installed capacity: 691 KW						
Canned fish: automatic canning machines (2 shifts);				Of which actually operated in 1963:						
Fish flour: "Sohlotter Hose" equipment (2 shifts).				1st shift 100 %; 2nd shift 27 %; 3rd shift - %						
(All machines are of local manufacture.)				<b>Technological features:</b> Tunny is processed by the Mediterranean method; small fish by "Ueo Nates" method. Fish flour is produced on "Sohlotter Hose" equipment. Cans are produced through an automatic process. Mechanisation and automation are rated at 75% and 40%, respectively. Located 40 km from the sources of raw materials.						
II. LABOUR (1963)		TOTAL no. of employees: 1,267			Educational background of workers:					
		1st shift	2nd shift	3rd shift						
1. Factory workers:		shift	shift	shift	Techn. Econ. Low Others Total					
Total	1,142 persons	1,034	108	-	Univ. or higher	2	6	1	3	12
	(2,646 thous. manhrs.)	(2,394)	(252)	(-)	Tech. Higher sch.	-	-	-	1	1
					Secondary sch.	5	5	-	18	28
					Primary school	-	-	-	1,226	1,226
					IV. INTERMEDIATE INPUTS					
					Quantity		Value (Drs. Million)			
					TOTAL actual consumption 1963 3,625					
					1. Energy inputs: total 47					
							699 Mwh	16		
							2,872 t	31		
					2. Major production materials: total 3,381					
								78		
								356		
								1,094		
								266		
								53		
								8		
								64		
								1,462		
					3. Repairs & maintenance: total 32					
					b. Other material & non-factor service inputs 165					
III. ANNUAL PRODUCTION & CAPACITY		Quantity		Value (Drs. Million)	V. VALUE ADDED (1963) (Drs. Million)					
TOTAL actual revenue output 1963 *				4,489	TOTAL (except turnover tax) 854					
					- Wages of factory workers 571					
					- Salaries of non-factory workers 76					
					- Depreciation 44					
					- Interests paid 57					
					- Other accumulation 106 1/2					
					(Turnover tax) 10					
					VI. SUPPLEMENT					
					Future plans: Production of ready-to-eat meals of fish and vegetables, which calls for installation of new processes.					
					SELECTED COEFFICIENTS					
					- Mech. & equip. per factory worker on 1st shift: Drs. 1,710,000					
					- Value added per employee: Drs. 674,000					
					- Annual wage per factory worker: Drs. 500,000					
					- Variable input cost/gross production ratio: 2/ 76.5 %					
					- Gross accumulation/gross production ratio: 3/ 3.6 %					
					(at full capacity) 6.4 %					
					- Level of production at break-even point: 84 % of the 1963 actual level.					
					1 Of which Drs. 80 million are funds belonging to the enterprise.					
					2 Wages and salaries are considered as fixed costs in the vicinity of current operation scale.					
					3 Gross accumulation includes interests paid.					

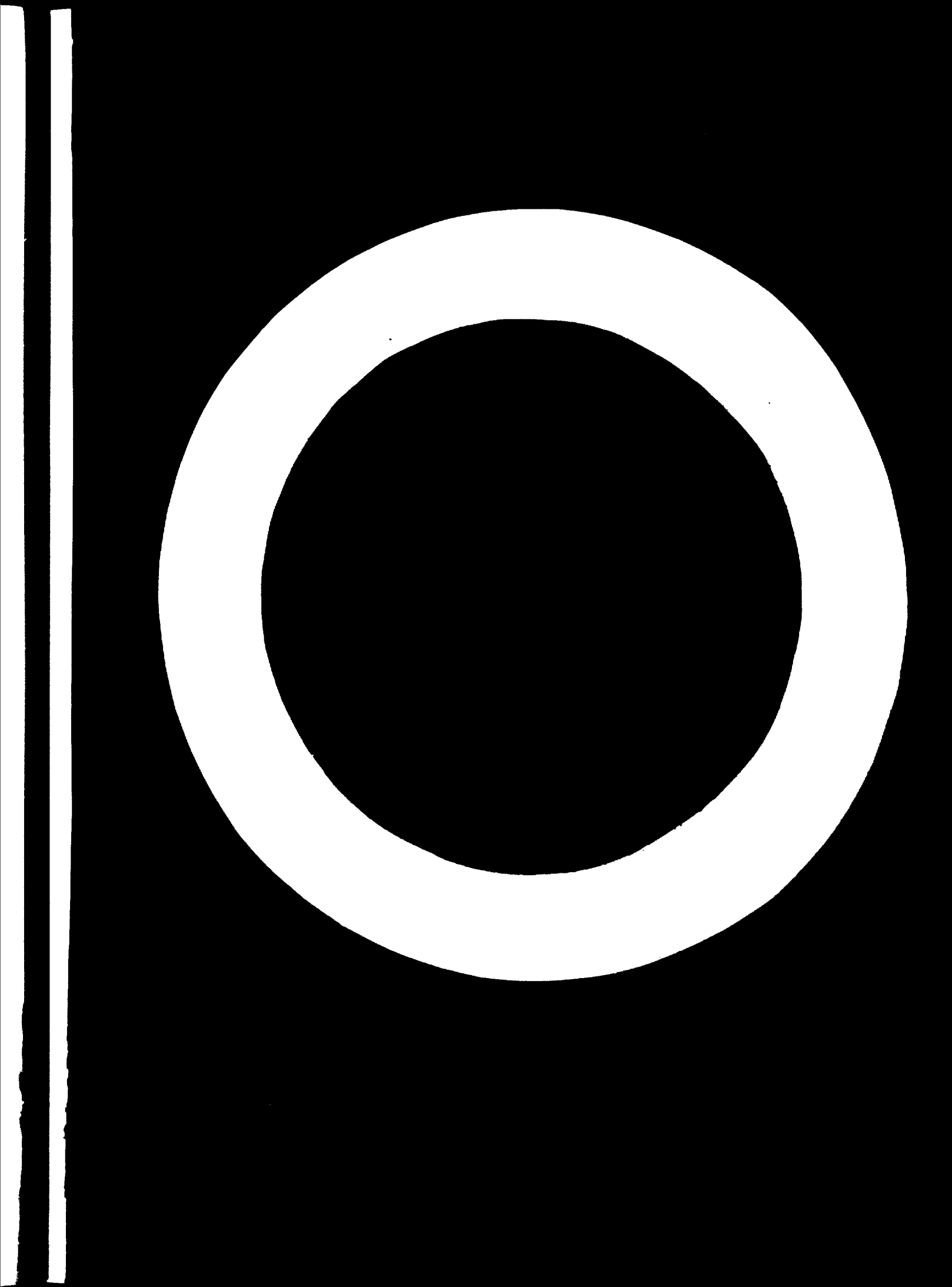
An enterprise engaging in vegetable and meat processing and packing. Founded in 1948. Capable of processing up to 20,000 t of fruits, vegetable and meat on three shifts operation (except metal and wooden packaging working on two shifts). Metal sheets, peotin, spices are imported; almost one-fourth of the output is directly exported.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)						
TOTAL (Drs. million)		620	700		1956-57	1958-60	1961-63			
Buildings & land improvements		265	345	Gross expenditures	60	188	164			
Machinery & equipment		353	353	Retirements	21	41	61			
Other capital assets		2	2	Calculated average age of fixed assets:	6.7 years					
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Electric motors:</b>						
Juices and syrups: machine for washing, extracting and bottling (3 shifts); duplicators (3 shifts);				Total installed capacity: 628 KW						
Jams: duplicators (3 shifts);				Of which actually operated in 1963:						
Canned meat: canning machine (3 shifts);				1st shift 100 %; 2nd shift 80 %; 3rd shift 6 %						
Peotose: kiln (3 shifts).				<b>Technological features:</b> Sterilisation, pasteurisation, cooking, concentrating, canning and bottling of fruits, vegetable and meat. Mechanisation and automation are not satisfactory to meet the competition. Located about 50 km from the source of raw materials; poor access to railway transport.						
(24 % of the machinery & equipment are of foreign origin.)										
II. LABOUR (1963)		TOTAL no. of employees: 596			Educational background of workers:					
1. Factory workers:		1st shift	2nd shift	3rd shift	Techn.	Mean.	Low	Others	Total	
Total	468 persons	281	140	47	Univ. or higher	3	-	-	4	7
(1,020 thous. manhrs.)	(612)	(312)	(96)		Tech. Higher sch.	-	-	-	2	2
- Juice	36	32	19		Secondary sch.	1	8	-	10	19
- Jam	27	24	11		Primary school	-	-	-	560	568
- Semi-processed food and peotin	15	10	1		IV. INTERMEDIATE INPUTS					
- Canned meat	26	20	10		Quantity		Value (Drs. Million)			
- Metal & wooden packaging	38	25	-		TOTAL actual consumption 1963					
- Repair, sales, administration, etc.	139	29	6		1. Energy inputs: total		1,382			
2. Non-factory workers:	128 persons	(265 thous. manhours)			- Electricity		29			
					- Brown coal		640 Mwh 4,161 t 18			
					2. Major production materials: total		1,246			
					- Fruits		8,772 t 278			
					- Vegetables		853 t 40			
					- Meat		379 t 115			
					- Sugar		2,717 t 404			
					- Acids		78 t 18			
					- Glass for packaging		1,429 t 131			
					- Metal sheets for packaging		381 t 199			
					- Card-board for packaging		247 t 61			
					3. Repairs & maintenance: total		16			
					4. Other material & non-factor service inputs		91			
III. ANNUAL PRODUCTION & CAPACITY		Quantity			Value (Drs. Million)					
TOTAL actual revenue output 1963*		1,689			TOTAL (except turnover tax)			301		
- Semi-processed fruits**	2,268 t	125								
- Processed fruits**	4,886 t	1,030								
- Canned vegetable	1,222 t	233								
- Canned meat	625 t	300								
- Fresh meat	466 t	159								
- Metal packaging	452 t	140								
- Wood packaging	580 t	21								
- Others**	..	479								
* Including turnover tax on sold products.										
** Of which Drs. 798 million were internally used and excluded from the total.										
<b>Capacity output:</b>										
Semi-processed fruits	3,000 t	Overall rate of utilisation is 58 %.								
Processed fruits	7,000 t									
Canned vegetable	2,000 t									
Fresh meat	1,500 t									
Canned meat	1,500 t									
Underutilisation due to seasonal operation of parts of the shop. Optimum number of workers on the 1st shift for full utilisation is estimated to be 420; i. e. 49 % more than the actual 1963 level.										
VI. SUPPLEMENT		Future plans:			SELECTED COEFFICIENTS					
1. Introduction of new products: peotin, peotolite, dried fruits and vegetables; accordingly, new processes for separation of peotin from apples, breeding of micro-organisms and drying of fruits and vegetables.					- Mach. & equip. per factory worker on 1st shift: Drs. 1,256,000					
2. Mechanisation of internal transport and overhauling of the jam shop.					- Value added per employee: Drs. 505,000					
1/ Of which Drs. 30 million are funds belonging to the enterprise.					- Annual wage per factory worker: Drs. 326,000					
					- Variable input cost/gross production ratio: 84.5 %					
					- Gross accumulation/gross production ratio: 5.2 %					
					- Level of production at break-even point: 64 % of the 1963 actual level.					
					2/ Gross accumulation includes interests paid.					



An enterprise engaging in fruits and vegetables processing and canning. Capable of producing over 10,000 t of processed fruits, 1,500t of canned vegetables and 1,300t of alcoholic beverages annually on three-shift operation. Tin products are imported and 4% of the output directly exported. The enterprise was founded in 1945.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
TOTAL (Drs. million)		696	830	1953-54	1955-57	1958-60	1961-63		
Buildings & land improvements		317	420	Gross expenditures	47	22	170	190	
Machinery & equipment		379	410	Retirements	22	42	61	81	
Other capital assets		-	-	Calculated average age of fixed assets: 8.1 years					
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Electric motors:</b>					
Fruit juices: presses, centrifuges, pasteurisers and bottling machines (3 shifts only seasonally);				Total installed capacity: 465 KW					
Processed fruits: machines for processing, pressing, sterilization and filling (3 shifts only seasonally).				Of which actually operated in 1963:					
17% of machinery and equipment are of foreign origins.				1st shift 97%; 2nd shift 87%; 3rd shift 24%					
				<b>Technological features:</b> Fruit juices; washing, extraction, collection, pasteurisation, bottling, labelling and packing; Marmalads; vacuum boiling instead of pasteurisation; Alcoholic beverages; mixing, bottling, labelling and packing. Mechanisation and automation are satisfactory and rated as 80% and 75% of the world most advanced level. Located closer to consumers than to raw materials.					
II. LABOUR (1963)		TOTAL no. of employees: 350			<b>Educational background of workers:</b>				
1. Factory workers:		1st shift	2nd shift	3rd shift	Techn.	Secn.	Low	Others	Total
Total 295 persons		117	111	67	Univ. or higher	3	-	-	3
(650 thous. manhrs.)		(265)	(241)	(144)	Tech. Higher sch.	-	1	1	2
- Processing of fruits and vegetables		31	28	27	Secondary sch.	3	10	-	15
- Alcoholic beverage		16	15	15	Primary school	-	-	330	330
- Bottling of beverages		22	22	20	IV. INTERMEDIATE INPUTS				
- Ancillary shops		48	46	5	Quantity		Value (Drs. Million)		
2. Non-factory workers: 55 persons		(125 thous. manhours)			TOTAL actual consumption 1963 1,515				
					1. Energy inputs: total 30				
					- Electricity 443 Mwh 7				
					- Hard coal 2,230 t 16				
					- Liquid fuel 63 t 7				
					2. Major production materials: total 1,139				
					- Fruits 3,124 t 245				
					- Vegetables 1,174 t 48				
					- Sugar 1,734 t 268				
					- Fruit pulp 1,617 t 126				
					- Fruit juices 1,362 t 180				
					- Tin products * 179 t 134				
					- Glass packing material 842 t 84				
					- Alcohol 16,097 Kl 54				
					* Mostly imported.				
					3. Repairs & maintenance: total 27				
					4. Other material & non-factor service inputs 319				
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1963) (Drs. Million)				
TOTAL actual revenue output 1963 *		1,943		TOTAL (except turnover tax) 333					
- Fruit pulp **		1,749 t	..		- Wages of factory workers 197				
- Fruit juices		1,561 t	248		- Salaries of non-factory workers 42				
- Processed fruits		2,939 t	781		- Depreciation 28				
- Canned vegetables		1,005 t	407		- Interests paid 31				
- Alcoholic beverage		733 Kl	323		- Other accumulation 35 1/				
- Others		-	175		(Turnover tax) 95				
* Includes turnover tax on sold products.									
**Entirely internally used (Drs. 184 million).									
<b>Capacity Output</b>									
Fruit pulp		3,880 t	Overall						
Fruit juices		1,950 t	rate of						
Processed fruits		4,510 t	utilization						
Canned vegetables		1,520 t	is 62%.						
Alcoholic beverages		1,330 t							
Underutilisation due to seasonal fluctuations in the intermediate processing shops; final processes are operated throughout the year, but with one or two shifts during the off-season period.									
VI. SUPPLEMENT		Future Plans		<b>SELECTED COEFFICIENTS</b>					
1) To raise the level of mechanisation and automation by 10%.				- Mach. & equip. per factory worker on 1st shift: Drs. 3,504,000					
2) During 1964, nearly one half of the productive facilities were renovated.				- Value added per employee: Drs. 951,000					
				- Annual wage per factory worker: Drs. 668,000					
				- Variable input cost/gross production ratio: 74%					
				- Gross accumulation/gross production ratio: 2/ 3.6%					
				(at full capacity 12.1%)					
1/ Drs. 12 million are funds belonging to the enterprise.				- Level of production at break-even point: 87% of the 1963 actual level.					
2/ Gross accumulation includes interests paid.									



**MAJOR PRODUCTS:** Flour. Capable of processing 53,000 tons of wheat on partial three shifts.

**REPORTING UNIT:** A small one-establishment enterprise with total assets of 3.5 million and employees 41 as of 1964. Founded in 1937.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE (000 IE)</b>	<u>2,477</u>	<u>1,502</u>
1. Land (5,000 sq.m.)	203	203
2. Land improvements	-	-
3. Buildings (total floor space: 6,500 sq.m.)	844	717
4. Other construction works	-	-
5. Machinery & equipment	1,412	569
6. Tools & instruments	-	-
7. Vehicles	12	8
8. Office furniture & fixtures	6	5

**DETAIL OF I.5 (No.)**

	Avr. Age (Yr.)	Depr. Oper. rate (%)	Depr. Cond. (\$)
a. Roller mills (28)	15,30	A-B	18
b. Plant sifters (12)	13,17,18	" "	" "
c. Purifiers (14)	15,30	" "	" "
d. Washers (2)	12,18	" "	" "
e. Diffusers and cells system(68)	12	" "	" "

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE (000 IE)</b>	<u>233</u>	<u>+39 %</u>
1. Direct production materials	2	-
2. Other input materials	48	-
3. Work in process	-	-
4. Finished products	183	+50

- Normal inventories of finished products 3.3% of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 767 HP

Total load, capacity of trucks: - t

Most of the machinery and equipment itemized were imported from Switzerland.

Average age of machinery is 15 years.

**EXTERNAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 41	28	8	5
1. Direct production (all male)	17	8	5
Annual total manhours (000)	(56.5)	(14.5)	(1.5)
a. Milling	3	3	3
b. Cleaning and guarding	1	-	2
c. Packaging	4	3	-
d. Bags mending	1	-	-
e. Portage	8	2	-
2. Auxiliary activities (M. 9, F. 2)	11	-	-
a. Management and inspection	9	-	-
b. Maintenance	2	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

	Univ. or higher		Sr. High sch. or equiv.		Other
	Engl.-speak	Other	Engl.-speak	Other	
<b>TOTAL</b>	1	1	3	3	36
<b>Management</b>	1	1	3	3	
<b>Direct Production</b>					
Skilled	-	-	-	-	27
Semi-skilled	-	-	-	-	3
Unskilled	-	-	-	-	
<b>Auxiliary Activities</b>					
Skilled	-	-	-	-	
Semi-skilled	-	-	-	-	
Unskilled	-	-	-	-	3

- Average working hours per annum per direct production worker: 2,419 hrs.

- Proportion of motors occupied: 100% on 1st shift, 90% on 2nd shift and 85% on 3rd shift.

**Technological features:**

a) and b); conventional process.

c) and d); filling and sewing jute bags.

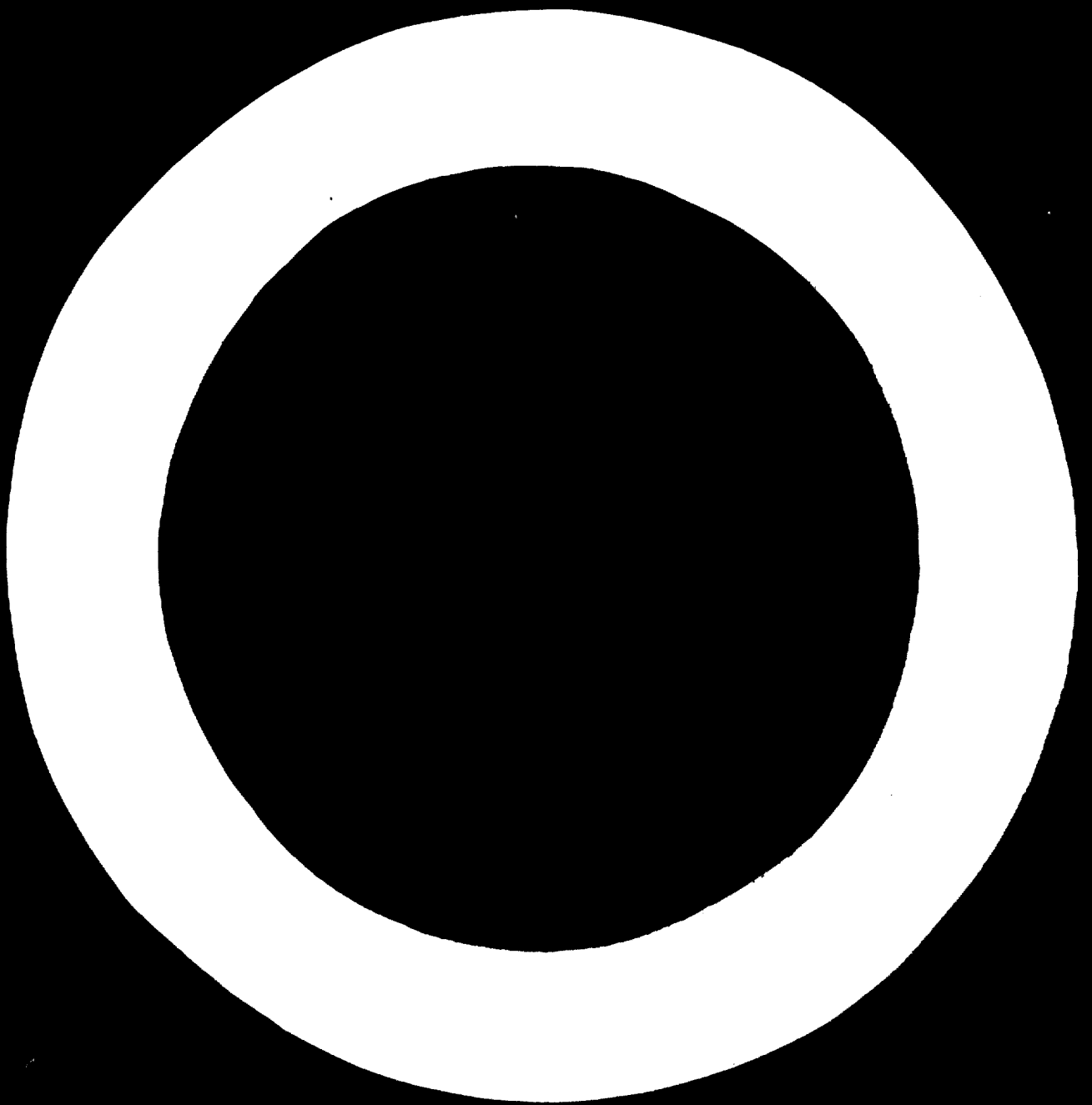
e); by manpower.

- Degree of mechanization is rated from fair to excellent but automation is poor to fair in all shops except portage which does not involve mechanization or automation.

IV. ANNUAL PRODUCTION (1964)		V. INTERMEDIATE INPUTS (1964)	
TOTAL VALUE OF PRODUCTION ( 000 IE ) <u>8,399</u>		TOTAL VALUE OF CONSUMPTION ( 000 IE ) <u>7,497</u>	
<u>Product</u>	<u>Unit</u> <u>Quantity Pro-duced</u> <u>Unit Value ( IE )</u>	<u>1. Energy &amp; water: total</u>	<u>62</u>
a. White flour	ton 14,657 325		
b. Standard flour	" 7,765 300	- Electricity	000 kwh 1,842 33
c. Offal	" 15 300	- Water	000 cu.m. 51 200
d. Semolina	" 384 356	<u>2. Direct production materials: total</u>	<u>7,321</u>
e. Bran (for official market)	" 5,042 135	a. Hard winter wheat	ton 19,229 250
f. Bran (for free market)	" 1,163 165	b. Manitoba wheat	" 3,551 243
g. Offal, 2nd class	" 31 230	c. Australian wheat	" 151 250
h. Scrap, 1st class	" 778 167	d. Domestic soft wheat	" 6,134 250
i. Scrap, 2nd class	" 85 66	e. Soya flour	" 222 354
j. Dirty flour	" 14 164		
k. Revenues from use of productive facilities	000 IE 147 ..	<u>3. Packaging materials: total</u>	<u>29</u>
<b>CAPACITY OUTPUT:</b>		30,000 new jute bags (IE .95/unit)	for replacement
80% higher than the 1964 actual output level with no addition to manhours. Underutilization of capacity is due to insufficient demand for the product.		701 old jute bags (IE .58/unit)	
Unit value of product: Market value f.o.b. before sales tax		<u>4. Work performed by sub-contractors ( )</u>	<u>22</u>
Unit value of material: Market price c.i.f.		<u>5. Repairs &amp; maintenance (materials &amp; services purchased)</u>	<u>34</u>
- 45,000 cu.m. of water was internally supplied and not counted in value of consumption.		<u>6. Material inputs for auxiliary activities</u>	<u>2</u>
- Direct production materials except (d) are imported with freight rate about IE 5/ton.		<u>7. Non-factor service inputs: total</u>	<u>27</u>
		Transportation, insurance and storage services purchased separately	IE 16,000
<b>VI. VALUE ADDED TOTAL 1964 ( 000 IE ) <u>902</u></b>		<b>SELECTED COEFFICIENTS</b>	
1. Wages & salaries (before income tax)		- Mach., equip., instruments & tools per employee in direct production on 1st shift: IE 83,059 (15,670 <sup>1/</sup> )	
- Employees in direct production	332	- Value added per employee: IE 22,000	
- Other employees	97	- Annual wage per employee in direct production: IE 11,067	
2. Other expenditures for employees	28	- Variable input costs/gross production ratio: 88.5% <sup>2/</sup>	
3. Annual depreciation allowance	262	- Gross profit/gross production ratio: 2.2%	
4. Rental paid	-	- Gross profit/gross production ratio at full capacity: 6.3% <sup>2/</sup>	
5. Sales & other indirect taxes (less subsidies)	-	- Level of production at break-even point is approximately 81 % of the 1964 actual level. <sup>2/</sup>	
6. Other gross business income (before income tax)	183		
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>		<b>2. Future Plan</b> None	
<u>1. Recent Expansion</u>	<u>Gross acquisition</u> <u>Scrapped or sold</u>	a. Investment proposed for the period 19 to 19	
From 19 to 19		Total value ( )	
a. Total Investment ( )		Of which: - Mach. & equipment	\$
- Land		- Land improv. & bldg.	
- Land improvements		- Land	
- Buildings		- Others	
- Other construction work		b. Net increase in no. of employees envisaged for the same period:	
- Machinery & equipment		- Direct production:	
- Tools & instruments		- Auxiliary:	
- Vehicles		c. Purposes:	
- Office furniture & fixtures			
b. Corresponding increase:	From 19 to 19		
In no. of employees			
In annual gross production ( )			
<b>VIII. SUPPLEMENT</b>			
<sup>1/</sup> The denominator excludes workers engaging in portage (III.l.s.).			
<sup>2/</sup> Wages and salaries considered as fixed cost.			

An enterprise producing wheat flour, flour products and edible oil. Founded in 1954. Annual capacity of flourmill is 21,000 t, on three shifts operation. About 1,500 t of wheat is imported. Final products serve local markets only.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
<b>TOTAL (Drs. million)</b>		696	708	Gross expenditures	21	47	145	255	
Buildings & land improvements		390	408	Retirements	9	18	25	34	
Machinery & equipment		306	300	Calculated average age of fixed assets: <u>5.3</u> years					
Other capital assets		-	-	<b>Electric motors:</b>					
<b>Major machinery crucial for determining the overall production capacity:</b>				Total installed capacity: <u>539</u> KW					
Flour: mill rollers and sieves ( 3 shifts ).				Of which actually operated in 1963:					
One fourth of machinery and equipment are of foreign origine.				1st shift <u>100</u> %; 2nd shift <u>22</u> %; 3rd shift <u>18</u> %					
				<b>Technological features:</b> Conventional milling system: crushing by rollers, sieving, pneumatic transport, automatic mixing and packing. Mechanization and automation are satisfactory, and rated as 80% and 70% of the world standard.					
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Law	Others	Total
1. Factory workers:									
Total	167 persons	108	37	22	Univ. or higher	-	-	-	2
	( 369 thous. manhrs. )	( 238 )	( 83 )	( 48 )	Tech. Higher sch.	-	1	-	1
- Flour shop	36	18	8	Secondary sch.	-	1	-	1	2
- Bread and pastries	17	15	10	Primary school	-	-	-	185	185
- Edible oil	9	4	4	<b>IV. INTERMEDIATE INPUTS</b>					
- Transport and other services	46	-	-	Quantity		Value (Drs. Million)			
2. Non-factory workers: <u>23</u> persons					TOTAL actual consumption 1963				
( <u>49</u> thous. manhours )					1. Energy inputs: total				
					- Electricity				
					- Lignite				
					2. Major production materials: total				
					- Wheat *				
					- Flour				
					- Pumpkin seeds				
					* Excludes the wheat milled on the contract work basis, which amounted to about 10,000 t altogether.				
					3. Repairs & maintenance: total				
					4. Other material & non-factor service inputs				
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1963) (Drs. Million)				
TOTAL actual revenue output 1963 *			815		TOTAL (except turnover tax)				
- Flour **	6,670 t	576		- Wages of factory workers					
- Bread and pastries	1,554 t	140		- Salaries of non-factory workers					
- Edible oil	15 t	9		- Depreciation					
- Bran	3,656 t	66		- Interests paid					
- Contract work on milling services	5,946 t	56		- Other accumulation					
- Other services sold	..	111		( Turnover tax )					
* Including turnover tax on sold products.									
** Drs. 143 million are internally used and not included in the total.									
<b>Capacity output:</b>									
- Wheat flour *	21,000 t	Rate of utilization							
- Bread and pastries	2,380 t	is 75 %.							
- Edible oil	88 t								
Underutilization due to insufficient supply of raw materials.									
* Including contract work.									
VI. SUPPLEMENT		Modernization of the bakery shop is being planned.			SELECTED COEFFICIENTS				
1/ Of which Drs. 42 million are funds belonging to the enterprise.					- Mach. & equip. per factory worker on 1st shift: Drs. 2,778,000				
2/ Assumes that 60% of the flourmill output takes the form of milling service fee.					- Value added per employee: Drs. 1,258,00				
3/ Gross accumulation includes "interests paid".					- Annual wage per factory worker: Drs. 539,000				
					- Variable input cost/gross production ratio: 2/ 68.2 %				
					- Gross accumulation/gross production ratio: 3/ 14.7 %				
					(at full capacity: 19.0 %)				
					- Level of production at break-even point: 53 % of the 1963 actual level.				



**MAJOR PRODUCTS:** Cane sugar refineries. Annual capacity output 20,000 tons of refined sugar on three shift operation.

**REPORTING UNIT:** A branch of an eleven-establishment enterprise with total assets Rs. 50 million (net worth Rs. 20 million) and employees 4,200 as of 1964. This branch was founded in 1933. See VIII for activities of other establishments of the enterprise.

**I. FIXED CAPITAL ASSETS (end of 1964)**

TOTAL BOOK VALUE (Rs. million)	Before deprec.	After deprec.
	4.47	1.65
1. Land (on lease)	-	-
2. Land improvements	-	-
3. Buildings	.40	.18
4. Other construction works	.08	.03
5. Machinery & equipment	3.83	1.36
6. Tools & instruments	.02	-
7. Vehicles	.06	.04
8. Office furniture & fixtures	.08	.04

DETAIL OF 1.5 (No.)	Total Bk. value bef. depr.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace. value
a. Crane carrier with engine (1)	3,70	33	B	6.6	.10
b. Cane knives with engines (2)		8	"	"	.02
c. Crusher (1)		20	"	"	.40
d. Mills (6)		20	A, B	"	3.00
e. Steam engines for crushers and mills (3)		31, 11	B, A	"	.60
f. Juice heaters (7)		5	B	"	.30
g. Juice sulphurization tanks (3)		4	"	"	.10
h. Air compressor (1)		10	"	"	.04
i. Filter presses (14)		4	"	"	.15
j. Carbonation tanks (4)		7, 5	A	"	.10
k. Lime stone (1)		15	B	"	.05
l. Evaporators (2)		10, 3	C, B	"	.10
m. Sulphuring tanks (3)		3	B	"	.10
n. Vacuum pans (1)		10	B, C	"	.60
o. Crystallizers (11)		15	B	"	1.12
p. Centrifugal machines (30)	10	"	"	.60	
q. Boilers (6)	33, 27, 9	"	"	2.50	

**II. INVENTORIES (end of 1964)**

TOTAL VALUE (Rs. million)	Actual	Normal
	1.12	..
1. Direct production materials	.75	..
2. Other input materials		
3. Work in process	.07	..
4. Finished products	.30	+100

- Normal inventories of finished products 6.3% of annual gross production

- Seasonal variations:

Seasonal high	+ 3/50%	+ 4/20%
	(June, July)	(Oct to Nov)
Seasonal low	- 34%	(Dec to Feb)

Capacity of electr. motors: 30 KW  
Capacity of other prime movers: 1,150 HP  
Total load, capacity of trucks: - t  
Total length of railway tracks: 2 Km.  
Machines (a) to (e), (h), (o) to (q) were imported. The rest domestically produced.  
Average age of machinery (97% of total) is 19.2 years.

The establishment was lastly modernized with some Rs. 500,000 investment during 1953/54.

**GENERAL CONDITIONS:** Local transportation, educational, health and recreational facilities, excellent. Long distance transportation, public utilities and residential facilities, fair.

**III. LABOUR (1964 average)**

TOTAL EMPLOYED	1st shift			2nd shift			3rd shift		
	483	3.4	3.4	235	234	234	(32%)	(31%)	(31%)
1. Direct production (all male)	Annual total manhours (COO)								
a. Cane unloading and cane carrier	71	70	70						
b. Mill house	54	54	54						
c. Clarification	4	4	4						
d. Boiling house	62	62	62						
e. Presses	20	20	20						
f. Centrifugals	30	30	30						
g. Drying	6	6	6						
h. Boilers	38	38	38						
2. Auxiliary activities (all male)	198	20	20						
a. Repairs and maintenance	34	20	20						
b. Technical and managerial control	11	-	-						

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	
		Engl-rears	Other
17	6	18	1050
<b>Management</b>			
17	3	1	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	47
<b>Semi-skilled</b>			
-	-	-	161
<b>Unskilled</b>			
-	-	-	645
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	3	17	83
<b>Semi-skilled</b>			
-	-	-	89
<b>Unskilled</b>			
-	-	-	25

Actual hours worked per annum per direct production worker: 1,125 hrs. (The industry operates seasonally. The duration of the season for this establishment is 126 days in 1964)

Motors are fully occupied on all shifts.

**Technological features**

(a) Continuous supply of cane to mills by cane carriers run by steam engine.

(b) Cane is crushed and juice is extracted. Mills are run by steam engines.

(c) Juice clarified by double sulphurisation and carbonation process.

(d) Boiling the juice for concentration.

(e) Physical impurities are removed by passing the juice through filter presses.

(f) Crystal sugar separated from mother liquor.

(g) Sugar is dried on hoppers.

- Mechanization: (a), (b), (d), and (f), excellent; (c) and (g) fair; (e) very poor.

- Automation: Outdated in all shops.

- Skilled workers in direct production are; foreman of mill house, boilers in charge, weighing assistants, panmen, operators of centrifugal machines and crystallizers, etc. Those in auxiliary activities are; fitters, turners, welders, electricians, wooden pattern makers, administrative assistants, accountants, etc.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)				
TOTAL VALUE OF PRODUCTION (Rs. million)			9.59	TOTAL VALUE OF CONSUMPTION (Rs. million)			8.41	
Product	Unit	Quantity Produced	Unit Value (Rs.)	1. <u>Energy &amp; water:</u> total (including 265 Kl lubricating oil at Rs. 1.3/ltr, 476,000 m <sup>3</sup> water at Rs. .08/M <sup>3</sup> ; bagasse is used for boilers)			.16	
a. Crystal sugar	Ton	10,579	904	Quantity Unit consumed (Rs.)				
b. Molasses	"	3,821*	6	- Electricity	000 Kwh	98		
				- Coal	Ton	51		
				- Firewood	"	568		
				- Fuel oils other than petrol	000 l	83.4		
				2. <u>Direct production materials:</u> total			6.97	
				a. Sugar cane	Ton	120,080	56	
				b. Lime stone	"	4,385	37	
				c. Sulphur	"	42	313	
				d. Filter cloth	100 m	55	236	
				e. Hessian cloth	"	167	96	
				f. Hard coke	Ton	582	78	
*intrafirm transfer				3. <u>Packaging materials:</u> total				.20
CAPACITY OUTPUT: 100% higher than the 1964 actual production level with normal 240 days of sugar cane supply; attainable with no addition to manhours. The underutilisation is primarily due to seasonally insufficient supply of sugar cane.				Gunny bags (Rs. 1,856/1000 pcs)				106,000
Unit value of product: Market value f.o.b. before sales tax.				4. <u>Work performed by sub-contractors</u> ( )				-
Unit value of material: Market price c.i.f.				5. <u>Repairs &amp; maintenance</u> (materials & services purchased)				.67
- Crystal sugar is partly exported.				Consumable stores for maintenance of machinery				.13
- Sulphur is imported (purchased through dealers). The rest is domestically produced. Delivery is either by railroad or road. Freight rates for V.2.(a), (b), (c), (f) and V.3. are 1%, 37%, 32%, 38% and 8%, respectively, of the c.i.f. prices.				Minor materials for repair of buildings and equipment				.54
				6. <u>Material inputs for auxiliary activities</u>				.10
				General consumables stores.				.03
				Stationary, etc.				.07
				7. <u>Non-factor service inputs:</u> total				.31
				Of which transportation, insurance and storage (purchased separately) Rs. .05 million.				
VI. VALUE ADDED TOTAL 1964 (Rs. million)				1.10				
1. Wages & salaries (before income tax)				.58				
- Employees in direct production				.27				
- Other employees				.04				
2. Other expenditures for employees				.18				
3. Annual depreciation allowance				-				
4. Rental paid				-				
5. Sales & other indirect taxes (less subsidies) not included in total				[.21]				
6. Other gross business income (before income tax)				.11				
VII. EXPANSION: HISTORY & PLAN				SELECTED COEFFICIENTS				
1. <u>Recent Expansion</u>				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 10,400 (Rs. 27,700) 1/				
From 1960 to 1964				- Value added per employee: Rs. 1,173				
a. Total Investment (Rs. million)		Gross acquisition	Scrapped or sold	- Annual wage per employee in direct production: Rs. 680 2/				
- Land				- Variable input costs/gross production ratio: 76.4%				
- Land improvements				- Gross profit, gross production ratio: 1.1 (at full capacity: 12.4%)				
- Buildings				- Level of production at break-even point is approximately 95% of the 1964 actual level.				
- Other construction work								
- Machinery & equipment		.34						
- Tools & instruments								
- Vehicles								
- Office furniture & fixtures								
b. Corresponding increase:		From 1960	to 1964					
In no. of employees		1,020	1,091					
In annual gross production (Rs. million)		7.60	9.59					
2. <u>Future Plan</u> : None								
a. Investment proposed for the period 19 to 19								
Total value ( )								
Of which: - Mach. & equipment								
- Land improv. & bldg.								
- Land								
- Others								
b. Net increase in no. of employees envisaged for the same period:								
- Direct production:								
- Auxiliary:								
c. Purposes:								
VIII. SUPPLEMENT				Other establishments of the company are engaged in manufacturing of paints and varnishes (see India 313 - (3)), hydrogenated oil (see India 312 - (1)), soap, vegetable oil, lanterns, torches, gas and chemicals, arc electrodes, rolled steel and distillery.				
1/ The number of workers (denominator) includes those in repair and maintenance. The figure in parenthesis uses the 1964 replacement value of equipment as numerator.								
2/ Wages and salaries are included in fixed costs.								



An enterprise refining beet sugar. Founded in 1947. Capable of processing annually 300,000-350,000 tone of beet on 100-days-per-year partial three shift operation. Both raw materials and product markets are local.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)					
TOTAL (Drs. million)		7,709	8,534	- 1954 1955-57 1958-60 1961-63					
Buildings & land improvements		2,368	3,200	Gross expenditures 17 620 717 3,231					
Machinery & equipment		5,334	5,334	Retirements 146 454 436 607					
Other capital assets		7	-	Calculated average age of fixed assets: 6.7 years					
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Electric motors:</b>					
Sugar: diffusion tower ( 3 shifts ).				Total installed capacity: 5,661 KW					
26% of machinery and equipment are of foreign origine.				Of which actually operated in 1965:					
				1st shift 100%; 2nd shift 80%; 3rd shift 80%					
				<b>Technological features:</b> Conventional processes for cutting, diffusion, dehydration, crystallisation and centrifugation. Sufficient mechanisation and automation (rated at 85% & 80%, respectively). Operated seasonally for 100 days a year. Located about 55 km. from the source of raw material.					
II. LABOUR (1965)		TOTAL no. of employees: 841			Educational background of workers:				
		1st shift	2nd shift	3rd shift		Techn. Econ.	Low	Others	Total
1. Factory workers:					Univ. or higher	5	-	-	5
Total	795 persons *	434	228	133	Tech. Higher sch.	-	-	-	-
(1,215 thous. manhrs.)		(494)	(469)	(252)	Secondary sch.	12	9	-	21
- Preparation of raw materials		32	-	-	Primary school	-	-	815	815
- Sugar		147	135	64	IV. INTERMEDIATE INPUTS				
- Other products		22	12	11	Quantity		Value (Drs. Million)		
- Steam and electricity		28	27	16	TOTAL actual consumption 1965				
- Internal transport		39	39	28	3,529				
- Repair, other services and management		166	15	14	1. Energy inputs: total				
2. Non-factory workers: 46 persons					- Electricity 375				
* Of which 253 seasonal workers.		(102 thous. manhours)			- Coke 96				
					- Coal 35				
					- Coal 60,188 t 244				
					2. Major production materials: total				
					2,899				
					- Sugar beet * 243,590 t 2,899				
					* The value includes a part of the wages of seasonal workers which takes the form of raw material costs.				
					3. Repairs & maintenance: total 220				
					4. Other material & non-factor service inputs 35				
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1965) (Drs. Million)				
TOTAL actual revenue output 1965 *				5,139	TOTAL (except turnover tax) 1,274				
- Sugar		28,092 t	4,493		- Wages of factory workers 390 2/				
- Raw spirit		48,200 kl.	51		- Salaries of non-factory workers 39				
- Molasses **		(10,032 t)	..		- Depreciation 314				
- Dry sugar pulp		8,025 t	104		- Interests paid 165				
- Others		..	491		- Other accumulation 366 1/				
* Include turnover tax on sold products.					- (Turnover tax) 336 1/				
** All internal use.									
<b>Capacity output:</b>									
- Sugar 38,400 t									
- Molasses 12,000 t									
- Dry sugar pulp 9,000 t									
- Raw spirit 108,000 kl.									
		Overall rate of utilisation is 74%.							
		Underutilization due to shortage of sugar beet. No additional factory workers are required for full utilization. Out of the 253 seasonal workers, 203 is on 1st shift, 21 on the 2nd. shift and 29 on the 3rd. shift.							
VI. SUPPLEMENT		Future plans:			SELECTED COEFFICIENTS				
1) Introduction of liquid fuel (masut) for boiler.		1) Introduction of liquid fuel (masut) for boiler.			- Mach. & equip. per factory worker on 1st shift: Drs. 12,290,000				
2) Introduction of packing press for lump sugar.		2) Introduction of packing press for lump sugar.			- Value added per employee: Drs. 1,515,000				
1/ Of which Drs. 27 million are funds belonging to the enterprise.		1/ Of which Drs. 27 million are funds belonging to the enterprise.			- Annual wage per factory worker: Drs. 720,000 2/				
2/ Drs. 390 million correspond to non-seasonal 542 workers.		2/ Drs. 390 million correspond to non-seasonal 542 workers.			- Variable input cost/gross production ratio: 1/ 68.2 %				
3/ Wages and salaries are considered as fixed costs.		3/ Wages and salaries are considered as fixed costs.			- Gross accumulation/gross production ratio: 11.0 %				
					(at full capacity: 16.6 %)				
					- Level of production at break-even point: 65 % of the 1965 actual level.				

An enterprise engaging in beet sugar refinery; founded in 1956; capable of processing annually about 330,000 t of sugar beet on 100-days-per-annum operation with three shifts. All production materials are domestically produced.

I. FIXED CAPITAL (end of 1963)	Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)		
			1955-57	1958-60	1961-63
TOTAL (Drs. million)	7,267	7,712			
Buildings & land improvements	2,220	2,669			
Machinery & equipment	4,987	4,987			
Other capital assets	60	60			
Major machinery crucial for determining the overall production capacity:			Gross expenditures		
Sugar: diffusion tower ( 3 shifts ).			Retirements		
26% of machinery and equipment were imported.			Calculated average age of fixed assets: 6.6 years		
			Electric motors:		
			Total installed capacity: 7,410 kW		
			Of which actually operated in 1963:		
			1st shift 100 %; 2nd shift 100 %; 3rd shift 100 %		
			Technological features:		
			Conventional processes for extraction of sugar.		
			Mechanisation and automation lag behind the world advanced level by some 40%. Operates only during the period from Sept. 1 to Dec. 31. Located at 46km. from the best supplies. Good communication lines.		

II. LABOUR (1963)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:			
Total 1,095 persons *	459	324	312
( 1,300 thous. manhrs** )	( 546 )	( 382 )	( 372 )
- Raw material handling *	65	60	60
- Refinery	98	98	98
- Drying plant	29	25	25
- Boiler room and electric plant	64	53	51
- Purchase, transport and warehousing *	69	32	28
- Other shops and services *	134	56	50
2. Non-factory workers: 140 persons			
* Including seasonal workers, totalling to 472 persons.	( 284 )		

Educational background of workers:	Total				
	Tech. sch.	Elem.	Low	Others	Total
Univ. or higher	11	-	-	-	11
Tech. Higher sch.	-	-	2	2	4
Secondary sch.	21	4	-	6	31
Primary school	-	-	-	-	-

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1963 *		6,860
- Sugar	41,750 t	6,568
- Molasses **	15,750 t	361
- Dry sugar pulp **	8,790 t	114
- Others	..	29

\* Including turnover tax on sold products.  
\*\* Drs. 212 million internally used and not included in the total.

#### Capacity output:

- Sugar : 39,000 t. Rate of utilisation is 93%.

Capacity is utilised seasonally; normally 100 days per annum. Optimum number of workers including seasonal workers on the 1st. shift for full utilisation is estimated to be 450; i.e. 2% less than the actual 1963 level.

VI. SUPPLEMENT	Future plans:
2) Balanced expansion of the existing capacities.	1) Introduction of a new process for desaccharisation of molasses.
1/ For 623 non-seasonal workers.	
2/ Of which Drs. 241 million are funds belonging to the enterprises.	
3/ Wages and salaries are considered as fixed costs.	

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. Million)
TOTAL actual consumption 1963		4,800
1. Energy inputs: total		455
- Electricity *	10,348 MWh	..
- Coke	70 t	2
- Coal (various kinds)	79,146 t	412
- Liquid fuel	2,162 t	41
* Drs. 186 million internally supplied.		
2. Major production materials: total		3,401
- Sugar beet	307,342 t	3,012
- Transport, loading and unloading of materials *	..	318
- Other services including wages paid to temporary workers	..	71
* Mostly done by seasonal workers.		
3. Repairs & maintenance: total		84
4. Other material & non-factor service inputs		860

V. VALUE ADDED (1963)	(Drs. Million)
TOTAL (except turnover tax)	1,426
- Wages of factory workers	436 1/
- Salaries of non-factory workers	102
- Depreciation	280
- Interests paid	327
- Other accumulation (Turnover tax)	281 2/
	( 634 )

#### SELECTED COEFFICIENTS

- Mech. & equip. per factory worker on 1st shift: Drs. 10,865,000	
- Value added per employee: Drs. 1,155,000	
- Annual wage per factory worker: Drs. 700,000 1/	
- Variable input cost/gross production ratio: 1/ 62 %	
- Gross accumulation/gross production ratio: 9.7 %	
(at full capacity; 11.8 %)	
- Level of production at break-even point: 74 % of the 1963 actual level.	

An old enterprise with a beet sugar refinery; secondary products include sugar spirit and alcoholic beverages. Capable of processing annually 350,000 t of sugar beet; sugar spirit and liquors about 900,000 kl.; partial three shifts operation (liquors shop works only one shift). The enterprise was founded in 1912.

I. FIXED CAPITAL (end of 1963)	Original purchase value	1963 replacement value
TOTAL (Drs. million)	7,125	7,670
Buildings & land improvements	2,055	2,600
Machinery & equipment	5,070	5,070
Other capital assets	-	-

Major machinery crucial for determining the overall production capacity:

Sugar: diffusion tower and battery ( 3 shifts ).

40% of machinery and equipment are of foreign origins.

Capital expenditures in the past years: (Drs. million)	1953-54	1955-57	1958-60	1961-63
Gross expenditures	286	1,350	846	2,968
Retirements	233	548	664	926

Calculated average age of fixed assets: 6.6 years

Electric motors:

Total installed capacity: 4,971 KW

Of which actually operated in 1963:

1st shift 100 %; 2nd shift 100 %; 3rd shift 100 %

Technological features:

The conventional process for continuous extraction: cutting, diffusion, dehydration, cooking and centrifugation. Operates seasonally for 100 days a year with processing capacity of 300 wagon loads of sugar beet per 24 hours. Highly mechanised and automated (90% relative to the world most advanced level). Located near the supply of raw material.

II. LABOUR (1963)	TOTAL no. of employees: 602		
	1st shift	2nd shift	3rd shift
1. Factory workers: *			
Total 602 persons	293	187	122
(1,400 thous. manhrs.)	( 670 )	( 443 )	( 287 )
- Sugar	246	173	111
- Refined sugar spirit	35	14	11
- Other liquors	12	-	-

\* These figures include the non-factory workers (197 in total) and man-hours but exclude those of the seasonal workers.

Educational background of workers:

	Techn.	Med.	Low	Others	Total
Univ. or higher	11	4	4	1	20
Tech. Higher sch.	2	2	-	-	4
Secondary sch.	24	50	-	-	74
Primary school	-	-	-	504	504

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1963 *		8,364
- Sugar **	40,032 t	6,325
- Refined sugar spirit	280,900 kl.	856
- Denatured alcohol	11,200 "	20
- Artificial brandy	558,500 "	131
- Liquors	36,600 "	13
- Non-alcoholic beverages	100,700 "	22
- Electricity (sold)	5,580 MWH	112
- Molasses **	15,516 t	387
- Dry sugar pulp	17,250 t	224
- Others	..	274

\* Includes turnover tax on sold products.

\*\* Internal use is included.

Capacity	Output t	
- Sugar	46,800 t	} Rate of utilisation is 87%
- Refined sugar spirit	300,000 kl.	
- Molasses	15,510 t	

Underutilization due to insufficient supply of raw materials. No additional man-hours are required on 1st. shift for full utilization.

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. Million)
TOTAL actual consumption 1963		4,890
1. Energy inputs: total		523
- Electricity *	6,541 MWH	131
- Coks	1,521 t	41
- Brown & lignite coal	50,090 t	350
- Liquid fuel	6 t	1
* Internally supplied.		
2. Major production materials: total		4,005
- Sugar beet	306,842 t	2,960
- Sugar	5 t	1
- Various packaging materials	..	134
- Others	..	200
- Wages for seasonal workers	..	592
- Transport services (by seasonal workers)	..	118
3. Repairs & maintenance: total		251
4. Other material & non-factor service inputs		111

V. VALUE ADDED (1963)	(Drs. Million)
TOTAL (except turnover tax)	2,231
- Wages of factory workers	433
- Salaries of non-factory workers	173
- Depreciation	385
- Interests paid	381
- Other accumulation (Turnover tax)	859 1/2
	( 1,244 )

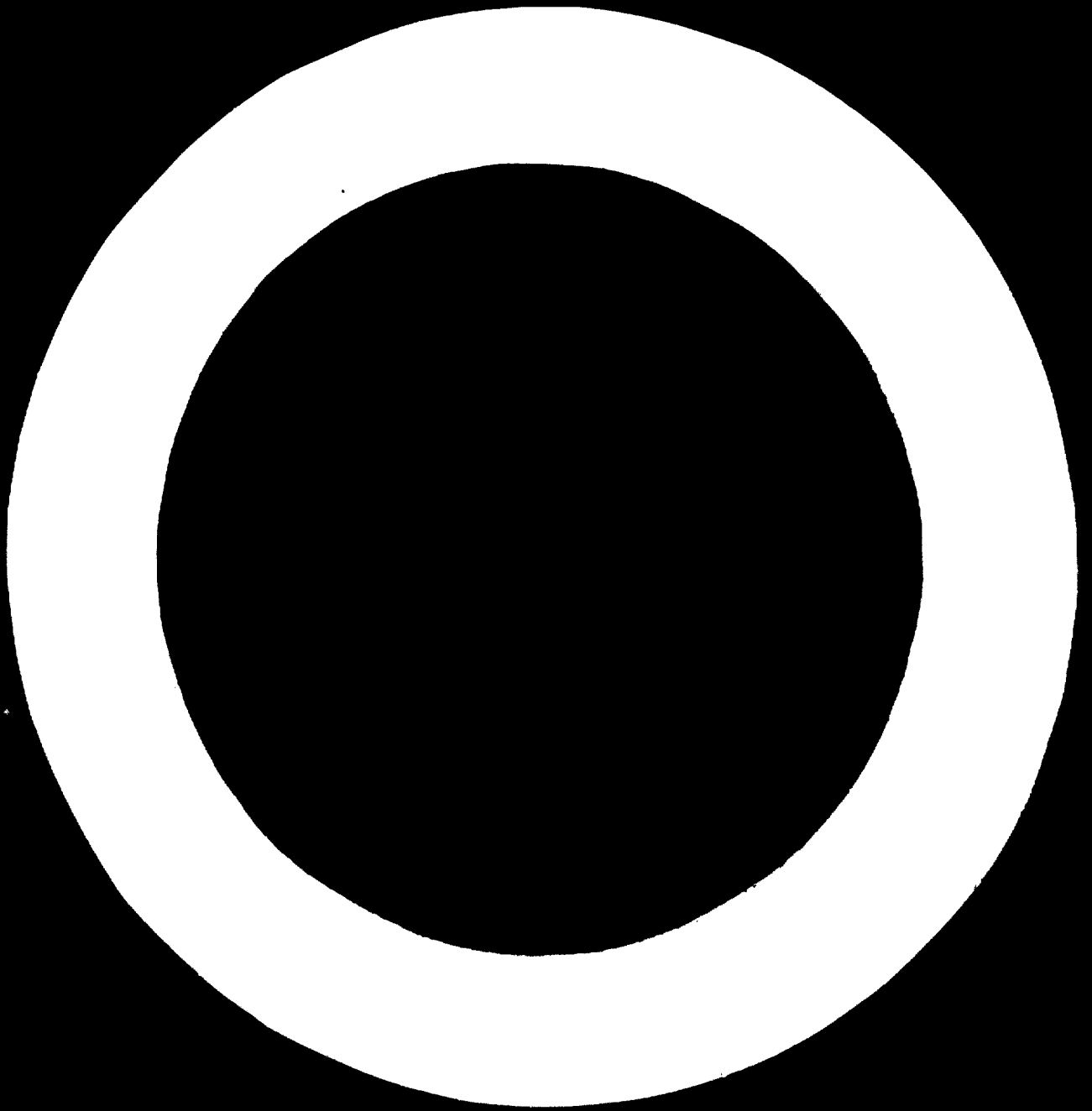
VI. SUPPLEMENT Future plans: Replacement of the existing diffusion battery with diffusion tower which is expected to increase the capacity of production of sugar from 3,000 t to 4,000 t (in terms of sugar beet) per 24 hours.

1/ Of which Drs. 360 million are funds belonging to the enterprise.

2/ Wages and salaries are considered as fixed cost.

SELECTED COEFFICIENTS

- Mech. & equip. per factory worker on 1st shift: Drs.	17,304,000
- Value added per employee: Drs.	3,706,000
- Annual wage per factory worker: Drs.	719,000
- Variable input cost/gross production ratio: 2/	63.6 %
- Gross accumulation/gross production ratio: (at full capacity):	17.4 %
	21.3 %
- Level of production at break-even point: 2/	52 % of the 1963 actual level.



France : 231 - ( 4 )

**MAJOR PRODUCTS:** Wool and synthetic-fibre yarn and threads. Annual capacity output 4,000 to 4,500 tons of yarn and thread, on one shift operation. But actually employs sub-contractors' services, which add 1,500 to 2,000 tons of similar products to the enterprise's gross annual sales.

**REPORTING UNIT:** An independent one-establishment enterprise with capital stock Fr. 10 million and employees 2,398 as of 1964. Founded in 1827.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Fr. million)	62.7	16.6
1. Land (19.75 hectares)	1.8	1.8
2. Land improvements	-	-
3. Buildings (total floor space 98,970 m <sup>2</sup> )	20.7	10.1
4. Other construction works	-	-
5. Machinery & equipment	39.0	4.5
6. Tools & instruments	-	-
7. Vehicles	.3	.1
8. Office furniture & fixtures	.9	.2

DETAIL OF I.5 (No.)	Total Bk value	Avr. Age	Depr. rate	1964 replace value
	(Unit value) Fr. 000	(Yr.)	(%)	(Unit value) Fr. 000
a. "Frotteur à confection" and "Finisseur de préparation"	54	1	A	15
b. Continuous spinning machines (NSC)	64	10	"	"
c. Continuous twisting machines (Wolkmann)	87	2	"	"

**II. INVENTORIES** (end of 1964)

	Actual	Normal
<b>TOTAL VALUE</b> (Fr. million)	61.5	...
1. Direct production materials	18.2	
2. Other input materials	2.1	
3. Work in process	24.0	
4. Finished products	17.3	

- Actual inventories of finished products 12.5% of annual gross production

- Seasonal variations:

	High % Month	Low % Month
- Production materials	+ 13 May-June	- 13 Sep.-Oct.
- Finished goods	+ 50 June	- 50 Nov.

Capacity of electr. motors: 4,500KW

Total load, capacity of trucks: 40 t

(o) was imported; the rest produced domestically.

**EXTERNAL CONDITIONS:** Transportation, water and educational facilities, excellent. Electricity, fair. Residential, health and recreational facilities, poor.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> m. 1,189	2,398	-	-
1. Direct production (r. 659)	1,848	-	-
Annual total manhours (000)	(2,956)	( )	( )
a. Combing	363	-	-
b. Dyeing	157	-	-
c. Spinning and finishing	1,145	-	-
d. Maintenance *	183	-	-
2. Auxiliary activities (m. 382) (r. 168)	550	-	-
Technical control and administrative and commercial services.	550	-	-

\* Preferably to be classified under III 2.

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
15	13	174	2,196
<b>Management</b>			
15	13	29	21
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	61	1,534
<b>Semi-skilled</b>			
-	-	-	140
<b>Unskilled</b>			
-	-	-	113
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	84	-	351
<b>Semi-skilled</b>			
-	-	-	27
<b>Unskilled</b>			
-	-	-	10

- Average working hours per annum per direct production worker: 1,600 hours.

- Proportion of motors occupied: 90% on 1st shift.

**Technological features:**

a): Washing, carding and combing; fibres are treated by cracking or "convertissage".

b): Dyeing or combed strands or yarns.

c): Drawing combed strands; then drawing and twisting for forming threads; winding thread cone from spinning bobbins together with "purification" of irregularities and assembling with torsion of two or several threads.

- Degree of mechanisation is excellent to fair in (a); excellent in (b) and (c);

fair in twisting. Automation is poor in (a), fair in (b) and (c); but excellent in fibre treating and winding section.

- **Skilled workers** in direct production are engaged in manual sorting of wool, adjusting of carding machines, operating of dyeing autoclaves and supervision and operation of continuous spinning and winding machines. Boiler operators, and drivers of transport and material handling vehicles are also considered among skilled job categories.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION (Fr. million )			138.0	TOTAL VALUE OF CONSUMPTION (Fr. million )			102.7
<u>Product</u>	<u>Unit</u>	<u>Quantity Produced</u>	<u>Unit Value (Fr.000)</u>	<u>1. Energy &amp; water: total</u>			1.9
a. Hosiery and weaving yarn	Ton	4,427*	24.02	- Water	000 m <sup>3</sup>	516	567
b. Knitting threads	"	1,061	21.65	- Electricity	000 KWH	14,476	77
c. Contract work on : strands (rubans) of artificial and synthetic fibres.	"	575	6.65**	- Coal	ton	1,910	80
d. Waste from carding, dyeing and spinning	"	679	4.50	- Heavy liquid fuel	"	2,500	120
e. Revenue from packing and others	000 Fr.	1,760	..	- Light liquid fuel	"	463	154
				<u>2. Direct production materials: total</u>			78.2
				a. Combed wool	ton	3,302	15,100
				b. Strands of artificial and synthetic fibres	"	2,450*	8,800
				c. Others	000 Fr.	6.7	..
* Includes 1,856 tons made by sub-contractors. ( See VIII.)				* Of which 1,942 tons were contracted out (see VIII ).			
** Rate of commission ( See VIII.)							
<b>CAPACITY OUTPUT:</b> 10 - 20% higher than the 1964 actual production level given sufficient demand and additional 10% man-hours. This in itself is constrained by the installed capacity in the spinning conical winding, recombining and dyeing sections; an investment of Fr. five million would increase the overall capacity over the 1964 production level by 33%. Product - mix is <u>not</u> flexible.				<b>3. Packaging materials: total</b> 1.1			
Unit value of product: Market value f.o.b. before sales tax Unit value of material: Market price c.i.f.				<b>4. Work performed by sub-contractors ( see VIII )</b> 6.6			
- 41% of hosiery and weaving threads is exported.				<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> 6.0			
- Combed wool is directly imported and delivered seaborne. Bands of synthetic and artificial fibres are domestically produced and delivered by road.				<b>6. Material inputs for auxiliary activities</b> 8.9			
				<b>7. Non-factor service inputs: total</b> Transportation, insurance and storage purchased separately; Fr. 1,784,000.			
<b>VI. VALUE ADDED TOTAL 1964 (Fr. million )</b> 35.3				<b>SELECTED COEFFICIENTS</b>			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Fr. 21,100			
- Employees in direct production 15.7				- Value added per employee: Fr. 14,710			
- Other employees 10.8				- Annual wage per employee in direct production: Fr. 8,490			
2. Other expenditures for employees .84				- Variable input costs/gross production ratio: 7%			
3. Annual depreciation allowance 4.2				- Gross profit/gross production ratio: 2.7%			
4. Rental paid (incl. royalties Fr. 110,000) .14				- ( at full capacity : 6.2% )			
5. Sales & other indirect taxes [18.2]				- Level of production at break-even point is approximately 90 % of the 1964 actual level.			
6. Other gross business income (before income tax) 3.7							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u>				2. <u>Future Plan</u>			
From 1962 to 1965				a. Investment proposed for the period 1966 to 1972			
a. Total Investment (Fr. million )		21.8		Total value (Fr. million )		10.88	
- Land		.4		Of which: - Mach. & equipment		81	\$
- Land improvements		-		- Land improv. & bldg.		19	
- Buildings		9.4		- Land		-	
- Other construction work		-		- Others		-	
- Machinery & equipment		11.5		b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments		-		- Direct production: ..			
- Vehicles		.2		- Auxiliary: ..			
- Office furniture & fixtures		.3		c. <u>Purposes:</u> Expansion of thread dyeing, transformation of artificial and synthetic fibres, automatic conical winding, and twisting section. Integration of haberdashery; overhauling of winding and twisting shops and improvement of material handling section.			
b. Corresponding increase:		<u>From 1962 to 1965</u>					
In no. of employees (direct prod.)		1,794	1,572				
In annual gross production (Fr. million )		160	160				
<b>VIII. SUPPLEMENT</b>							
<u>Work performed by sub-contractors (detail)</u>							
A sub-contractor (with employees 1,500) manufactured under a long-term agreement woollen yarn 1,683 tons from bands of combed wool or synthetic fibre, receiving Fr. 4,262,000 for fees. Another sub-contractor with a short-term contract made woollen yarn 173 tons receiving a fee of Fr. 2,296,000. These woollen yarns are sold outside without being further processed, together with spinning waste recollected.							
<u>Commission work done by the establishment</u>							
The establishment made strands, cranked, converted and carded, from the artificial and synthetic fibres in cable or in hair supplied by a contractor, receiving a fee of Fr. 3.8 million in 1964.							



**IV. ANNUAL PRODUCTION (1964)**  
 TOTAL VALUE OF PRODUCTION ( 000 Frs. ) 10,127

Product	Unit	Quantity Produced	Unit Value (Fr.)
a. Cotton yarns.	ton	1,620	5,000*
b. Miscellaneous secondary products	(000 Frs)	..	968
c. Scrape	(000 Frs)	..	59

\* Market price after sales tax is reported to be Fr. 6,250 per ton.

**CAPACITY OUTPUT:** 100% higher than the 1964 actual production given sufficient demand with additional manhours: 150,000 on the 2nd shift and 200,000 on the 3rd shift.

Unit value of product: Market value f.o.b. before sales tax  
 Unit value of material: Market price c.i.f.  
 (12.a.) is imported. The approximate freight rate is Frs. 19 per ton.

**V. INTERMEDIATE INPUTS (1964)**  
 TOTAL VALUE OF CONSUMPTION ( 000 Frs. ) 7,139

1. **Energy & water: total** 445

	Quantity	Unit	Unit Value (Fr.)
(30,000 Kwh)			
- Electricity internally supplied)	000 Kwh	3,700	..
- Liquid fuel	M <sup>3</sup>	92	..
- Water	000 M <sup>3</sup>	30	..

2. **Direct production materials: total** 6,460

a. Raw cotton	ton	2,020	3,200
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3. **Finishing materials: total** 54

- Paper and paper products	ton	60	715
- Others	000 Frs.	11	..

4. **Work performed by sub-contractors ( )** -

5. **Repairs & maintenance (materials & services purchased)** 98

6. **Material inputs for auxiliary activities** 11

Lubricants Frs. 6,000; driving belts Frs. 4,200; lighting and maintenance Frs. 730.

7. **Non-factor service inputs: total** 71

Of which transport, insurance and storage services purchased separately 61

**VI. VALUE ADDED TOTAL 1964 ( 000 Frs. ) 2,988**

1. Wages & salaries (before income tax)	
- Employees in direct production	1,093
- Other employees	354
2. Other expenditures for employees	738
3. Annual depreciation allowance	525 1/
4. Rental paid	-
5. Sales & other indirect taxes (less subsidies) (not included in total)	[1,918]
6. Other gross business income (before income tax)	278

**SELECTED OBSERVATIONS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Frs. 82,849<sup>2/</sup>
- Value added per employee: Frs. 10,440.
- Annual wage per employee in direct production: 4,340<sup>3/</sup>
- Variable input costs/gross production ratio: 79.5%
- Gross profit/gross production ratio: 2.7% (" at full capacity: 14.1%)
- Level of production at break-even point is approximately 63 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
1. <b>Recent Expansion</b> (for renovation) From 1954 to 1964	5,510	-
a. Total Investment ( 000 Frs. )		
- Land	-	-
- Land improvements	-	-
- Buildings	200 4/	-
- Other construction work	-	-
- Machinery & equipment	5,240 4/	-
- Tools & instruments	-	-
- Vehicles	70	-
- Office furniture & fixtures	-	-
b. Corresponding increase:	From 1954	to 1964
In no. of employees	330	286
In annual gross production		+ 10 %

2. **Future Plan \***
- a. Investment proposed for the period 19 to 19  
 Total value ( )  
 Of which: - Mach. & equipment \$  
 - Land improv. & bldg.  
 - Land  
 - Others
- b. Net increase in no. of employees envisaged for the same period:  
 - Direct production:  
 - Auxiliary:
- c. **Purposes:**  
 \* The absorption of an enterprise engaging in similar activity is being planned.

**VIII. SUPPLEMENT** 1/ Annual depreciation allowance was not reported originally by the enterprise; this was estimated as 10% of the total value of fixed capital(excluding land)after depreciation at the end of 1963.

- 2 Including maintenance crew (estimated 26 persons).
- 3 The level of wages is still low compared with the prevailing standard, but the production costs have been appreciably increased owing to the wage adjustment forced by the competition.
- 4 All the expenditures for building and 5% of the expenditure for machinery consist of internally supplied works.



**MAJOR PRODUCTS:** Cotton spinning, weaving and finishing: Dhories, sarees, sheetings, shirtings, etc. Annual capacity output (with three shifts) is about 5,800 tone of these finished products.

**REPORTING UNIT:** A largest branch of a 6 - establishment enterprise, founded in 1915, with total assets of Rs. 65 (net - worth Rs. 20 million) and employees more than 8,000 as of 1964. The other five branches are spinning mills with some 3,500 employees altogether. All branches are operating relatively independently of one another

**I. FIXED CAPITAL ASSETS** (end of 1964)

TOTAL BOOK VALUE (Rs. million)	Before deprec.*	After deprec.
	25.05	10.90
1. Land	Negligible	Negligible
2. Land improvements	-	-
3. Buildings	5.70	2.93
4. Other construction works	-	-
5. Machinery & equipment	18.72	7.69
6. Tools & instruments	Negligible	Negligible
7. Vehicles	.31	.09
8. Office furniture & fixtures	.32	.18

\* Excludes the assets already completely amortized.

Total Bk. value	Avg. Age	Depr. rate	196 4 replace value
25.05	10.90	10	21

**DETAIL OF I.5 (No.)**

	Total Bk. value	Avg. Age	Depr. rate	196 4 replace value
a. Carding, preparation, processing, and drawing machines (390).	30	C		
b. Ring, spinning, and blow room machines (7)	13	B		
c. Mixing room and willow shed (11)	16	B		
d. Boiler house and pump room (7)	15	35	C	10
e. General machine shop (17)	33	C		
f. Weaving, calendaring, folding, sizing, winding, warping, etc. (576)	38	C		
g. Reeling department (33)	35	C		

**II. INVENTORIES**

(end of 1964)

TOTAL VALUE (Rs. million)	Actual	Normal
21.04	21.04	-14 %

1. Direct production materials	6.10	-10
2. Other input materials		
3. Work in process	7.09	+ 0
4. Finished products	7.85	-30

- Normal inventories of finished products 10.7 % of annual gross production

- Seasonal variations: None.

Capacity of electr. motors: 558 KW

Total load, capacity of trucks: 22 t

Total length of railway tracks: 2 Km.

(e) is in part domestically produced.

All the rest are imported.

Average age of machinery (80% of total) is 27 years.

**EXTERNAL CONDITIONS:** Local transport - ation and public utilities, excellent. Long distance transportation, residential, health and recreational facilities fair. Educational facilities, poor.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> (4,849 m. 4,315 f. 168)	2,352	1,619	877
1. Direct production (Annual total manhours (000))	2,113 (5,985)	1,549 (4,275)	821 (2,280)
a. Spinning shop	300	250	175
b. Weaving shop	204	254	100
c. Processing shop	775	575	275
d. Stores and other shops	225	115	35
e. Maintenance shop	200	75	25
f. General labour	409	280	211
2. Auxiliary activities (Technical and managerial control)	240	70	56

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Other
4	85	110	4,650
4	75	50	-
<b>Direct Production</b>			
Skilled			
Semi-skilled			
Unskilled			
<b>Auxiliary Activities</b>			
Skilled			
Semi-skilled			
Unskilled			

- Actual hours worked per annum per direct production worker : 2,800 hours.

- **Technological features:** (c): Dyeing bleaching, printing, sanforising and mercerising.

- Mechanisation and automation fair to poor in (a), poor to obsolete in (b), and excellent to poor in (c).

- **Skilled workers** in direct production are: carders, weavers, spinners, dyers, fitters, turners, carpenters, welders, etc. Those in auxiliary activities are: administrative assistants, sales and purchase assistants, accountants, etc.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( Rs. million )			51.33	TOTAL VALUE OF CONSUMPTION ( Rs. million )			37.00
Product	Unit	Quantity Produced	Unit Value (Rs.)		Quantity consumed	Unit value (Rs.)	
a. Dhoties and sarees	ton	452	6,259	1. Energy & water: total			2.66
b. Chaddars, sheeting, etc.	ton	1,546	7,044	(515 million l. water drawn from the own tube well).			
c. Coatings	ton	277	4,757	- Electricity	000 KWH	16,201	93.00
d. Long cloth and shirtings	ton	3,025	6,887	- Coal	ton	21,084	27.85
e. Tent cloth and canvas	ton	225	5,368	- Lubricating oil	000 lit.	125	813.60
f. Drills and jeans	ton	107	5,028	- Petroleum	000 lit.	12	1,600.00
g. Cambrics, lawn, mulls, etc.	ton	59	15,270	- Other fuel oils	000 lit.	54	
h. Other products	ton	154	6,651	2. Direct production materials: total			12.57
i. Cotton (sold)	ton	1,220	7,705	a. Short staples	000 ton	1,228	15,000
j. Cotton (internally used)	ton	(7,280)	( - )	b. Medium staples	" "	153	21,000
k. Cotton scraps	ton	755	813	c. Long staples	" "	189	24,000
l. Cotton yarn scrap	ton	528	1,043	d. Cotton	ton	402	6,284
m. Tents scrap	ton	208	5,264	e. Silk fibres	"	4	4,507
n. Cloth rags scraps	ton	31	4,032	f. Other fibres	"	1	5,000
				g. Chemicals etc.	"	1,562	1,600
				h. Consumable stores	Rs. mil.	1.35	
<b>CAPACITY OUTPUT:</b>				3. Packing materials: total			.54
Close to the 1964 actual production level.				Serial products other than cases Rs. 6,000; Paper & paper products Rs. 117,000 Wooden materials Rs. 48,000.			
Unit value of product: Market prices f.o.b. before sales tax				4. Work performed by sub-contractors (			
Unit value of material: Market prices o.i.f.				5. Repairs & maintenance (materials & services purchased)			.20
- All products are for domestic markets.				6. Material inputs for auxiliary activities			.09
- Production materials are all domestically produced, but (g) and (h) have significant imports contents.				Stationery and printing			
(a) to (f) are delivered by railroad and road with freight rates 3 to 5% of o.i.f. value;				7. Non-factor service inputs: total			.93
(g) and (h) by railroad and sea with freight rate 10%.				Of which transportation, insurance and storage (purchased separately) .78			
<b>VI. VALUE ADDED</b>			TOTAL 1964 ( Rs. million )	<b>SELECTED COEFFICIENTS</b>			
			14.32	- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 8,860 (Rs. 12,400 1/)			
1. Wages & salaries (before income tax)		9.69		- Value added per employee: Rs. 2,960			
- Employees in direct production		{ .. }		- Annual wage per employee Rs. 2,000 2/			
- Other employees		{ .. }		- Variable input costs/gross production ratio: 79.4% 3/			
2. Other expenditures for employees		.75		- Gross profit/gross production ratio: 1.4% 4/			
3. Annual depreciation allowance		1.35		- Level of production at break-even point is approximately 93 % of the 1964 actual level.			
4. Royalties paid		1.81					
5. Sales & other indirect taxes (less subsidies)		-					
6. Other gross business income (before income tax)		.73					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>			Gross acquisition	% of repair			
1. Recent Expansion				2. Future Plan : None.			
From 1962 to 1965				a. Investment proposed for the period 19 to 19			
a. Total Investment ( Rs. million )		7.01		Total value ( )			
- Land		-		Of which: - Mach. & equipment %			
- Land improvements		-		- Land improv. & bldg.			
- Buildings		.88	10	- Land			
- Other construction work		-	-	- Others			
- Machinery & equipment		5.96	20	b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments		-	-	- Direct production:			
- Vehicles		.05	8	- Auxiliary:			
- Office furniture & fixtures		.12	10	c. Purposes:			
b. Corresponding increase:		From 1962 to 1965					
In no. of employees		4,362	4,949				
In annual gross production (Rs. million)			+ 37%				
<b>VIII. SUPPLEMENT</b>			Structure of liquid assets of the parent company (end of 1964; Rs. million).				
			Cash on hand and in bank 0.45; Accounts receivable 3.57; Loans and advances 3.65.				
			Taxes payable 3.41; Accounts payable 8.25; Short-term loans from commercial bank 29.92.				
1/	The numerator is the 1964 replacement value.						
2/	Total wages and salaries divided by total number of employees.						
3/	Rs. 5 million of wages and salaries is regarded as variable cost.						
4/	In 1963 the profit/production ratio was much higher at 5.5%. The changes in the annual revenue and major cost items are as follows : (Rs. million)						
	Production revenue	Direct prod. materials	Royalties	Wages & salaries	Other costs	Gross profit	
1963	46.8	28.8	1.9	8.2	6.3	2.6	
1964	51.3	32.8	1.8	9.7	7.3		

India : 231 - ( 8 )

**MAJOR PRODUCTS:** Cotton spinning, weaving and finishing; Integrated mill producing - Dhotees, sarrees, bed sheets, table cloths, etc., from cotton staples. Annual capacity output is about 2,500 tons and amounts to some Rs. 19 million in revenue terms on partial three-shift operation.

**REPORTING UNIT:** Old one-establishment enterprise with total assets of Rs. 15 million (net worth 4.5 million); founded in 1923 and has 2,445 employees as of 1964.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. million)	<u>8.20</u>	<u>2.61</u>
1. Land	.13	.13
2. Land improvements	.002	.001
3. Buildings	1.27	.51
4. Other construction works	-	-
5. Machinery & equipment	6.64	1.91
6. Tools & instruments	-	-
7. Vehicles	.09	.02
8. Office furniture & fixtures	.06	.04

DETAIL OF I.5 (No.)	Total Bk. value bef. deprec.	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace. value
a. Blow room lines (3)	.218	29	B	10	.50
b. Carding engines (108)	.427	34	"	"	3.50
c. Draw frames (58)	.091	34	"	"	1.00
d. Speed frames (53)	.378	34	"	"	3.30
e. Ring frames (92)	.825	34	"	"	6.30
f. Winders (13)	.190	41	"	"	.80
g. Warpere (9)	.030	34	"	"	.65
h. Sisera (5)	.041	41	"	"	.50
i. Looms (898)	.437	39	"	"	2.00
j. Jiggere (7)	.013	8	"	"	.50
k. Dampers (4)	.007	25	"	"	.05
l. Printer (1)	.150	0	A	"	.15
m. Finishers (26)	.055	34	B	"	.30
n. Calenders (5)	.163	34	B	"	.70

**II. INVENTORIES**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> (Rs. million)	<u>6.69</u>	<u>-24</u>
1. Direct production materials	1.51	-
2. Other input materials	.79	-
3. Work in process	.18	+17
4. Finished products	4.20	-40

- Normal inventories of finished products 13.7% of annual gross production

- Seasonal variations: Finished products: Seasonal high (July) and low (Nov.) are 80% and 20%, respectively, of the 1964 normal level. Materials (1 + 2) Seasonal high (Jan.) and low (Nov.) are 100% & 60% resp., of the 1964 normal level.

Capacity of electr. motors: 2,318 KW

Total load, capacity of trucks: 3 t  
" " " railway: 50 t  
Total length of railway tracks: .25 Km

Most of machines are imported; only (e) and (i) are in part domestically made.

Average age of the itemized machinery (46% of total) is about 33 years.

**EXTERNAL CONDITIONS:** Transportation and public utilities, excellent. Residential health and recreational facilities, fair. Educational facilities, poor.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	<u>1,256</u>	<u>950</u>	<u>239</u>
1. Direct production ( all male* )	<u>1,003</u>	<u>888</u>	<u>235</u>
Annual total manhours (000)	<u>(2,810)</u>	<u>(2,480)</u>	<u>(657)</u>
a. Carding	158	137	66
b. Spinning	296	261	82
c. Winding	86	94	87
d. Weaving	379	347	-
e. Dyeing and bleaching	57	38	-
f. Printing	27	11	-
2. Auxiliary activities ( all male )	<u>253</u>	<u>62</u>	<u>4</u>
a. Warehouse	67	62	4
b. Maintenance and other shops	129	-	-
c. Technical and managerial control	57	-	-

\* Those workers classified under III, 1 direct production include approximately 450 workers engaged in auxiliary types of jobs within factories.

**EDUCATIONAL BACKGROUND** (No. of employees)

Engl-ness	Univ. or higher		Sr. High sch. or equiv.	Others
	Other			
<b>TOTAL</b>	1	23	107	2,314
<b>Management</b>	1	20	30	6
<b>Direct Production</b>	-	-	27	801
Skilled	-	-	-	-
Semi-skilled	-	-	-	542
Unskilled	-	-	-	756
<b>Auxiliary Activities</b>	-	-	-	-
Skilled	-	3	5	31
Semi-skilled	-	-	45	59
Unskilled	-	-	-	119

- Actual hours worked per annum per direct production worker: 2,800 hours.

- Proportion of motors occupied: 100%, 80% and 15% for 1st., 2nd., and 3rd., shift, respectively.

- **Technological features:**

- Mixing, ginning, blowing and formation into laps.
- Spinning of laps into yarn.
- Winding of yarn on spindles to form reels.
- Yarn is transferred from reels to beams, starched and then stretched. The beams are filled on looms and cloth is woven.
- The cloth and the yarn are dyed or bleached according to the requirements.
- Weighting of the cloth, calendaring, folding, stamping, labelling and packing.

- Mechanisation: fair in (a) to (g). Poor in (2.a).  
- Automation: low in (a) to (g).

- **Skilled workers** in direct production are: carders, spinners, winders, weavers and dyers.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( Rs. million ) 19.17

Product	Unit	Quantity	Unit Price (Rs.)	Value (Rs.)
a. Dhoties and sarees	ton	1,112.7	7,200	
b. Bed sheets, table cloths and dhoties	ton	784.0	7,300	
c. Shirtings and long cloth	ton	409.8	8,400	
d. Printed cambrics and lawns	ton	97.9	12,000	
e. Cotton yarn	ton	34.8	5,900	
f. Tante	ton	63.0	6,800	
g. Rags	ton	34.2	5,000	

**CAPACITY OUTPUT:** No increase over the 1964 actual level. The winding shop, finishing and dyeing shop are a constraining factor; an investment of Rs. 1 million and additional man-hours 50,000 on 1st, 350,000 on 2nd, and 520,000 on 3rd shift are required to increase the capacity by about 25%. Product - mix is flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price o.i.f.

- Only part of 1V (b) (grey sheeting) and of 1V (c) (dyed cloth) are directly exported.
- V. 2 : Production material (d) is directly imported; (b) and (c) are domestically produced with a significant amount of import contents.
- Most of production material is transported by railroads and roads.

**VI. VALUE ADDED TOTAL 1964 ( Rs. million ) 7.90**

1. Wages & salaries (before income tax)	
- Employees in direct production	4.68
- Other employees	.61
2. Other expenditures for employees	1.20
3. Annual depreciation allowance	.38
4. Rental paid (other than for land & buildings)	.01
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	1.02

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION (Rs. million ) 11.27

1. Energy & water: total	Quantity consumed (Rs.)	Unit value (Rs.)
- Water	K. litre	3,326
- Electricity	000 KWH	7,526
- Petroleum	litre	18,078
- Other fuel oils	litre	12,573
- Coal	ton	3,404
2. Direct production materials: total		9.42
a. Short staple	bale	9,272
b. Medium staple	"	5,596
c. Long staple	"	147
d. Tallow	ton	35
e. China clay	"	121
f. Gums and resins	"	12
g. Sodium hydrosulphite	"	6
h. Caustic soda	"	23
i. Soda ash	"	18
j. Bleaching liquor	litre	3
k. Common salt	ton	25
l. Sulphuric acid	"	3
m. Hydrochloric acid	"	9
n. Starch	"	232
o. Colours	Kg.	16,676
3. Packaging materials: total		.19
- Metal products (Rs. 15,000), paper and paper products (Rs. 104,000), and hessian cloths (Rs. 7,000)		
4. Work performed by sub-contractors ( )		-
5. Repairs & maintenance (materials & services purchased)		.11
- General repair work		
6. Material inputs for auxiliary activities		-
7. Non-factor service inputs: total		.74

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 6,600 (Rs. 39,000 1/)
- Value added per employee: Rs. 3,220
- Annual wage per employee in direct production: Rs. 2,200
- Variable input costs/gross production ratio: 79%
- Gross profit/gross production ratio: 5.3%
- Level of production at break-even point is approximately 76 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition	% of repair
From 1960 to 1964		
a. Total Investment ( Rs. million )	2,312	
- Land	-	-
- Land improvements	-	-
- Buildings	.129	2
- Other construction work	-	-
- Machinery & equipment	2.110	5
- Tools & instruments	-	-
- Vehicles	.018	5
- Office furniture & fixtures	.055	-
b. Corresponding increase:	From 1960 to 1964	
In no. of employees	1,719	2,445
In annual gross production		+ 24%

**2. Future Plan**

- a. Investment proposed for the period 1964 to 1969
- |                             |      |
|-----------------------------|------|
| Total value ( Rs. million ) | 10   |
| Of which:                   |      |
| - Mach. & equipment         | 85 % |
| - Land improv. & bldg.      | 10   |
| - Land                      | -    |
| - Others                    | 5    |
- b. Net increase in no. of employees envisaged for the same period:
- Direct production: 70 persons
  - Auxiliary: 30
- c. Purposes: Introduction of new products; overhauling part of the existing shops and largely balanced expansion of the existing capacity in the same location.

**VIII. SUPPLEMENT**

Structure of liquid assets of the parent company (end of 1964) (Rs. million).

Cash on hand and in bank	6.7	Accounts payable	2.7
Accounts receivable	.8	Short term loans from commercial bank	6.9
Loans and advances	.5	Short term loans from industrial bank	.1

1/ The numerator is the 1964 replacement value of machinery and equipment estimated from the data in I. The denominator includes those engaged in maintenance and other shops (III. 2. b).

**MAJOR PRODUCTS:** Wool carding, spinning, weaving and finishing: suiting cloths, tweeds, flannel, blankets, etc. Annual capacity output (with three shifts) is about 450,000 m. of woven goods, plus about 950 t. of worsted yarn (to be sold).

**REPORTING UNIT:** An independent one-establishment enterprise with total assets of Rs. 22 million (net worth Rs. 9 million) and employees 1,150 as of 1964. Founded in 1924.

I. FIXED CAPITAL ASSETS (end of 1964)		Before deprec.	After deprec.	II. INVENTORIES (end of 1964)		
TOTAL BOOK VALUE (Rs. thousand)		12,007	6,268	TOTAL VALUE (Rs. million)	Actual	Normal
1. Land		44	44	1. Direct production materials	2.82	+ 7
2. Land improvements		-	-	2. Other input materials	1.06	- 6
3. Buildings		3,633	2,674	3. Work in process	1.09	- 8
4. Other construction works		1,009	375	4. Finished products	5.12	- 21
5. Machinery & equipment		6,733	2,899	- Normal inventories of finished products 17.3% of annual gross production		
6. Tools & instruments		-	-	- Seasonal variations: ..		
7. Vehicles		160	47	Capacity of electr. motors: 1,561 KW		
8. Office furniture & fixtures		428	229	Other prime movers 493 HP		
				Total load, capacity of trucks: 3 t		
				All machines are imported.		
<b>DETAIL OF I.5 (No.)</b>		Total Bk. value bef. deprec.	Avr. Age (Yr.)	Depr. Oper. rate (%)	1964 replace value	
a. Teasing machine	}	6,000	15	B	6	7,000
b. Carding machines						
c. Looms						
d. Finishing machines						
e. Automatic looms						
f. Drying machines						
g. Dyeing machines						
h. Packing machines						
i. Boilers						
j. Electric generators						
k. Lathes						
l. Sharpeners						
m. Planers						

**EXTERNAL CONDITIONS:**

Transportation, public utilities and community facilities, all excellent.

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				- Actual hours worked per annum per direct production worker: 2,276 hours.
TOTAL EMPLOYED	1,150 m. 912	568	326	256	Univ. or higher	Sr. High sch. or equiv.	Other	Others	
1. Direct production ( f. 37 )		385	313	251	Engi-ners	Other			- Proportion of motors occupied: 85%, 65% and 0% on 1st, 2nd, and 3rd shifts, respectively.
Annual total manhours (000)		(1,120)	(643)	(397)	TOTAL				
a. Teasing shop		75	50	35	4	67	124	955	- Technological features: (a): Teasing and scouring of wool. (e): Wet and dry finishing.
b. Carding shop		105	86	69	Management				
c. Spinning and weaving		120	115	106	Direct Production				- Mechanisation and automation is generally fair; but the automation of (b) and (c), is relatively poor.
d. Carpet yarn storage		25	18	16	Skilled				
e. Finishing department		40	24	15	Semi-skilled		24	510	
f. Dyeing department		15	15	10	Unskilled			307	
g. Packing and baling department		5	5	-				108	
					Auxiliary Activities				- Skilled workers on direct production are: wool pickers, wool examiners, wool scourers, carburisers, driers, fitters, carpenters, card-menders, mule minders, piecers, remlers, spinners, etc. Those of auxiliary activities are: administrative assistants, sales and purchase assistants, accountants, etc.
2. Auxiliary activities ( m. 201 )		183	13	5	Skilled				
a. Laboratory		10	8	-		7	80	-	
b. Workshop		50	-	-	Semi-skilled			20	
c. Foundry shop		29	-	-	Unskilled			10	
d. Boiler house		10	5	5					
e. Technical and managerial control		84	-	-					

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)																																																																																																																																																																											
TOTAL VALUE OF PRODUCTION (Rs. million ) <u>23.39</u>				TOTAL VALUE OF CONSUMPTION (Rs. million ) <u>15.58</u>																																																																																																																																																																											
<table border="1"> <thead> <tr> <th>Product</th> <th>Unit</th> <th>Quantity</th> <th>Unit Value (Rs.)</th> </tr> </thead> <tbody> <tr><td>a. Saxony suiting cloth</td><td>000 meter</td><td>144.8</td><td>18,200</td></tr> <tr><td>b. Tweeds</td><td>"</td><td>38.4</td><td>14,800</td></tr> <tr><td>c. Blaser cloth</td><td>"</td><td>7.4</td><td>16,200</td></tr> <tr><td>d. Woolien flannel</td><td>"</td><td>54.4</td><td>13,800</td></tr> <tr><td>e. Serges</td><td>"</td><td>44.0</td><td>20,300</td></tr> <tr><td>f. Gaberdine</td><td>"</td><td>1.0</td><td>18,900</td></tr> <tr><td>g. Roller cloth</td><td>"</td><td>51.6</td><td>19,200</td></tr> <tr><td>h. Rugs and blankets</td><td>"</td><td>30.9</td><td>37,500</td></tr> <tr><td>i. Worsted yarn (sold)</td><td>ton</td><td>120.0</td><td>31,000</td></tr> <tr><td>j. Worsted yarn (internally used)*</td><td>"</td><td>37.8</td><td>(..)</td></tr> <tr><td>k. Other yarns (sold)</td><td>"</td><td>647.5</td><td>10,800</td></tr> <tr><td>l. Other yarns (internally used)*</td><td>"</td><td>306.0</td><td>(..)</td></tr> <tr><td>m. Others</td><td>Rs. mil.</td><td>5.55</td><td>..</td></tr> </tbody> </table>				Product	Unit	Quantity	Unit Value (Rs.)	a. Saxony suiting cloth	000 meter	144.8	18,200	b. Tweeds	"	38.4	14,800	c. Blaser cloth	"	7.4	16,200	d. Woolien flannel	"	54.4	13,800	e. Serges	"	44.0	20,300	f. Gaberdine	"	1.0	18,900	g. Roller cloth	"	51.6	19,200	h. Rugs and blankets	"	30.9	37,500	i. Worsted yarn (sold)	ton	120.0	31,000	j. Worsted yarn (internally used)*	"	37.8	(..)	k. Other yarns (sold)	"	647.5	10,800	l. Other yarns (internally used)*	"	306.0	(..)	m. Others	Rs. mil.	5.55	..	<table border="1"> <thead> <tr> <th>Item</th> <th>Quantity</th> <th>Unit</th> <th>Value (Rs.)</th> </tr> </thead> <tbody> <tr><td>1. 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Consumable stores</td><td>000 Rs.</td><td>64.0</td><td>..</td></tr> <tr><td>h. Worsted yarn (internally produced)*</td><td>ton</td><td>37.8</td><td>(..)</td></tr> <tr><td>i. Other yarns (internally produced)*</td><td>ton</td><td>306.0</td><td>(..)</td></tr> <tr><td>3. Packaging materials: total</td><td></td><td></td><td><u>.21</u></td></tr> <tr><td>Of which gunny bags</td><td>ton</td><td>59</td><td>261</td></tr> <tr><td>4. Work performed by sub-contractors ( )</td><td></td><td></td><td><u>-</u></td></tr> <tr><td>5. Repairs &amp; maintenance (materials &amp; services purchased)</td><td></td><td></td><td><u>.15</u></td></tr> <tr><td>for buildings Rs. 30,000</td><td></td><td></td><td></td></tr> <tr><td>for machinery maintenance Rs. 122,000</td><td></td><td></td><td></td></tr> <tr><td>6. Material inputs for auxiliary activities</td><td></td><td></td><td><u>.58</u></td></tr> <tr><td>Printing and stationery Rs. 76,000</td><td></td><td></td><td></td></tr> <tr><td>Administration charges Rs. 504,000</td><td></td><td></td><td></td></tr> <tr><td>7. Non-factor service inputs: total</td><td></td><td></td><td><u>.21</u></td></tr> <tr><td>Transportation, insurance and storage services Rs. 140,000</td><td></td><td></td><td></td></tr> <tr><td>Communications, advertising and other business services Rs. 74,000</td><td></td><td></td><td></td></tr> </tbody> </table>				Item	Quantity	Unit	Value (Rs.)	1. Energy & water: total (incl. 3,713 t. of coal at Rs. 64/t. and 23 t. of coke at Rs. 96/t. )			<u>.77</u>	- Electricity	000 KWH	4,510	105	- Fuel oil	K.litre	277	204	- Lubricating oil	"	21	137	- Water (used but figure not available)				2. Direct production materials: total			<u>13.66</u>	a. Scoured wool	ton	1,253.5	8,000	b. Wool tops	"	165.0	21,000	c. Soda ash	"	199.4	524	d. 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i. Worsted yarn (sold)	ton	120.0	31,000																																																																																																																																																																												
j. Worsted yarn (internally used)*	"	37.8	(..)																																																																																																																																																																												
k. Other yarns (sold)	"	647.5	10,800																																																																																																																																																																												
l. Other yarns (internally used)*	"	306.0	(..)																																																																																																																																																																												
m. Others	Rs. mil.	5.55	..																																																																																																																																																																												
Item	Quantity	Unit	Value (Rs.)																																																																																																																																																																												
1. Energy & water: total (incl. 3,713 t. of coal at Rs. 64/t. and 23 t. of coke at Rs. 96/t. )			<u>.77</u>																																																																																																																																																																												
- Electricity	000 KWH	4,510	105																																																																																																																																																																												
- Fuel oil	K.litre	277	204																																																																																																																																																																												
- Lubricating oil	"	21	137																																																																																																																																																																												
- Water (used but figure not available)																																																																																																																																																																															
2. Direct production materials: total			<u>13.66</u>																																																																																																																																																																												
a. Scoured wool	ton	1,253.5	8,000																																																																																																																																																																												
b. Wool tops	"	165.0	21,000																																																																																																																																																																												
c. Soda ash	"	199.4	524																																																																																																																																																																												
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e. Dyss	"	4.5	432																																																																																																																																																																												
f. Oils	"	113.4	281																																																																																																																																																																												
g. Consumable stores	000 Rs.	64.0	..																																																																																																																																																																												
h. Worsted yarn (internally produced)*	ton	37.8	(..)																																																																																																																																																																												
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3. Packaging materials: total			<u>.21</u>																																																																																																																																																																												
Of which gunny bags	ton	59	261																																																																																																																																																																												
4. Work performed by sub-contractors ( )			<u>-</u>																																																																																																																																																																												
5. Repairs & maintenance (materials & services purchased)			<u>.15</u>																																																																																																																																																																												
for buildings Rs. 30,000																																																																																																																																																																															
for machinery maintenance Rs. 122,000																																																																																																																																																																															
6. Material inputs for auxiliary activities			<u>.58</u>																																																																																																																																																																												
Printing and stationery Rs. 76,000																																																																																																																																																																															
Administration charges Rs. 504,000																																																																																																																																																																															
7. Non-factor service inputs: total			<u>.21</u>																																																																																																																																																																												
Transportation, insurance and storage services Rs. 140,000																																																																																																																																																																															
Communications, advertising and other business services Rs. 74,000																																																																																																																																																																															
<p>* Not included in total</p> <p><b>CAPACITY OUTPUT:</b></p> <p>20% higher than 1964 actual production level with additional man-hours 10,000 on 1st shift.</p> <p>Seasonally insufficient supply of raw materials is in part responsible for the underutilisation.</p> <p>Product mix is <u>not</u> flexible.</p> <p>Unit value of product: Market value f.o.b. before sales tax.</p> <p>Unit value of material: Market price c.i.f.</p> <p>- Only a part of worsted yarn is directly exported.</p> <p>- All production materials are domestically produced; freight cost 5% of c.i.f. value; transportation by railroad and by road.</p>				<p>( * Not included in the total )</p>																																																																																																																																																																											
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<p>VI. VALUE ADDED TOTAL 1964 ( Rs. million ) <u>7.81</u></p> <p>1. Wages &amp; salaries (before income tax)</p> <p>- Employees in direct production 1.73</p> <p>- Other employees 1.22</p> <p>2. Other expenditures for employees .89</p> <p>3. Annual depreciation allowance .97</p> <p>4. Rental paid -</p> <p>5. Sales &amp; other indirect taxes (less subsidies) -</p> <p>6. Other gross business income (before income tax) 3.00</p>				<p><b>EMPLOYED CONVEYANCES</b></p> <p>- Mach., equip., instruments &amp; tools per employee in direct production on 1st shift: Rs. 17,500 (Rs. 20,260 1/2)</p> <p>- Value added per employee: Rs. 6,791</p> <p>- Annual wage per employee in direct production: Rs. 1,758</p> <p>- Variable input costs/gross production ratio: 70.2%</p> <p>- Gross profit/gross production ratio: 12.8% (at full capacity : 16.2%)</p> <p>- Level of production at break-even point is approximately 57 % of the 1964 actual level.</p>																																																																																																																																																																											
<p>VII. EXPANSION: HISTORY &amp; PLAN</p> <p>1. Recent Expansion</p> <p>From 1963 to 1965</p> <table border="1"> <thead> <tr> <th>Item</th> <th>Gross acquisition</th> <th>% of repair</th> </tr> </thead> <tbody> <tr><td>a. Total investment (Rs. million )</td><td><u>2.12</u></td><td></td></tr> <tr><td>- Land</td><td>-</td><td>-</td></tr> <tr><td>- Land improvements</td><td>-</td><td>-</td></tr> <tr><td>- Buildings</td><td>.34</td><td>5</td></tr> <tr><td>- Other construction work</td><td>.21</td><td>3</td></tr> <tr><td>- Machinery &amp; equipment</td><td>1.43</td><td>8</td></tr> <tr><td>- Tools &amp; instruments</td><td>-</td><td>-</td></tr> <tr><td>- Vehicles</td><td>-</td><td>-</td></tr> <tr><td>- Office furniture &amp; fixtures</td><td>.14</td><td>5</td></tr> <tr><td>b. Corresponding increase:</td><td></td><td></td></tr> <tr><td>In no. of employees</td><td>1,088</td><td>1,150</td></tr> <tr><td>In annual gross production</td><td></td><td>+ 32%</td></tr> </tbody> </table>				Item	Gross acquisition	% of repair	a. Total investment (Rs. million )	<u>2.12</u>		- Land	-	-	- Land improvements	-	-	- Buildings	.34	5	- Other construction work	.21	3	- Machinery & equipment	1.43	8	- Tools & instruments	-	-	- Vehicles	-	-	- Office furniture & fixtures	.14	5	b. Corresponding increase:			In no. of employees	1,088	1,150	In annual gross production		+ 32%	<p>2. Future Plan : Not available</p> <p>a. Investment proposed for the period 19 to 19</p> <p>Total value ( )</p> <p>Of which: - Mach. &amp; equipment \$</p> <p>- Land improv. &amp; bldg.</p> <p>- Land</p> <p>- Others</p> <p>b. Net increase in no. of employees envisaged for the same period:</p> <p>- Direct production:</p> <p>- Auxiliary:</p> <p>c. Purposes:</p>																																																																																																																																				
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<p>VIII. SUPPLEMENT</p> <p>Structure of liquid assets of the establishment (end of 1964; Rs. thousand).</p> <table border="1"> <tbody> <tr><td>Cash on hand and in bank</td><td>38</td><td>Accounts payable</td><td>11,010</td></tr> <tr><td>Accounts receivable</td><td>4,093</td><td></td><td></td></tr> <tr><td>Unsecured loans</td><td>201</td><td></td><td></td></tr> </tbody> </table>				Cash on hand and in bank	38	Accounts payable	11,010	Accounts receivable	4,093			Unsecured loans	201																																																																																																																																																																		
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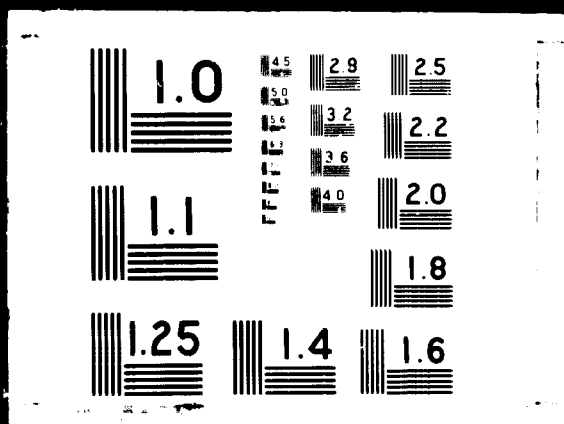


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**MAJOR PRODUCTS:** Wool scouring, carding, spinning, weaving and finishing, worsted and shoddy yarn and various suiting cloths. Actual capacity output (with full three shifts) is about 270,000 m of various woven cloths (wool voils, worsted flannel, overcoatings, shawl, ruffle, suiting cloth etc.) plus some 130t of yarns (to be sold).

**REPORTING UNIT:** An independent one-establishment enterprise with total assets Rs. 7.5 million (net worth Rs. 3.5 million) and employees 545 as of 1965. It was founded in 1952.

I. FIXED CAPITAL ASSETS (end of 1965)		Before deprec.	After deprec.	II. INVENTORIES (end of 1965)	
TOTAL BOOK VALUE (Rs. thousand)		2,774	1,893	TOTAL VALUE (Rs. thousand)	Actual Normal
1. Land		9	9	1. Direct production materials	} 2,364 - 7
2. Land improvements		-	-	2. Other input materials	
3. Buildings (mostly rented)		50	48	3. Work in process	579 - 57
4. Other construction works		-	-	4. Finished products	200 +313
5. Machinery & equipment		2,628	1,793	- Normal inventories of finished products 16% of annual gross production	
6. Tools & instruments		-	-	- Seasonal variations: ..	
7. Vehicles		63	23	Capacity of electr. motors: 840 KW	
8. Office furniture & fixtures		24	20	Total load, capacity of trucks: 2 t	
				All machines are imported.	
				Average age of all machinery is 8 years.	
				<b>GENERAL CONDITIONS:</b>	
				Transportation, public utilities and community facilities, all excellent.	

DETAIL OF I.5 (No.)	Total Bk. value bef. deprec.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1965 replace value
a. Ordinary gill boxes (11)	} 2,630	10	} B	} 10	} 4,000
b. Autoleveller gill box (1)		8			
c. Weight box (1)		9			
d. First finishers (3)		7			
e. Autoleveller drawing box (1)		8			
f. Second finishers (3)		7			
g. Reducers (7)		7			
h. Rovers (16)		7			
i. Spinning frames (28)		8			
j. Twisting frames (11)		8			
k. Winding machines (3)		8			
l. Combing machine (1)		8			
m. Backwashing machine (1)		6			
n. Worsted card (1)		10			
o. Woollen looms (68)		8			

III. LABOUR (1965 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
TOTAL EMPLOYED	545	288	159	98	Univ. or higher	Sr. High sch. or equiv.	Other	Others
1. Direct production (m. 495)	7.6	244	159	98	3	19	6	517
Annual total manhours (000)		(620)	(247)	(180)	Management			
a. Wool godown *		40	25	10	3	7	3	-
b. Wool scouring		35	26	7	Direct Production			
c. Carding and combing		40	34	27	Skilled			
d. Carding and spinning		48	42	37	Semi-skilled			
e. Drying and spinning		33	17	12	Unskilled			
f. Worsted shop		25	10	-	Auxiliary Activities			
g. Weaving shops		23	5	5	Skilled			
					Semi-skilled			
					Unskilled			
					Others			
					16			
* Warehouse for materials; can be classified under auxiliary.					- Actual hours worked per annum per direct production worker: 2,090 hours.			
2. Auxiliary activities (r. 44)					- Proportion of motors occupied: 90%, 8% on 1st and 2nd shift, but not available for 3rd shift.			
a. Maintenance, technical and managerial control.		44*	-	-	- Mechanisation and automation is generally fair.			
* Of which 30 work at a separately located sales office operating with annual wages and salaries Rs. 90,000 and other operating cost Rs. 20,000.					- Skilled workers in direct production are: wool pickers, wool examiners, wool scourers, carders, dyers, fitters, carpenters, mule minders, fettlers, reellers, spinners, etc. Those in auxiliary activities are: administrative assistants, sales and purchase assistants, accountants, etc.			

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)						
TOTAL VALUE OF PRODUCTION (Re. thousand)			5,131	TOTAL VALUE OF CONSUMPTION (Re. thousand)			2,998			
Product	Unit	Quantity	Unit Value (Rs.)		Quantity	Unit Value (Rs.)				
		Pre-Consumed			consumed					
a. Suiting cloth	000 meters	25.0	20,700	1. Energy & water: total		173				
b. Tweeds	"	.8	20,000	(Incl. 1,118 t. of coal at Re. 70/t. and 1 ton of coke at Re. 98/t.)						
c. Persia	"	4.0	20,000	- Electricity	000 KWH	919.0	90			
d. Blazer cloth	"	2.6	7,000	- Petroleum	Kilo litre	7.0	970			
e. Worsted flannel	"	38.0	11,000	- Lubricating oil	"	4.3	840			
f. Overcoatings	"	38.0	20,000	- Other fuel oils	"	1.5	940			
g. Sergee	"	7.5	14,800	2. <del>Wool, wool tops, wool waste:</del>		2,641				
h. Gaberdines	"	2.1	15,000	a. Wool tops	ton	99.0	18,000			
i. Shawl & ruffle cloth	"	27.0	12,200	b. Wool waste	"	57.5	8,000			
j. Rugs and blanket cloth	"	7.0	10,300	c. Terylene fibre	"	1.2	39,600			
k. Terylene wool & summer cloth	"	14.0	11,300	d. Nylon	"	9.0	15,000			
l. Wool voile	"	75.0	7,000	e. Voilee	"	20.6	820			
m. Roller cloth	"	4.0	16,200	f. Viscose	"	1.9	840			
n. Shoddy yarn (sold)	ton	47.0	6,958	g. Soda ash	"	8.6	450			
o. Shoddy yarn (internally used)	"	6.0	(..)	h. Sulphuric acid	"	5.6	3,100			
p. Worsted yarn (sold)	"	66.0	25,023	i. Dyes	"	13.5	3,300			
q. Worsted yarn (internally used)	"	5.0	(..)	j. Oils	"	.3	4,000			
r. Other products	000 Re.	51.0	..	k. Soap	"	1.5	1,700			
<b>CAPACITY OUTPUT:</b>				1. Others				000 Rs.	90.0	..
10% higher than the 1965 actual production level with an overall sufficient supply of raw and intermediate materials, plus labour (additional 10,000 man-hours on 1st shift). Suiting cloth, tweeds, persia are flexible in terms of output pattern.				m. Consumable stores				"	126.0	..
Unit value of product: Market price f.o.b. before sales tax				n. Shoddy yarn (internally prod.)				ton	6.0	(..)
Unit value of material: Market price o.i.f.				o. Worsted yarn (internally prod.)				"	5.0	(..)
- V. 2. (a),(o),(d) and (f) are directly imported with freight rate 1% of e.i.f. value; transport by railroad, road, sea and inland waterway. (i) contains significant amount of import contents and delivered by railroad and road with freight rate 4%. The rest of domestic origin; freight rates are 1% except for (g) for which it is 10%.				3. Packaging materials: total					38	
				Of which wrapping paper Re. 10,000						
				4. Work performed by sub-contractors ( )					-	
				5. Repairs & maintenance (materials & services purchased)					43	
				Materials consumed Re. 29,000						
				Services purchased Rs. 14,000						
				6. Material inputs for auxiliary activities					49	
				Stationery and printing Re. 9,000						
				General administration Rs. 40,000						
				7. Non-factor service inputs: total					54	
				Transportation, insurance and storage Rs. 48,000						
				Communication, advertising and other business services Rs. 6,000						
<b>VI. VALUE ADDED</b>				<b>REVENUE CONTRACTS</b>						
TOTAL 1965 (Re. thousand)			2,133	- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 10,770 (Rs. 16,390 1/2)						
1. Wages & salaries (before income tax)				- Value added per employee: Re. 3,914						
- Employees in direct production				782	- Annual wage per employee in direct production: Rs. 1,560					
- Other employees				217	- Variable input costs/gross production ratio: 70.8%					
2. Other expenditures for employees				351	- Gross profit/gross production ratio: 8.3%					
3. Annual depreciation allowance				321	- (at full capacity : 10.1%)					
4. Rental paid (buildings)				36	- Level of production at break-even point is approximately 72% of the 1965 actual level.					
5. Sales & other indirect taxes (less subsidies)				-						
6. Other gross business income (before income tax)				426						
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				2. Future Plan: None						
1. Recent Expansion				a. Investment proposed for the period 1965 to 1965						
From 1963 to 1965				Total value ( )						
a. Total Investment (Re. thousand)			1,891	Of which: - Mach. & equipment \$						
- Land			-	- Land improv. & bldg.						
- Land improvements			-	- Land						
- Buildings			5	- Others						
- Other construction work			-	b. Net increase in no. of employees envisaged for the same period:						
- Machinery & equipment			1,779	- Direct production:						
- Tools & instruments			-	- Auxiliary:						
- Vehicles			88	c. Purposes:						
- Office furniture & fixtures			19							
b. Corresponding increase:										
In no. of employees			512							
In annual gross production (Re. million)			4.2							
			5.1							
<b>VIII. SUPPLEMENT</b>				Structure of liquid assets of the establishment (end of 1965; Re. thousand).						
Cash on hand and in bank				77	Accounts payable				519	
Accounts receivable				590						
Loans and advances				1,417						
1/ The numerator is the 1965 replacement value.										

**MAJOR PRODUCTS:** Worsted yarn and fabric; annual capacity output is 60 t. and 28,000 m.: respectively, or Re. 1.9 million on partial three shift operation.

**REPORTING UNIT:** A new but small one-establishment enterprise with total assets of Re. 800 thousand (net worth Re. 450 thousand) and 121 employees as of 1964. Founded in 1961.

I. FIXED CAPITAL ASSETS (end of 1964)		Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. thousand)		267.3	229.5
1. Land		7.5	7.5
2. Land improvements		-	-
3. Buildings		27.8	25.3
4. Other construction works		-	-
5. Machinery & equipment		199.5	168.0
6. Tools & instruments		-	-
7. Vehicles		32.5	28.7
8. Office furniture & fixtures		-	-

DETAIL OF I.5 (No.)	Total Bk. value	Avg. Age	Oper. Cond.	Depr. rate (%)	196 replace value
a. Reducers (5)	150.0	3	B	10	160.0
b. Rovers (5)					
c. Spinning frames (10)					
d. Twisting frames (4)					
e. Winding machines (2)					
f. Combing machine (1)					
g. Worsted card (1)					

II. INVENTORIES (end of 1964)		Actual	Normal
<b>TOTAL VALUE</b> (Rs. thousand)		325.6	-17.6
1. Direct production materials	86.2	-	9
2. Other input materials			
3. Work in process	112.5		-20
4. Finished products	126.4		-20

- Normal inventories of finished products 7.9 % of annual gross production

- Seasonal variations:  
Finished goods: Seasonal high (May to Aug.) and low (Dec. to Jan.) are + 12% and -40%, respectively; of the 1964 normal level.

Capacity of electr. motors: 85 KW

A diesel generator set is installed as a standby arrangement. Nominal installed capacity of electricity generation: 55 KW (not used in 1964). All the itemised machines were imported. No substantial investment has taken place since the enterprise was established in 1961. The first-year commercial production was about 60% of the 1964 level.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, all excellent.

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	121	53	45	23
1. Direct production (all male)		41	40	19
Annual total manhours (000)		104	87	44
a. Spinning		14	13	9
b. Weaving		12	12	-
c. Finishing and packing		15	15	10
2. Auxiliary activities (all male)		12	5	4
a. Repair work shop		3	2	2
b. Technical and maintenance control		9	3	2

EDUCATIONAL BACKGROUND (No. of employees)			
Univ. or higher	Sr. High sch. or equiv.	Other	Others
2	4	20	95
<b>Management</b>			
2	2	-	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	20	-	50
<b>Semi-skilled</b>			
-	-	-	7
<b>Unskilled</b>			
-	-	-	23
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	2	-	4
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	-	11

- Actual hours worked per annum per direct production worker: 2,350 hours.

- Proportion of motors occupied: 60%, 50% and 30% for 1st, 2nd, and 3rd shifts, respectively.

- Mechanisation and automation are generally poor.

- **Skilled workers** on direct production are engaged in carding, spinning and weaving. Those in auxiliary activities perform; electrical and mechanical repairs, accounts, sales, etc.

IX. ANNUAL PRODUCTION (1964)		TOTAL VALUE OF PRODUCTION (Rs. thousand)		1,278.1	
Product	Unit	Quantity Produced	Unit Value (Rs.)		
e. Worsted fabric for suits	000 m.	18.60	20,100		
b. Shawl cloth	ton	6.20	7,500		
c. Worsted yarn	ton	39.61	21,000		
d. Wool waste	ton	3.83	6,800		

CAPACITY OUTPUT:	
50% higher than the 1964 actual production level, with additional man-hours 50, 40 and 20 thousand on 1st, 2nd and 3rd shift, respectively. Underutilisation is mainly due to seasonally insufficient demand for the products produced, insufficient supply of raw and intermediate materials, and a lack of finance. The proportion of woollen suitings and woollen shawls may be changed according to the pattern of demand.	
Unit value of product: Market value f.o.b. before sales tax. Unit value of material: Market price o.i.f.	
- Only part of worsted fabrics is directly exported.	
- Wool tops are directly imported and delivered by railroad and sea with freight rate 10% of o.i.f. value. The rest is domestically produced with very little import contents, and delivered by railroad and road with freight rate 5%.	

VI. VALUE ADDED		TOTAL 1964 (Rs. thousand)		221.2	
1. Wages & salaries (before income tax)					
- Employees in direct production		46.8			
- Other employees		60.4			
2. Other expenditures for employees		-			
3. Annual depreciation allowance		37.8			
4. Rental paid		-			
5. Sales & other indirect taxes (less subsidies)		-			
6. Other gross business income (before income tax)		76.2			

VII. EXPANSION: HISTORY & PLAN		Gross Scraped acquisition or sold	
1. <u>Recent Expansion</u> : None			
From 19 to 19			
a. Total Investment ( )			
- Land			
- Land improvements			
- Buildings			
- Other construction work			
- Machinery & equipment			
- Tools & instruments			
- Vehicles			
- Office furniture & fixtures			
b. Corresponding increase:		From 19	To 19
In no. of employees			
In annual gross production			
2. <u>Future Plan</u> : None			
a. Investment proposed for the period 19 to 19			
Total value ( )			
Of which: - Mach. & equipment \$			
- Land improv. & bldg.			
- Land			
- Others			
b. Net increase in no. of employees envisaged for the same period:			
- Direct production:			
- Auxiliary:			
c. Purposes:			

VIII. SUPPLEMENT		Structure of liquid assets and short term liabilities (end of 1964: Rs. thousand).	
Cash on hand and in bank	32	Accounts payable	325
Accounts receivable	209	Short term loans from commercial banks	20

V.4 : Part of the finishing process of woven cloth is done by a small sub-contractor.

1/ The numerator is the 1964 replacement value.

## V. INTERMEDIATE INPUTS (1964)

TOTAL VALUE OF CONSUMPTION (Rs. thousand) 1,056.9

1. Energy & water: total 29.2

	Quantity consumed	Unit value (Rs.)
- Electricity	Kwh 208,141	.11
- Petroleum	litre 5,078	.90
- Other fuel oils	" 3,690	.46

2. Direct production materials: total 904.7

a. Woollen yarn	Kg.	30,500	15.8
b. Staple yarn	"	14	8.0
c. Wool tops	"	23,068	14.8
d. Others	Rs.000	81.3	..

3. Finishing materials: total 12.7

Hessian cloth and others (Rs. 5,900)

4. Work performed by sub-contractors (See VIII) 42.95. Repairs & maintenance 6.8

General repairs

6. Material inputs for auxiliary activities 32.8

Consumables

7. Non-factor service inputs: total 27.8

- Transportation, insurance and storage services Rs. 9,800  
- Communication, advertising, etc. Rs. 18,400

## SELECTED CONVEYERS

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 4,866 (Rs. 5,203 1/)

- Value added per employee: Rs. 1,828

- Annual wage per employee in direct production: Rs. 468

- Variable input costs/gross production ratio: 81.2%

- Gross profit/gross production ratio: 6.0% (at full capacity: 10.7%)

- Level of production at break-even point is approximately 69 % of the 1964 actual level.

**MAJOR PRODUCTS:** Cotton yarn. Installed capacity is about 1,500 tons of cotton yarn on three shifts.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets I £8 million and employees 250 as of 1964. Founded in 1947.

I. FIXED CAPITAL ASSETS (end of 1964) : revalued in 1964.			
		Before deprec.	After deprec.
<b>TOTAL BOOK VALUE ( 000 LE )</b>		<u>5,529</u>	<u>4,869</u>
1. Land	}		
2. Land improvements			
3. Buildings		1,686	1,599
4. Other construction works			
5. Machinery & equipment		3,770	3,212
6. Tools & instruments		-	-
7. Vehicles		47	36
8. Office furniture & fixtures		26	22
		<b>Avr. Age (Yr.)</b>	<b>Depr. rate (%)</b>
<b>DETAIL OF I.5 (No.)</b>			
a. Blowing machine, 7 tons/24 hrs (1)		1	A 10
b. Carding machines, 5 kg./h. (62)		7,17	" "
c. Drawing machines, 300 kg/8 hrs. (14)		8	" "
d. Drawing machines, 800 kg/8 hrs. (4)		1	" "
e. Combing machines, 100 kg/8 hrs. (4)		3	" "
f. Roving machines, 600 kg/8 hrs. (5)		8	" "
g. Spinning machines, 324 spindles, 150 kg./8 hrs. (26)		8	" "
h. Spinning machines, 390 spindles, 170 kg./8 hrs. (8)		17	" "
i. Spinning machines, 400 spindles, 200 kg/8 hrs. (9)		2	" "
j. Winding machines, 120 heads, 600 kg/8 hrs. (7)		9	" "
k. Twisting machines, 288 spindles, 200 kg/8 hrs. (2)		9	" "
l. Twisting machines, 208 spindles, 200/8 hrs. (1)		9	" "
m. Doubling machine, 120 heads (1)		14	" "

II. INVENTORIES (end of 1964)			
		Actual	Normal
<b>TOTAL VALUE ( 000 LE )</b>		<u>1,072</u>	- %
1. Direct production materials		530	-
2. Other input materials		-	-
3. Work in process		103	-
4. Finished products		439	-
- Normal inventories of finished products 6.4% of annual gross production			
- Seasonal variations: None			

Capacity of electr. motors: 1,600 KW  
 Total load, capacity of trucks: 5 t

Machines itemised all imported from England, Germany, U.S.A. and Italy.  
 Average age of machinery is 8 years.

**GENERAL CONDITIONS:**  
 Transportation, public utilities and community facilities, excellent.

III. LABOUR (1964 average)				EDUCATIONAL BACKGROUND (No. of employees)				- Average working hours per annum per direct production worker: 2,400 hrs.
		1st shift	2nd shift	3rd shift	Univ. or higher	Sr. High sch. or equiv.	Other	
<b>TOTAL EMPLOYED 250</b>		<u>175</u>	<u>38</u>	<u>37</u>				
1. Direct production ( s. 34 f. 80 ) Annual total manhours (000)		<u>( 91.2 )</u>	<u>( 21.2 )</u>	<u>( 21.2 )</u>				
a. Blowing		3	3	3				
b. Carding		2	2	2				
c. Roving		3	3	3				
d. Spinning		14	13	13				
e. Winding		11	11	11				
f. Twisting		2	2	1				
g. Doubling		1	1	1				
h. Others		3	3	3				
2. Auxiliary activities ( s. 100 f. 36 )		<u>136</u>	-	-				

EDUCATIONAL BACKGROUND (No. of employees)			
Univ. or higher	Sr. High sch. or equiv.	Other	Total
7	13	8	224
<b>Management</b>			
6	13	-	-
<b>Direct Production</b>			
Skilled			
-	-	3	7
Semi-skilled			
-	-	-	-
Unskilled			
-	-	-	104
<b>Auxiliary Activities</b>			
Skilled			
1	-	-	-
Semi-skilled			
-	-	-	-
Unskilled			
-	-	5	111

- Proportion of motors occupied 80 to 90% on all three shifts.

- Conventional process is employed in all shops.  
 Mechanisation is excellent; automation, fair.

IV. ANNUAL PRODUCTION (1964)		V. INTERMEDIATE INPUTS (1964)	
TOTAL VALUE OF PRODUCTION ( 000 IE )		TOTAL VALUE OF CONSUMPTION ( 000 IE )	
6,858		4,958	
<u>Product</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit</u>
		<u>Pro-</u>	<u>con-</u>
		<u>duced</u>	<u>sumed</u>
		<u>( IE )</u>	<u>( IE )</u>
a. Cotton yarn	ton	1,525	4,500
CAPACITY OUTPUT:			
Same as the 1964 actual production level.			
Unit value of product: Market value f.o.b. before sales tax			
Unit value of material: Market price c.i.f.			
- Cotton yarn is mostly exported.			
VI. VALUE ADDED		TOTAL 1964 ( 000 IE )	
1. Wages & salaries (before income tax)		1,490	
- Employees in direct production		(...)	
- Other employees		(...)	
2. Other expenditures for employees		50	
3. Annual depreciation allowance		250	
4. Rental paid		10	
5. Sales & other indirect taxes (less subsidies)		-	
6. Other gross business income (before income tax)		100	
TOTAL 1964 ( 000 IE )		1,900	
SELECTED COEFFICIENTS			
- Mach., equip., instruments & tools per employee in direct production on 1st shift: IE 96,667			
- Value added per employee: IE 7,600			
- Annual wage per employee in direct production: IE 5,960 <sup>1/</sup>			
- Variable input costs/gross production ratio: 74.6% <sup>2/</sup>			
- Gross profit/gross production ratio: 1.5%			
- Level of production at break-even point is approximately 94 % of the 1964 actual level.			
VII. EXPANSION: HISTORY & PLAN		Gross Scrapped acquisition or sold	
1. Recent Expansion		None	
From 19 to 19			
a. Total Investment ( )			
- Land			
- Land improvements			
- Buildings			
- Other construction work			
- Machinery & equipment			
- Tools & instruments			
- Vehicles			
- Office furniture & fixtures			
b. Corresponding increase:		From 19 to 19	
In no. of employees			
In annual gross production ( )			
2. Future Plan		None	
a. Investment proposed for the period 19 to 19			
Total value ( )			
Of which: - Mach. & equipment			
- Land improv. & bldg.			
- Land			
- Others			
b. Net increase in no. of employees envisaged for the same period:			
- Direct production:			
- Auxiliary:			
c. Purposes:			
VIII. SUPPLEMENT			
1/ Total wages and salaries divided by total number of employees.			
2/ 40% of wages and salaries is variable cost.			

**MAJOR PRODUCTS:** Cotton spinning, weaving and dyeing. Capable of processing 1,000 tons of cotton annually with three shifts.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets I£4.5 million and employees 560 as of 1964. Founded in 1951.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( 000 IE )	<u>8,480</u>	<u>4,555</u>
1. Land	130	130
2. Land improvements	-	-
3. Buildings	2,700	1,600
4. Other construction works	-	-
5. Machinery & equipment	5,400	2,700
6. Tools & instruments	-	-
7. Vehicles	-	-
8. Office furniture & fixtures	250	125

**DETAIL OF 1.5 (No.)**

	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Spinning mill (blowing, carding, combing, roving & spinning)	7	B	7	4,000
b. Twisting machines	7	"	"	1,000
c. Knitting & weaving machines (combined process)	4	"	"	1,000
d. Dyeing machines	8	"	"	2,000
e. Spinning machine (for waste cotton yarn)	15	"	"	150

**II. INVENTORIES**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> (000 IE )	<u>2,680</u>	-
1. Direct production materials	1,280	-
2. Other input materials	290	-
3. Work in process	110	-
4. Finished products	1,000	-

- Normal inventories of finished products 11.0% of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 1,480 KW

Total load, capacity of trucks: - t

were  
Machine itemised all imported.

Average age is 7 years.

**GENERAL CONDITIONS:**

Transportation, electricity and residential facilities, excellent. Water, health and recreational facilities, fair. \*Industrial water consumption is regionally rationed, but the factory has its own well.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 560	<u>358</u>	<u>128</u>	<u>74</u>
1. Direct production ( n. 193 )	<u>224</u>	<u>128</u>	<u>74</u>
Annual total manhours (000)	( 787,6 )	( 281,6 )	( 162,8 )
a. Spinning, ordinary cotton	120	60	40
b. Twisting	30	20	10
c. Dyeing	60	40	20
d. Spinning, waste cotton	10	8	4
e. Weaving	4	-	-

2. **Auxiliary activities** ( n. 101 ) 134 - -  
r. 33

Managers, office workers, laboratory staff, maintenance workers & foremen.

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
Engi-ners			
<b>TOTAL</b>	..	..	..
<b>Management</b>			
1	1	-	-
<b>Direct Production</b>			
Skilled	-	10	20
Semi-skilled			
Unskilled	..		
<b>Auxiliary Activities</b>			
Skilled			
Semi-skilled	..		
Unskilled			

- Average working hours per annum per direct production worker: 2,892 hrs.
- Proportion of motors occupied: 100% on all three shifts.
- Conventional process is employed in all shops. Mechanization is excellent; automation is fair.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( 000 IE )			
9,113			
Product	Unit	Quantity Pro- duced	Unit Value ( IE )
a. Cotton yarn	ton	760*	8,815
b. Cotton yarn made of waste cotton	"	100	3,500
c. Dyed cotton yarn**	"	1,070	1,765
d. Cotton fabrics	"	33	10,636

\* Includes 20 tons internally used and not counted in value of production.

\*\* Contract and commission work. Unit value is rate of commissions.

**CAPACITY OUTPUT:**

Same as the 1964 production level.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Water is internally supplied and not counted in value of consumption.

- Cotton yarn is partly exported.

- About half of cotton & chemicals are imported with freight rate \$30 & \$18 per ton, respectively.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( 000 IE )			
5,503			
1. Energy & water: total			
225			
	Quantity	Unit	Unit
	con-	sum-	value
	sum-	med	( IE )
	med	( IE )	
- Electricity	000 kwh	6,000	30
- Heavy solar oil	ton	700	63.9
- Water	000 cu.m.	200	..
2. Direct production materials: total			
4,798			
a. Cotton	ton	1,000	3,500
b. Dyes, chemicals etc.	000 IE	1,298	..
3. Purchasing materials: total			
210			
4. Work performed by sub-contractors ( )			
-			
5. Repairs & maintenance (materials & services purchased)			
230			
6. Material inputs for auxiliary activities			
-			
7. Non-factor service inputs: total			
40			
Transportation, insurance and storage (purchased separately) IE 25,000			

**VI. VALUE ADDED TOTAL 1964 ( 000 IE )**

3,610	
1. Wages & salaries (before income tax)	2,700
- Employees in direct production	(..)
- Other employees	(..)
2. Other expenditures for employees	200
3. Annual depreciation allowance	450
4. Rental paid	50
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	210

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: IE 24,100 (36,400 <sup>1/</sup>)
- Value added per employee: IE 6,440
- Annual wage per employee in direct production: IE 4,820 <sup>2/</sup>
- Variable input costs/gross production ratio: 77.3% <sup>3/</sup>
- Gross profit/gross production ratio: 2.3%
- Level of production at break-even point is approximately 90 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acqui- sition	% of repair & mainte- nance work	2. Future Plan	
			None	
From 1962 to 1965				
a. Total Investment ( 000 IE )	750	2 %		
- Land	-	-		
- Land improvements	-	-		
- Buildings	-	-		
- Other construction work	-	-		
- Machinery & equipment	750	2 %		
- Tools & instruments	-	-		
- Vehicles	-	-		
- Office furniture & fixtures	-	-		
b. Corresponding increase:	From 1962	to 1965		
In no. of employees	441	560		
In annual gross production ( IE million )	7.0	10.0		

**2. Future Plan**

- a. Investment proposed for the period 19 to 19
- Total value ( )
- Of which: - Mach. & equipment \$
- Land improv. & bldg.
- Land
- Others
- b. Net increase in no. of employees envisaged for the same period: - Direct production:
- Auxiliary:
- c. Purposes:

**VIII. SUPPLEMENT**

- <sup>1/</sup> The numerator is 1964 replacement value of machinery and equipment.
- <sup>2/</sup> Total wages & salaries divided by total number of employees.
- <sup>3/</sup> 2/3 of wages & salaries are considered as variable cost.



**MAJOR PRODUCTS:** Woven yarn, fabric and finishing; capable of producing 600,000 (1.5 x 1m) of woollen fabrics and 900 tone of yarn on partial three shifts.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets I£ 28 million and employees 506 as of 1964. Founded in 1963.

**I. FIXED CAPITAL ASSETS** (end of 1964)

TOTAL BOOK VALUE ( 000 I£ )	Before deprec.	After deprec.
	15,025	14,205
1. Land	125	125
2. Land improvements	-	-
3. Buildings (total floor space: 14,800 sq.m.)	5,500	5,200
4. Other construction works	-	-
5. Machinery & equipment	9,100	8,600
6. Tools & instruments	-	-
7. Vehicles	300	200
8. Office furniture & fixtures	-	-

DETAIL OF I.5 (No.)	Total Bk. value bef. deprec.	Avr. Age (Yr.)	Oper. rate (%)	Depr. rate (%)	1964 replace value
	a. Spinning preparing machine	250	2	A	10
b. Spinning machines (3)	1,175	2	"	"	1,280
c. Weaving machines (2)	1,340	2	"	"	1,470
d. Colouring equipment (2)	510	2	"	"	560
e. Finishing equipment (5)	860	1	"	"	915

**II. INVENTORIES**

(end of 1964)	Actual	Normal
TOTAL VALUE ( 000 I£ )	5,262	-
1. Direct production materials	1,650	-
2. Other input materials	162	-
3. Work in process	1,600	-
4. Finished products	1,850	-

- Normal inventories of finished products 16.9 % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 2,000 HP

Total load, capacity of trucks: 12 t

Machines itemised were all imported.

**EXTERNAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR** (1964 average)

TOTAL EMPLOYED 506	1st shift	2nd shift	3rd shift
	325	116	65
1. Direct production ( m. 100 f. 300 )	219	116	65
Annual total manhours (000)	(473)	(287)	(143)
a. Spinning	100	55	55
b. Weaving	30	30	10
c. Artificial mending	25	20	-
d. Finishing	36	-	-
e. Dyeing	11	11	-
f. Miscellaneous	17	-	-
2. Auxiliary activities ( m. 56 f. 90 )	106	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or other	Management	
		Skilled	Unskilled
5	6	75	420
5	6	5	-
-	-	-	-
-	-	20	-
-	-	20	360
-	-	15	-
-	-	15	60

- Average working hours per annum per direct production worker: 2,258 hrs.

- Proportion of motors occupied: 100% on the 1st shift, 70% on the 2nd shift and 50% on the 3rd shift.

- Conventional process is employed. Mechanization is excellent; automation is poor.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( 000 IE )		10,938	
Product	Unit	Quantity Produced	Unit Value ( IE )
a. Wool fabrics	000(1.5x1 m)	379	10,000
b. Yarns	ton	534*	18,000
c. Colouring	"	361*	1,680
d. Finishing	000(1.5x1 a)	425*	700
e. Artificial mending	"	226*	500
f. Scraps	ton	40	5,000

\* All of (c), (d) & (e) & 148 tons of (b) (IE 16,000/t) were internally used and not counted in value of production.

**CAPACITY OUTPUT:**

60-70% higher than the 1964 actual level with sufficient demand and with no addition to manhours. The underutilization is also due to various difficulties inherent in the initial period.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Woolen fabrics and yarn are partly exported and used for production of exports.

- Wool and synthetic tops are imported with freight rate IE 500/t.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( 000 IE )		8,270	
1. Energy & water: total	Quantity	Unit	Value ( IE )
- Electricity	000 kWh	5,300	30
- Solar oil	ton	900	55
- Water	000 cu.m.	200	160
<b>2. Direct production materials: total</b>			<b>6,173</b>
a. Wool tops	ton	420	11,000
b. Synthetic tops	"	207	7,900
<b>3. Finishing materials: total</b>			<b>19</b>
<b>4. Work performed by sub-contractors (See VIII)</b>			<b>706</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>			<b>290</b>
<b>6. Material inputs for auxiliary activities</b>			<b>82</b>
<b>7. Non-factor service inputs: total</b>			<b>803</b>
Transportation, insurance and storage (purchased separately)			IE 176,000

**VI. VALUE ADDED**

TOTAL 1964 ( 000 IE ) 2,668

1. Wages & salaries (before income tax)	
- Employees in direct production	1,900
- Other employees	204
2. Other expenditures for employees	-
3. Annual depreciation allowance	511
4. Rental paid	10
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	43

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: IE 41,953
- Value added per employee: IE 5,273
- Annual wage per employee in direct production: IE 4,750
- Variable input costs/gross production ratio: 65.9% <sup>1/</sup>
- Gross profit/gross production ratio: .4% (at full capacity: 14.3%)
- Level of production at break-even point is approximately 99 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	From 19	to 19	Gross acquisition	Scrapped or sold
a. Total Investment ( )				
- Land				
- Land improvements				
- Buildings				
- Other construction work				
- Machinery & equipment				
- Tools & instruments				
- Vehicles				
- Office furniture & fixtures				
b. Corresponding increase:	From 19	to 19		
In no. of employees				
In annual gross production				

**2. Future Plan None**

- a. Investment proposed for the period 19 to 19
- Total value ( )
- Of which: - Mach. & equipment \$
- Land improv. & bldg.
- Land
- Others
- b. Net increase in no. of employees envisaged for the same period:
- Direct production:
- Auxiliary:
- c. Purpose:

**VIII. SUPPLEMENT**

**Work performed by sub-contractors**

Three sub-contractors with long-term contracts performed: (1) yarn dyeing (with self-supplied dye), (2) yarn finishing, and (3) fabric mending. These products were further processed in the establishment.

<sup>1/</sup> Total wages and salaries considered as fixed cost.

**MAJOR PRODUCTS:** Woollen yarn, fabric and dyeing; Capable of processing about 680 tone of wool tops if operated three shifts.

**REPORTING UNIT:** A branch of an enterprise having 2 establishments with total assets of 3 million and employees 850 as of 1964. Founded in 1962. The other establishment is engaged in wool spinning.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
TOTAL BOOK VALUE ( 000 IE )	12,214	10,998
1. Land (90,000 sq.m.)	24	24
2. Land improvements	-	-
3. Buildings (total floor space: 24,000 sq.m.)	5,650	5,250
4. Other construction works	-	-
5. Machinery & equipment	6,400	5,600
6. Tools & instruments	-	-
7. Vehicles	60	50
8. Office furniture & fixtures	80	74

DETAIL OF I.5 (No.)	Total Br. value	Avr. Age (Yr.)	Oper. rate	Depr. rate (%)	1964 replace. value
a. Looms (54)	\$165,000	3	A	15	\$165,000
b. Dyeing equipment	\$ 14,000	"	"	"	\$ 14,000
c. Finishing machinery	\$ 74,600	"	"	"	\$ 74,600
d. Spinning machines - 15,000 spindles	\$465,000	"	"	"	\$465,000

**II. INVENTORIES (end of 1964)**

	Actual	Normal
TOTAL VALUE ( 000 IE )	2,144	- 46
1. Direct production materials	1,113	- 75
2. Other input materials	327	- 80
3. Work in process	350	- 10
4. Finished products	354	+ 40

- Normal inventories of finished products 8.3% of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 900 HP

Total load, capacity of trucks: 4 t

The machines itemised were all imported.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED 400	230	120	
1. Direct production ( m. 120 f. 200 )	200	120	
Annual total manhours (000)	(440)	(264)	( )
a. Spinning	100	80	
b. Weaving	35	25	
c. Finishing & dyeing	15	15	
d. Packaging	20	-	
e. Miscellaneous	30	-	
2. Auxiliary activities ( m. 70 f. 10 )	80		

**EDUCATIONAL BACKGROUND (No. of employees)**

Educational Background	Sr. High		Sr. High or equiv. Other	
	Higher	Other	Other	Other
TOTAL	2	6	32	360
Management	2	1	5	-
Direct Production				
Skilled	-	5	5	-
Semi-skilled	-	-	10	100
Unskilled	-	-	-	200
Auxiliary Activities				
Skilled	-	-	-	-
Semi-skilled	-	-	10	30
Unskilled	-	-	2	30

- Average working hours per annum per direct production worker: 2,200 hrs.

- Proportion of motors occupied: 80% on both 1st and 2nd shifts.

**Technological features:**

a), b) and c): Conventional process.

d): Mainly manual work due to small lots.

- Degree of mechanization is rated fair to excellent and automation poor to outmoded

for shops (a), (b) and (c). No automation in (d).

IX. ANNUAL PRODUCTION (1964)				
TOTAL VALUE OF PRODUCTION ( 000 IE ) <u>6,166</u>				
Product	Unit	Quantity	Unit Pre- Value	( IE )
a. Wool yarns	ton	220*	20,000	(\$3,800)
b. Wool fabrics	000(1 x 1.4 m.)	67	13,000	(\$2,800)
c. Yarn dyeing & finishing**	ton	120	2,000	
d. Synthetic fibre yarns	"	47	19,000	
e. Scrap of raw materials	"	27	6,000	

\* 20 tons internally used and not counted in the value of production.  
 \*\* Contract and commission work. Unit value is rate of commissions. Dyes were supplied by this establishment.

**CAPACITY OUTPUT:**  
 120% higher than the actual 1964 production level with additional manhours of 130,000 on the 2nd shift and 250,000 on the third shift. The underutilisation of capacity is due to overall insufficient demand for the products.

Unit value of product: Market value f.o.b. before sales tax  
 Unit value of material: Market price c.i.f.  
 - Direct production materials are all imported with freight rate \$200/t.  
 - Wool yarns and fabrics are partly exported at special export price \$3,800/t & \$2,800/000(1 x 1.4 m), respectively. Synthetic yarn is partly used for the production of exports.

V. INTERMEDIATE INPUTS (1964)				
TOTAL VALUE OF CONSUMPTION ( 000 IE ) <u>3,369</u>				
<b>1. ENERGY &amp; WATER: total</b> <u>140</u>				
		Quantity	Unit	Value
		Unit	consum-	( IE )
- Electricity	000 kwh	3,300		35
- Water	000 cu.m.	100		240
<b>2. Direct production materials: total</b> <u>2,799</u>				
a. Wool tops	ton	306.6		\$3,000
b. Acrylic tops	"	1.6		\$2,200
c. Nylon tops	"	1.6		\$2,500
d. Wistra tops	"	1.6		\$1,000
e. Orlon tops	"	1.6		\$2,500
f. Wool yarns (internal supply; not included in total)	"	20.0		..
<b>3. Packaging materials: total</b> <u>200</u>				
50,000 cartons (IE 4/carton)				
<b>4. Work performed by sub-contractors ( )</b> <u>-</u>				
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> <u>50</u>				
<b>6. Material inputs for auxiliary activities</b> <u>-</u>				
<b>7. Non-factor service inputs: total</b> <u>180</u>				
All transportation, insurance and storage services (purchased separately)				

VI. VALUE ADDED TOTAL 1964 ( 000 IE )		<u>2,797</u>
1. Wages & salaries (before income tax)		
- Employees in direct production	933	
- Other employees	178	
2. Other expenditures for employees	-	
3. Annual depreciation allowance	870	
4. Rental paid	-	
5. Sales & other indirect taxes (less subsidies) (not included in total)	<u>171</u>	
6. Other gross business income (before income tax)	816	

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: IE 32,000
- Value added per employee: IE 6,993
- Annual wage per employee in direct production: IE 2,916
- Variable input costs/gross production ratio: 66.0%
- Gross profit/gross production ratio: 13.2% (at full capacity: 16.7%) 1/
- Level of production at break-even point is approximately 61 % of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN			Gross	Scrapped
1. Recent Expansion	None		acqui-	or
			sition	sold
From 19 to 19				
a. Total Investment ( )				
- Land				
- Land improvements				
- Buildings				
- Other construction work				
- Machinery & equipment				
- Tools & instruments				
- Vehicles				
- Office furniture & fixtures				
b. Corresponding increase:		From 19	to 19	
In no. of employees				
In annual gross production ( )				

2. Future Plan	
a. Investment proposed for the period 1966 to 1967	
Total value ( 000 IE )	<u>800</u>
Of which: - Mach. & equipment	100 \$
- Land improv. & bldg.	-
- Land	-
- Others	-
b. Net increase in no. of employees envisaged for the same period:	
- Direct production:	30
- Auxiliary:	-
c. Purposes:	
Introduction of new products and processes	

**VIII. SUPPLEMENT**

1/ If operated at three shifts.

**MAJOR PRODUCTS:** Combed woollen fabric and trousers. Capable of weaving about 25,000 tons of woollen yarn and also capable of making about 75,000 pieces of trousers annually on the basis of 2 shift operation.

**WORKING UNIT:** An independent one-establishment enterprise with total assets I£ 3.5 million and employees 120 as of 1964. Founded in 1959.

**I. FIXED CAPITAL ASSETS (end of 1964)**

TOTAL BOOK VALUE ( 000 I£ )	Before deprec.	After deprec.
	580	275
1. Land	(rented)	(rented)
2. Land improvements	"	"
3. Buildings	"	"
4. Other construction works	"	"
5. Machinery & equipment	450	290
6. Tools & instruments	-	-
7. Vehicles	-	-
8. Office furniture & fixtures	30	25

DETAIL OF I.5 (No.)	Total bk. value I£. 000	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace. value
a. Looms (12)	104	10	A	15	200
b. Warp machine	11	7	"	"	..
c. Winding machines	192	1-5	"	"	217
d. Twisting machine	14	1	"	"	14
e. Sewing machines	(rented)				

**II. INVENTORIES (end of 1964)**

TOTAL VALUE ( 000 I£ )	Actual	Normal
	840	-
1. Direct production materials	250	-
2. Other input materials	-	-
3. Work in process	240	-
4. Finished products	350	-

- Normal inventories of finished products 6.5% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 100 KW

Total load, capacity of trucks: - t

All the machines itemised were imported. Average age of machinery (71% of total) is 5 years.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED 120	86	24	
1. Direct production ( n. 50 f. 55 )	76	20	
Annual total manhours (000)	(151.2)	(73.6)	( )
a. Weaving	18	9	
b. Sewing shop	55	15	
c. Miscellaneous	3	5	
2. Auxiliary activities ( n. 10 f. 5 )	10	5	

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	Unskilled
2	-	20	98
<b>Management</b>			
1	-	-	-
<b>Direct Production</b>			
<b>Skilled</b>			
1	3	-	-
<b>Semi-skilled</b>			
-	1	-	-
<b>Unskilled</b>			
-	-	10	90
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	1	-	-
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	5	8

- Average working hours per annum per direct production worker: 2,160 hrs.

- Proportion of motors occupied 60% on the 1st shift and 4% on the 2nd shift.

- Conventional process is employed. Degree of mechanization is excellent for a), fair for b). Automation is fair for a), poor for b).

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( 000 IE ) 5,391

Product	Unit	Quantity Produced	Unit Value ( IE )
a. Combed wool fabric	000(1x1.5m.)	314*	18,000
b. Trousers	000 pcs.	60.5	\$6,000

\* 75,000 (1 x 1.5 m) internally used and not counted in the value of production.

**CAPACITY OUTPUT:**

125% higher than the 1964 actual level with sufficient demand and additional manhours of 75,000 on the 2nd shift.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Both combed wool fabrics and trousers are mostly exported.
- Woolen yarns and lining fabrics directly imported.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( 000 IE ) 3,849

1. Energy & water: total	Unit	Quantity consumed	Unit value ( IE )
- Electricity	000 kwh	150	45
- Solar oil	ton	40	..
<b>2. Direct production materials: total</b>			<b>2,265</b>
a. Combed wool yarns	ton	90	18,800
b. Woolen fabrics	000 (1 x 1.5m)	75**	..
c. Lining fabric	000 sq.m.	50	1,450
d. Other	000 IE		500

\*\* internally supplied and not counted in value of consumption.

<b>3. Packaging materials: total</b>			<b>8</b>
<b>4. Work performed by sub-contractors ( )</b>			<b>461</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>			<b>27</b>
<b>6. Material inputs for auxiliary activities</b>			<b>5</b>
<b>7. Non-factor service inputs: total</b>			<b>1,073</b>
Transportation, insurance and storage services (purchased separately) IE 112,000			

**VI. VALUE ADDED TOTAL 1964 ( 000 IE ) 1,542**

1. Wages & salaries (before income tax)	
- Employees in direct production	637
- Other employees	64
2. Other expenditures for employees	148
3. Annual depreciation allowance	33
4. Rental paid	19
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	641

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: IE 5,921
- Value added per employee: IE 12,850
- Annual wage per employee in direct production: IE 6,067
- Variable input costs/gross production ratio: 63%
- Gross profit/gross production ratio: 11.9%
- Gross profit/gross production ratio at full capacity: 16.8%
- Level of production at break-even point is approximately 69 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	None	Gross acquisition	Scrapped or sold
From 19 to 19			
a. Total Investment ( )			
- Land			
- Land improvements			
- Buildings			
- Other construction work			
- Machinery & equipment			
- Tools & instruments			
- Vehicles			
- Office furniture & fixtures			
b. Corresponding increase: From 19 to 19			
In no. of employees			
In annual gross production ( )			

2. Future Plan	None
a. Investment proposed for the period 19 to 19	
Total value ( )	
Of which: - Mach. & equipment	\$
- Land improv. & bldg.	
- Land	
- Others	
b. Net increase in no. of employees envisaged for the same period: - Direct production:	
- Auxiliary:	
c. Purposes:	

**VIII. SUPPLEMENT**

**MAJOR PRODUCTS:** Woolen fabrics and trousers. Capable annually of weaving some 400,000 m (x 1.5 m) of woolen fabric (of which about one third for internal use) on three shifts and producing more than 100,000 pairs of trousers and other wearing apparel on one shift.

**PRODUCING UNIT:** An independent one-establishment enterprise with total assets of 4.8 million and employees 170 as of 1964. Founded in 1954.

**I. FIXED CAPITAL ASSETS (end of 1964)**

TOTAL BOOK VALUE (If 000)	Before deprec.	After deprec.*
	1,390	1,230
1. Land (1,000 sq.m.)		
2. Land improvements		
3. Buildings (2,300 sq.m.)	825	800
4. Other construction works		
5. Machinery & equipment	415	300
6. Tools & instruments		
7. Vehicles	150	130
8. Office furniture & fixtures		
*Revalued in 1964.		

**DETAIL OF I.5 (No.)**

	Total Bk value	Avg. Age	Oper. rate	Depr. rate	1964 replace value
	(\$)	(Yr.)	(%)	(%)	
a. Automatic weaving machines (4)	..	2	A	10	58
b. Jacquard machines (4)	..	10	A	10	16
c. Fabric controlling machine (1)	3	10	A	10	..
d. Ordinary sewing machines (8)	..	10	A	10	7.4
e. Special sewing machines (1)	..	2	A	10	24

**II. INVENTORY (end of 1964)**

TOTAL VALUE (If 000)	Actual	Normal
	1,585	+ 8 %
1. Direct production materials	499	-
2. Other input materials	-	-
3. Work in process	700	+ 15
4. Finished products	386	+ 5

- Normal inventories of finished products 8.3 % of annual gross production

- Seasonal variations: None.

Capacity of electr. motors: 30 KW

Total load, capacity of trucks: - t

All itemised machines were imported (mostly from F.R.Germany).

**GENERAL CONDITIONS:** Transportation, public utilities, community facilities are excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 170	140	15	15
1. Direct production (m.80; f.45)	95	15	15
Annual total manhours (000)	(237)	(38)	(38)
a. Weaving	15	15	15
b. Sewing	80	-	-
2. Auxiliary activities (m.25; f.20)	45	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other
2	16	150
<b>Management</b>		
1	1	-
<b>Direct Production</b>		
<b>Skilled</b>		
-	-	-
<b>Semi-skilled</b>		
-	-	-
<b>Unskilled</b>		
-	10	115
<b>Auxiliary Activities</b>		
<b>Skilled</b>		
-	-	-
<b>Semi-skilled</b>		
-	-	-
<b>Unskilled</b>		
4	7	35

- Average working hours per annum per direct production worker: 2,500 hours.

- Proportion of motors occupied: In weaving shop, 100 % on all the three shifts. In sewing shop, 100 % on the first shift (the only shift in operation).

- Conventional processes employed. Degree of mechanisation is fairly high. No automation.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( I£ 000 ) <u>4,854</u>				TOTAL VALUE OF CONSUMPTION ( I£ 000 ) <u>3,602</u>			
<u>Product</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Value ( I£ )</u>				
a. Woollen fabrics	000 (1.5 x 1 m)	253	9,500	1. <u>Energy &amp; water: total</u> <u>12</u>			
a.1 Woollen fabrics (internal use)	"	138	(..)	Quantity Unit value			
b. Trousers	000 pcs.	110	17,300	Unit used ( I£ )			
c. Others	(I£ 000)	548	..	- Electricity 000 kWh 200 40			
				- Liquid fuel ) negligible			
				- Water negligible			
				2. <u>Direct production materials: total</u> <u>2,274</u>			
				a. Wool yarn ton 70 16,500			
				b. Mohair yarn " 30 22,500			
				c. Others (I£ 000) 444 ..			
				3. <u>Finishing materials: total</u> <u>11</u>			
				4. <u>Work performed by sub-contractors (see VIII)</u> <u>642</u>			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> <u>29</u>			
				6. <u>Material inputs for auxiliary activities</u> <u>16</u>			
				7. <u>Non-factor service inputs: total</u> <u>611</u>			
				Of which transport, insurance & storage services purchased separately 125			
<b>CAPACITY OUTPUT:</b>				<b>SELECTED COEFFICIENTS</b>			
The same as 1964 actual production level.				- Mach., equip., instruments & tools per employee in direct production on 1st shift: I£ 4,368			
Product-mix <u>not</u> flexible.				- Value added per employee: I£ 7,365			
				- Annual wage per employee: I£ 6,425			
				- Variable input costs/gross production ratio: 83 % <sup>1/</sup>			
				- Gross profit/gross production ratio: 1.0 %			
				- Level of production at break-even point is approximately 93 % of the 1964 actual level.			
Unit value of product: Market value f.o.b. before sales tax							
Unit value of material: Market price o.i.f.							
- IV.b) are mainly exported; IV.a) partly exported and partly used for the production of goods for exports.							
- V.2.a) and V.2.b) are imported.							
<b>VI. VALUE ADDED</b> TOTAL 1964 ( I£ 000 ) <u>1,252</u>							
1. Wages & salaries (before income tax)							
- Employees in direct production ) 1,091 <sup>2/</sup>							
- Other employees )							
2. Other expenditures for employees 41							
3. Annual depreciation allowance 60							
4. Rental paid (land) 10							
5. Sales & other indirect taxes (less subsidies) (not included in total) [632]							
6. Other gross business income (before income tax) 50							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u>				2. <u>Future Plan: None.</u>			
From 1962 to 1964				a. Investment proposed for the period 19 to 19			
a. Total investment ( I£ 000 ) 250 -				Total value ( )			
- Land -				Of which: - Mach. & equipment I£			
- Land improvements -				- Land improv. & bldg. \$			
- Buildings 30 -				- Land			
- Other construction work -				- Others			
- Machinery & equipment 200 -				b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments -				- Direct production:			
- Vehicles 20 -				- Auxiliary:			
- Office furniture & fixtures -				c. Purposes:			
b. Corresponding increase: From 1962 to 1964							
In no. of employees (direct prod. only) 60 125							
In annual gross production ( I£ 000 ) 2,500 4,854							
<b>VIII. SUPPLEMENT</b>							
<u>Work performed by sub-contractors:</u>							
Dyeing and finishing of fabrics is wholly done by a sub-contractor on a short-term contract.							
<sup>1/</sup> All wages and salaries regarded as variable cost.							
<sup>2/</sup> Of which I£ 955,000 is the total wages and salaries of the workers in the factory including supervisory staff.							



A very old but well modernized enterprise (founded in 1866) specialized in cotton spinning. Annual capacity output is over 4,000 tons of cotton yarn on three shift operation. 8% of materials, especially cotton and synthetic fibres, are imported. However only 3% of products are sold abroad.

I. FIXED CAPITAL		(end of 1963)	Original purchase value	1963 re- placement value	Capital expenditures in the past years: (Drs. million)					
					1953-54	1955-57	1958-60	1961-63		
					Gross expenditures	-	200	107	460	
					Retirements	111	168	159	234	
					Calculated average age of fixed assets: <u>8.8</u> years					
					<b>Electric motors:</b>					
					Total installed capacity: <u>1,912</u> KW					
					Of which actually operated in 1963:					
					1st shift <u>100</u> %; 2nd shift <u>100</u> %; 3rd shift <u>100</u> %					
					<b>Technological features:</b>					
					A classical method of spinning with machinery and equipment mostly imported. Highly mechanized and automated (rated as 80% - 90% of the most advanced technology in the world).					
TOTAL (Drs. million)					2,142	2,410				
Buildings & land improvements					656	850				
Machinery & equipment					1,486	1,560				
Other capital assets					-	-				
<b>Major machinery crucial for determining the overall production capacity:</b>										
Yarn: spindles (3 shifts)										
(84% of the machinery and equipment was imported.)										
II. LABOUR		(1963)	TOTAL no. of employees: <u>695</u>			<b>Educational background of workers:</b>				
			1st shift	2nd shift	3rd shift	Tech. High.	Elem.	Low	Others	Total
1. Factory workers:										
Total		639 persons	294	173	172	-	1	1	1	3
		(1,346 thous. manhrs.)	(626)	(360)	(360)	-	-	-	-	-
- Spinning			192	173	172	15	6	-	2	23
- Ancillary shops and services			102	-	-	-	-	-	665	669
2. Non-factory workers:		56 persons								
		(118 thous. manhours)								
III. ANNUAL PRODUCTION & CAPACITY			Quantity	Value (Drs. million)		IV. INTERMEDIATE INPUTS				
TOTAL actual revenue output 1963*				3,520		Quantity		Value (Drs. Million)		
- Carded cotton yarn			4,002 t	3,520		TOTAL actual consumption 1963				
						2,666				
						1. Energy inputs: total				
						- Electricity				
						- Brown coal				
						- Liquid fuel				
						2. Major production materials: total				
						2,221				
						- Cotton fibre				
						- Synthetic fibre				
						- Cellulosic fibre				
						3. Repairs & maintenance: total				
						142				
						4. Other material & non-factor service inputs				
						202				
V. VALUE ADDED		(1963)			(Drs. Million)					
TOTAL (except turnover tax)					805					
- Wages of factory workers					420					
- Salaries of non-factory workers					69					
- Depreciation					180					
- Interests paid					92					
- Other accumulation (Turnover tax)					104 1/2					
VI. SUPPLEMENT		Introduction of synthetic yarn is being planned.			<b>SELECTED CONSTATANTS</b>					
1/		Of which Drs. 10 million are funds belonging to the enterprise.			- Mech. & equip. per factory worker on 1st shift: Drs: 5,306,000					
2/		Wages and salaries are considered as fixed costs in the vicinity of current operation scale.			- Value added per employee: Drs. 1,158,000					
3/		Gross accumulation includes interests paid.			- Annual wage per factory worker: Drs. 657,000					
					- Variable input cost/gross production ratio: 67.0 2/ %					
					- Gross accumulation/gross production ratio: 5.6 3/ %					
					- Level of production at break-even point: 83 2/ % of the 1963 actual level.					

An enterprise engaging in cotton spinning; also has a small weaving mill. Founded in 1952. Annual capacity output is 5,000 tons of carded cotton yarn on three shift operation. Most of basic materials (cotton and cellulosic fibre) are supplied from imports. 1% of the output is exported. The location is excellent.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 re- placement value	Capital expenditures in the past years: (Drs. million)															
TOTAL (Drs. million)				<table border="1"> <thead> <tr> <th></th> <th>1953-54</th> <th>1955-57</th> <th>1958-60</th> <th>1961-62</th> </tr> </thead> <tbody> <tr> <td>Gross expenditures</td> <td>15</td> <td>74</td> <td>164</td> <td>654</td> </tr> <tr> <td>Retirements</td> <td>66</td> <td>214</td> <td>204</td> <td>389</td> </tr> </tbody> </table>		1953-54	1955-57	1958-60	1961-62	Gross expenditures	15	74	164	654	Retirements	66	214	204	389
	1953-54	1955-57	1958-60	1961-62															
Gross expenditures	15	74	164	654															
Retirements	66	214	204	389															
Buildings & land improvements	1,077	1,400	Calculated average age of fixed assets: 9 years																
Machinery & equipment	2,104	2,104	<b>Electric motors:</b>																
Other capital assets	-	-	Total installed capacity: 2,176 KW																
<b>Major machinery crucial for determining the overall production capacity:</b>				Of which actually operated in 1965:															
Cotton yarn: spindles (3 shifts)				1st shift 100 %; 2nd shift 99.6%; 3rd shift 99.6 %															
(Over two-thirds of machinery and equipment was imported).				<b>Technological features:</b>															
				Cotton spinning with the "stretching" system of carding; uses imported machines PLATT and SIMON; degree of mechanization is rather unsatisfactory and insufficient to compete even in domestic market. Good railway and road connections with both foreign and domestic markets.															
II. LABOUR (1965)		TOTAL no. of employees: 954			Educational background of workers:														
1. Factory workers:		1st shift	2nd shift	3rd shift	Techn. High.	Elem.	Low	Others	Total										
Total	847 persons	320	283	244	Univ. or higher	-	1	1	-	2									
	(1,960 thous. manhrs.)	(715)	(660)	(565)	Tech. Higher sch.	3	1	-	-	4									
2. Non-factory workers:		107 persons			Secondary sch.	16	10	-	-	26									
		(239 thous. manhours)			Primary school	-	-	-	922	922									
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	IV. INTERMEDIATE INPUTS		Quantity	Value (Drs. Million)												
TOTAL actual revenue output 1965*			3,810	TOTAL actual consumption 1965			2,896												
- Carded cotton yarn	4,384 t.	3,650		1. Energy inputs: total		121													
- Cotton fabrics	926,000m <sup>2</sup>	160		- Electricity	9,780 kWh	114													
* Including turnover tax on sold products.				- Brown coal	1,363 t	7													
<b>Capacity output:</b>				2. Major production materials: total		2,643													
Carded cotton yarn 5,000 t. - Rate of utilization 100%.				a. Cotton fibre	4,352 t.	2,273													
- Under utilization due to: unbalance between capacities of various processes; insufficient supply of imported materials; shortage of electricity.				b. Cellulosic fibre	303 t.	141													
-63 additional workers are needed on the 1st. shift to meet the full utilization of the existing capacity.				c. Spindles	..	96													
				d. Others	..	133													
				3. Repairs & maintenance: total		30													
				4. Other material & non-factor service inputs		104													
VI. SUPPLEMENT		Future plans: Elimination of bottle-necks through partial reconstruction which will expand the existing capacity by 22%. Further expansion by 36% is being planned. Increase in workers envisaged is 13% for both expansions.		V. VALUE ADDED (1965)		(Drs. Million)													
1/	Of which Drs. 30 million internally retained for funds belonging to the enterprise.			TOTAL (except turnover tax)		870													
2/	Gross accumulation includes "interests" and "other accumulation".			- Wages of factory workers	313														
				- Salaries of non-factory workers	90														
				- Depreciation	158														
				- Interests paid	194														
				- Other accumulation (Turnover tax)	155														
					42														
				RELATED COEFFICIENTS															
				- Mach. & equip. per factory worker on 1st shift: Drs.	6,575,000														
				- Value added per employee: Drs.	912,000														
				- Annual wage per factory worker: Drs.	369,500														
				- Variable input cost/gross production ratio:	81.7 %														
				- Gross accumulation/gross production ratio:	9.3 %														
				(at full capacity)	10.5 %														
				- Level of production at break-even point:	50 % of the 1965 actual level.														

An enterprise producing cotton fabrics out of yarns purchased from outside. Founded in 1929. Annual capacity output is about 7 million m<sup>2</sup> of cotton fabrics on full three-shift-operation. Cotton yarn is of domestic origin, but dyes and chemicals, accounting for 5% of the total material expenditures, are imported. 5% of the output is directly exported.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)							
				1951-54	1955-57	1958-60	1961-63				
TOTAL (Drs. million)		1,192	1,351	Gross expenditures	13	68	137	106			
Buildings & land improvements		374	490	Retirements	37	105	105	136			
Machinery & equipment		817	860	Calculated average age of fixed assets: <u>9.5</u> years							
Other capital assets		1	1	<b>Electric motors:</b>							
<p><u>Major machinery crucial for determining the overall production capacity:</u></p> <p>Cotton fabrics : Weaving looms (3 shifts)</p> <p>(15% of machinery and equipment was imported.)</p>				<p>Total installed capacity: <u>1,095</u> KW</p> <p>Of which actually operated in 1965:</p> <p>1st shift <u>77</u> %; 2nd shift <u>77</u> %; 3rd shift <u>52</u> %</p> <p><b>Technological features:</b> Dyeing of yarn, weaving, mercerisation, bleaching, dyeing, finishing and calendaring of cotton fabrics. Mechanisation close to the world advanced level, but automation lagging behind by some 50%. The scale of production has been maintained around the same level for almost a decade. The assortment of products is satisfactory from the standpoint of both technological and sales efficiency.</p>							
II. LABOUR (1965)		TOTAL no. of employees: <u>799</u>			<b>Educational background of workers:</b>						
		1st shift	2nd shift	3rd shift	Techn. Econ.	Law	Others	Total			
1. Factory workers:											
Total	714 persons	282	282	190	Univ. or higher	2	2	-	-	4	
	( 1,472 thous. manhrs. )	( 579 )	( 579 )	( 314 )	Techn. Higher sch.	-	-	-	-	-	
- Preparation	37	37	23	Secondary sch.	22	8	-	-	30		
- Weaving	166	166	106	Primary school	-	-	-	765	765		
- Dyeing and finishing	34	34	10	IV. INTERMEDIATE INPUTS		Quantity		Value (Drs. Million)			
- Ancillary shops	32	32	6	TOTAL actual consumption 1965				1,358			
- General services	13	13	5	1. Energy inputs: total				79			
2. Non-factory workers:	85 persons				- Electricity	1,825 MWH		33			
	( 160 thous. manhours )				- Gas	14,070 m <sup>3</sup>		1			
					- Brown coal	4,000 t		45			
					2. Major production materials: total				1,053		
					- Cotton yarn	1,078 t		953			
					- Ancillary materials	..		100			
					3. Repairs & maintenance: total				64		
					4. Other material & non-factor service inputs				162		
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	V. VALUE ADDED (1965)		(Drs. Million)					
TOTAL actual revenue output 1965*			2,604	TOTAL (except turnover tax)		780					
- Cotton fabrics	5,493,000 m <sup>2</sup>	2,604		- Wages of factory workers	396						
* Including turnover tax on sold products (Drs. 466 million).				- Salaries of non-factory workers	49						
Capacity output :				- Depreciation	53						
Cotton fabrics : 7,000,000 m <sup>2</sup> . Rate of utilisation is 78%.				- Interests paid	70						
- Underutilisation due to insufficient supply of raw materials. No additional factory workers are required in the 1st. shift for full utilisation of the existing capacity.				- Other accumulation (Turnover tax)	212 1/2						
VI. SUPPLEMENT				VII. SELECTED COMPARISONS							
Automation of the production is being planned.				- Mech. & equip. per factory worker on 1st shift: Drs. 3,049,000							
1/	Of which Drs. 56 million retained internally as the enterprise's own funds.			- Value added per employee: Drs. 976,000							
2/	Wages and salaries are considered as fixed costs in the vicinity of scale of current operation.			- Annual wage per factory worker: Drs. 555,000							
3/	Gross accumulation consists of interests paid and other accumulation.			- Variable input cost/gross production ratio: 53 2/3 %							
				- Gross accumulation/gross production ratio: 13.23 % (at full capacity 20.6 %)							
				- Level of production at break-even point: 72 2/3 % of the 1965 actual level.							

A new enterprise engaging in woollen spinning and weaving. Founded in 1962-63. Annual capacity output is about 600 tons of woollen yarn and 1 million m<sup>2</sup> of woollen fabrics on full three-shift operation. Most of wool, dyes and chemicals, accounting 40% of total material expenditures, are imported. No sales abroad.

I. FIXED CAPITAL (end of 1964)	Original purchase value	1964 re- placement value	Capital expenditures in the past years: (Drs. million)
TOTAL (Drs. million)	3,168	3,168	Gross expenditures Retirements ..
Buildings & land improvements	758	758	Calculated average age of fixed assets: <u>1</u> years
Machinery & equipment	1,924	1,924	<b>Electric motors:</b> Total installed capacity: <u>2,559</u> KW Of which actually operated in 1965: 1st shift <u>100</u> %; 2nd shift <u>31</u> %; 3rd shift <u>18</u> %
Other capital assets	486	486	<b>Technological features:</b> A newly established factory with the conventional system for spinning and weaving of wool. (Normal scale of operation was not attained until early 1964.) Satisfactorily mechanised and automated (rated at 8% and 70% respectively). Rather unfavourably located with respect to both purchase of materials and sale of products.

**Major machinery crucial for determining the overall production capacity:**

- Wool yarn : spindles (3 shifts)
  - Fabrics : looms (3 shifts)
- (79% of machinery and equipment was imported).

II. LABOUR (1964)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:			
Total 863 persons	400	280	183
(1,689 thous. manhrs.)	(794)	(543)	(362)
- Spinning of carded yarn	35	27	15
- Spinning of combed yarn	73	41	40
- Weaving	185	141	99
- Finishing	81	54	19
- Auxiliary shops	26	17	10
2. Non-factory workers:	85 persons		
	(190 thous. manhours)		

**Miscellaneous background of workers:**

	Techn.	Non.	Low	Others	Total
Univ. or higher	1	5	2	-	8
Tech. Higher sch.	1	3	1	2	7
Secondary sch.	19	9	6	5	39
Primary school	-	-	-	894	894

**IV. INTERMEDIATE INPUTS**

	Quantity	Value (Drs. Million)
TOTAL actual consumption 1964		1,612
1. Energy inputs: total		93
- Electricity	2,500 kWh	38
- Lights	9,200 t	47
- Liquid fuel	400 t	8
2. Major production materials: total		1,256
- Wool (imported)	428 t	1,070
- Wool (domestic)	10 t	22
- Cellulosic fibre	53 t	32
- Synthetic fibre	10 t	20
- Mohair	10 t	27
- Waste and regenerates of knitwear	83 t	85
3. Repairs & maintenance: total		30
4. Other material & non-factor service inputs (incl. dyes & chemicals)		233

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
	TOTAL actual revenue output 1964 **	
- Carded wool yarn **	239 t	697
- Combed wool yarn **	247 t	1,117
- Carded wool fabrics	522,000 m <sup>2</sup>	1,038
- Combed wool fabrics	524,000 m <sup>2</sup>	1,841

\*\* Partly internally used and not counted in the total value of production.

\* Including turnover tax on sold products (Drs. 360 million).

**Capacity output :**

- Carded wool yarn	320 t	Overall rate of utilization is 77%.
- Combed wool yarn	290 t	
- Fabrics	1,000,000 m <sup>2</sup>	

- Owing to the recent start, the capacities of different processes are not quite in balance yet.

**V. VALUE ADDED (1964) (Drs. Million)**

TOTAL (except turnover tax)	1,669
- Wages of factory workers	642
- Salaries of non-factory workers	99
- Depreciation	267
- Interests paid	237
- Other accumulation (Turnover tax)	444 1/2

**VI. SUPPLEMENT Future plans:**

- a) Introduction of synthetic fabrics and knitwear.
- b) Expansion of the carded-yarn spinning mill and the weaving mill by 300% and 20% respectively.
- c) Completion of installing finishing machines.

1/ Of which Drs. 24 million are funds belonging to the enterprise.

2/ Gross accumulation includes interest paid.

**SELECTED INDICATORS**

- Mech. & equip. per factory worker on 1st shift: Drs. 4,810,000	
- Value added per employee: Drs. 1,761,000	
- Annual wage per factory worker: Drs. 744,000	
- Variable input cost/gross production ratio: 60.7 %	
- Gross accumulation/gross production ratio: 21.4 %	
(at full capacity)	
- Level of production at break-even point: 46 % of the 1965 actual level.	

An enterprise, founded in 1955, engaging in woolen weaving. Capable of producing around 600,000 m<sup>2</sup> wool fabrics annually with two shifts. 17% of materials (wool yarn and chemicals) are imported, but the products are sold only on the domestic market.

I. FIXED CAPITAL	(end of 1965)	Original	1965 re-
		purchase	placement
		value	value
TOTAL (Drs. million)		403	662
Buildings & land improvements		108	320
Machinery & equipment		287	330
Other capital assets		8	12

Major machinery crucial for determining the overall production capacity:

Fabrics from wool yarn; looms (2 shifts)

(Over one half of the machinery and equipment was made abroad).

Capital expenditures in the past years: (Drs. million)	1955-57 1958-60 1961-63		
	1955-57	1958-60	1961-63
Gross expenditures	216	108	100
Retirements	11	27	46
Calculated average age of fixed assets:	5.2 years		

Electric motors:

Total installed capacity: 217 KW  
Of which actually operated in 1965:

1st shift 100 %; 2nd shift 94 %; 3rd shift — %

Technological features:

Winding of yarn, weaving on looms, and finishing of fabrics made of carded wool yarn. Medium rate of mechanization. Location not very favourable.

II. LABOUR	(1965)	TOTAL no. of employees:		
		1st shift	2nd shift	3rd shift
1. Factory workers:		129	105	—
Total 234 persons		(297)	(251)	(—)
(548 thous. manhrs.)				
- Preparations		19	18	
- Weaving		41	40	
- Finishing		41	36	
- Maintenance, etc.		28	11	
2. Non-factory workers:		20 persons		
(48 thous. manhours)				

Educational background of workers:

	Techn. Econ. Low Others				Total
	Techn.	Econ.	Low	Others	
Univ. or higher	1	—	—	—	1
Tech. Higher sch.	—	—	—	—	—
Secondary sch.	3	4	1	4	12
Primary school	—	—	—	241	241

III. ANNUAL PRODUCTION & CAPACITY	Quantity		Value (Drs. million)
	Quantity	Value	
TOTAL actual revenue output 1965*			1,240
- Wool fabrics	335,000 m <sup>2</sup>		1,240

\* Including turnover tax on sold products.

Capacity output :

Wool fabrics \* 600,000 m<sup>2</sup> Rate of utilisation is 56%.

\* Assuming 3 - shift operation.

Two-thirds of underutilization attributable to the unbalance between capacities of various processes; the rest to insufficient supply of raw materials. Full capacity output shift can be achieved without additional factory workers on the first, but by introducing the 3rd shift operation.

IV. INTERMEDIATE INPUTS	Quantity		Value (Drs. Million)
	Quantity	Value	
TOTAL actual consumption 1965			649
1. Energy inputs: total			8
- Electricity		312 MW	5
- Brown coal		821 t	3
2. Major production materials: total			558
- Wool yarn		127 t	558
3. Repairs & maintenance: total			9
4. Other material & non-factor service inputs			74

V. VALUE ADDED	(1965)	(Drs. Million)
TOTAL (except turnover tax)		314
- Wages of factory workers		138
- Salaries of non-factory workers		22
- Depreciation		18
- Interests paid		48
- Other accumulation (Turnover tax)		88 1/2
		(277)

VI. SUPPLEMENT	Future plans.
a)	Introduction of new products.
b)	Introduction of a new finishing process.
c)	Installation of new looms.
1/	Of which Drs. 27 million are funds belonging to the enterprise.
2/	Gross accumulation includes interest paid.

SELECTED COEFFICIENTS

- Mech. & equip. per factory worker on 1st shift:	Drs. 2,560,000
- Value added per employee:	Drs. 1,236,000
- Annual wage per factory worker:	Drs. 590,000
- Variable input cost/gross production ratio:	73.0 %
- Gross accumulation/gross production ratio:	14.1 2/ %
(at full capacity)	20.0 %
- Level of production at break-even point:	47 % of the 1965 actual level.

An enterprise engaging in weaving and finishing of man-made fibre textiles. Capable of producing over 3 million m<sup>2</sup> of artificial silk fabrics and synthetic fabrics annually on full three-shift operation. Almost one half of the materials (synthetic yarn) are imported, but all the products are sold on domestic markets. The enterprise was founded in 1926.

I. FIXED CAPITAL (end of 1963)	Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)			
			1953-54	1955-57	1958-60	1961-63
TOTAL (Drs. million)	929	1,062	Gross expenditures 34	31	217	58
Buildings & land improvements	355	462	Retirements 20	81	68	100
Machinery & equipment	574	600	Calculated average age of fixed assets: 9.1 years			
Other capital assets	-	-	<b>Electric motors:</b>			
<b>Major machinery crucial for determining the overall production capacity:</b>			Total installed capacity: 709 KW			
Artificial silk fabrics and synthetic yarn : looms ( 3 shifts ). (8% of machinery and equipment is of foreign origins).			Of which actually operated in 1963: 1st shift 100 %; 2nd shift 98 %; 3rd shift 78 %			
- The last substantial expansion took place in 1960, which accounts for some 22% of the existing fixed capital.			<b>Technological features:</b> A classical system of weaving with mostly imported equipment. Specialised in rayon and synthetic fibre fabrics. Relatively low rate of mechanisation and automation (falls short by about 60% and 80%, respectively, of the world standard) but still competes well in the domestic market. Favourable location.			

II. LABOUR (1963)	TOTAL no. of employees:			Educational background of workers:					
	1st shift	2nd shift	3rd shift	Tech.	Sec.	Low	Others	Total	
1. Factory workers:				Univ. or higher	2	2	1	1	6
Total 611 persons	254	227	130	Tech. Higher sch.	-	3	-	3	6
(1,406 thous. manhrs.)	( 584 )	( 520 )	( 302 )	Secondary sch.	18	7	-	11	36
- Weaving	160	152	118	Primary school	-	-	-	654	654
- Finishing	39	38	6	IV. INTERMEDIATE INPUTS					
- Auxiliary shops	16	12	3	Quantity		Value (Drs. Million)			
- Technical control	39	25	3	TOTAL actual consumption 1963 1,262					
2. Non-factory workers: 91 persons	( 208 thous. manhours )			1. Energy inputs: total 33					
				- Electricity 429 kWh 7					
				- Brown coal 5,430 t 26					
				2. Major production materials: total 1,032					
				- Artificial silk yarn 169 t 266					
				- Synthetic yarn 178 t 766					
				3. Repairs & maintenance: total 34					
				4. Other material & non-factor service inputs 163					

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)	IV. VALUE ADDED (1963) (Drs. Million)	
			TOTAL (except turnover tax)	1,221
TOTAL actual revenue output 1963*		2,719	- Wages of factory workers	311
- Artificial silk fabrics	897,000 m <sup>2</sup>	734	- Salaries of non-factory workers	81
- Synthetic fabrics	1,863,000 m <sup>2</sup>	1,985	- Depreciation	40
			- Interests paid	72
			- Other accumulation	717 1/2
			(Turnover tax)	236
* Including turnover tax on sold products.			VI. SUPPLEMENT	
			Future plans. a): Replacement of all weaving looms. b): 100% mechanization.	
			1/ Of which Drs. 282 million are funds belonging to the enterprise.	
			2/ The denominator is 200; excluding workers in "auxiliary shop" and "technical control".	
			3/ Gross accumulation consists of interests paid and other accumulation.	

**Capacity output :**

Artificial silk fabrics 1,000,000 m<sup>2</sup> } Overall rate of utilization is 86%.  
Synthetic fabrics 2,200,000 m<sup>2</sup> }

- Under utilization mainly due to the shortage of labour; additional 76 workers would be needed on 1st shift for the full utilization of the present capacity.

VII. SELECTED INDICATORS	
- Mech. & equip. per factory worker on 1st shift: Drs. 3,000,000	2/
- Value added per employee: Drs. 1,739,000	
- Annual wage per factory worker: Drs. 509,000	
- Variable input cost/gross production ratio: 55.4 %	
- Gross accumulation/gross production ratio: 31.7 %	1/
(at full capacity 33.5 %)	
- Level of production at break-even point: 29 % of the 1963 actual level.	

An old enterprise manufacturing hemp, jute and sisal goods (rope, cordage, sacks, etc.) Founded in 1907. Annual capacity output is 9,000 t of packaging yarn, 2,300 t of cordage, rope and webbing and 8.4 million m<sup>2</sup> of fabrics, sacks and rugs on partial three-shift operation. Jute and sisal fibres, amounting to over one-third of material expenditures, is imported, but only 5% of the output is sold abroad.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 re- placement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-65		
TOTAL (Drs. million)		1,745	2,344	24	126	218	345		
Buildings & land improvements		679	917	73	124	150	166		
Machinery & equipment		1,064	1,425						
Other capital assets		2	2						
<u>Major machinery crucial for determining the overall production capacity:</u>				Calculated average age of fixed assets: <u>8.6</u> years					
Hemp, jute and sisal yarn: spinning machines (2 shifts for hems and 3 shifts for jute and sisal yarn)				<u>Electric motors:</u> Total installed capacity: <u>1,958</u> KW Of which actually operated in 1965: 1st shift <u>100</u> \$; 2nd shift <u>97</u> \$; 3rd shift <u>76</u> \$					
- As much as 90% of machinery and equipment was imported.				<u>Technological features:</u> Dry, semi-dry and damp spinning, and weaving of packaging fabrics, manufacturing of rope, cordage and sacks. With insufficient degree of mechanisation and automation. They fall short by about 30% and 20%, respectively of the today's standard. Favourably located with respect to the domestic source of raw materials.					
II. LABOUR (1965)		TOTAL no. of employees: 1,428			<u>Educational background of workers:</u>				
		1st shift	2nd shift	3rd shift	Techn. High.	Low	Others	Total	
1. Factory workers:									
Total	1,342 persons	617	536	189	2	-	1	-	3
	(3,112 thous. manhrs.)	(1,424)	(1,245)	(443)	-	4	-	-	4
	- Hemp yarn	230	215	105	19	4	-	8	31
	- Hemp fabrics and sacks	115	106	-	-	-	-	-	-
	- Rope and cordage	52	45	-	-	-	-	-	-
	- Jute yarn	80	70	30	-	-	-	-	-
	- Sisal yarn	50	50	54	-	-	-	-	-
	- Ancillary shops and services	90	50	-	-	-	-	-	-
2. Non-factory workers:		86 persons			Primary school: - - - 1,390 1,390				
	(225 thous. manhours)								
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		IV. INTERMEDIATE INPUTS				
TOTAL actual revenue output 1965*			5,112		Quantity		Value (Drs. Million)		
	- Hemp yarn **	2,866 t	2,052		TOTAL actual consumption 1965				
	- Jute yarn **	1,818 t	769		1. Energy inputs: total				
	- Sisal yarn **	3,498 t	1,623		- Electricity				
	- Hemp cordage	255 t	142		- Brown coal				
	- Hemp webbing	168 t	178		5,008 MWH				
	- Hemp ropes	1,783 t	1,202		5,759 t				
	- Jute fabrics	2,735,000 m <sup>2</sup>	552		2. Major production materials: total				
	- Hemp fabrics	2,626,000 m <sup>2</sup>	1,050		- Hemp fibres				
	- Rugs	39,000 m <sup>2</sup>	50		- Jute fibres				
	- Hemp sacks	1,906,000 m <sup>2</sup>	616		- Sisal fibres				
* Including turnover tax on sold products.					3. Repairs & maintenance: total				
** Of which Drs. 3,122 million internally used and not counted in the total.					4. Other material & non-factor service inputs				
<u>Capacity output:</u>					V. VALUE ADDED (1965) (Drs. Million)				
	- Hemp yarn	3,200 t	Overall rate of utilisation is 91%.		TOTAL (except turnover tax)				
	- Jute yarn	2,200 t			1,777				
	- Sisal yarn	3,600 t			- Wages of factory workers				
	- Hemp cordage, ropes and webbing	2,300 t			646				
	- Hemp fabrics and sacks	5,200,000 m <sup>2</sup>			- Salaries of non-factory workers				
	- Jute fabrics	3,100,000 m <sup>2</sup>			97				
	- Rugs	60,000 m <sup>2</sup>			- Depreciation				
- Underutilisation due to insufficient supply of raw materials. Full capacity output can be achieved without additional man-hours.					65				
VI. SUPPLEMENT		Future plans: a): Introduction of unwoven felt, cocoa rubber and PVC carpet.			- Interests paid				
b): Expansion of the capacity for spinning of synthetic yarn and manufacture of ropes.					118				
c): Overhauling of weaving shops and spinning shops for jute.					- Other accumulation				
1/ Of which Drs. 324 million are funds belonging to the enterprise.					851				
2/ The denominator is 520, i.e. excluding workers in "Ancillary shops and services"					- (Turnover tax)				
3/ Wages and salaries are considered as fixed costs in the vicinity of the level of current operation.					110				
					SELECTED COEFFICIENTS				
					- Mach. & equip. per factory worker on 1st shift: Drs. 2,740,000				
					- Value added per employee: Drs. 1,244,000				
					- Annual wage per factory worker: Drs. 481,000				
					- Variable input cost/gross production ratio: 49.6 %				
					- Gross accumulation/gross production ratio: 19.4 %				
					(at full capacity 22.2 %)				
					- Level of production at break-even point: 62 % of the 1965 actual level.				

An enterprise engaging in woollen spinning and weaving; founded in 1950; Capable of annually spinning 2,200t of wool yarn (mostly further processed within the enterprise) and weaving 3 million sq.m. of woollen fabrics on three shifts. 80% of materials (wool, synthetic fibre and rags) are imported; only 8% of the output is sold on foreign markets. Located near main highways but other means of communication rather poor.

I. FIXED CAPITAL (end of 1965)	Original purchase value	1965 replacement value
	TOTAL (Drs. million)	5,228
Buildings & land improvements	1,916	2,490
Machinery & equipment	3,226	3,226
Other capital assets	86	86

Major machinery crucial for determining the overall production capacity:

Yarn: Spindles (3 shifts);

Fabrics: Looms (3 shifts).

About a half of machinery and equipment were imported.

Capital expenditures in the past years: (Drs. million)

	1953-54	1955-57	1958-60	1961-63
Gross expenditures	2,312	1,499	106	387
Retirements	82	324	426	496

Calculated average age of fixed assets: 8.9 years

Electric motors:

Total installed capacity: 2,810 KW

Of which actually operated in 1965:

1st shift 100 %; 2nd shift 85 %; 3rd shift 69 %

Technological features:

Involves a conventional system for spinning and weaving of wool. The degree of mechanization and automation can be rated relatively to the world level, as follows:  
Spinning of carded yarn = 100%; spinning of combed yarn = 80%; weaving = 60%.

II. LABOUR (1965)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:	1,370	587	211
Total 2,168 persons	(3,064)	(1,332)	(444)
(4,780 thous. manhrs.)			
- Carded yarn	154	68	72
- Combed yarn	143	126	64
- Weaving and finishing	812	312	51
- Ancillary shops	261	81	24

2. Non-factory workers: 227 persons  
(510 thous. manhours)

Educational background of workers:

	Techn.	Elem.	Low	Others	Total
Univ. or higher	6	6	2	-	14
Tech. Higher sch.	3	10	-	4	17
Secondary sch.	36	16	-	10	62
Primary school	-	-	-	2,302	2,302

IV. INTERMEDIATE INPUTS

	Quantity	Value (Drs. Million)
TOTAL actual consumption 1965		4,126
1. Energy inputs: total		218
- Electricity	4,972 M-h	72
- Lignite	25,534 t	146

	Quantity	Value (Drs. Million)
2. Major production materials: total		3,423
- Imported wool	1,050 t	3,423
- Synthetic and artificial fibres	1,138 t	
- Combed wool yarn *	129 t	(3,000)
- Carded wool yarn *	1,246 t	

\* Internal supply and not included in the total value.

3. Repairs & maintenance: total	65
4. Other material & non-factor service inputs	420

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
	TOTAL actual revenue output 1965 *	
- Carded wool yarn (internal use)	1,246 t	(2,599)
- Combed wool yarn (sold outside)	390 t	1,777
- Combed wool yarn (internal use)	129 t	(401)
- Woollen fabrics	2,396,000 m <sup>2</sup>	4,742
- By-products	324 t	373

\* Including turnover tax on sold products.

Capacity Output:

Carded wool yarn	1,600 t	Overall rate of utilization is 86%.
Combed wool yarn	600 t	
Wool fabrics	3,000,000 m <sup>2</sup>	

- Underutilization due to insufficient supply of imported raw materials. Optimum number of factory workers on the 1st shift for full capacity operation is estimated to be 1,400.

V. VALUE ADDED (1965)	(Drs. Million)
TOTAL (except turnover tax)	2,381
- Wages of factory workers	766
- Salaries of non-factory workers	110
- Depreciation	212
- Interests paid	586
- Other accumulation (Turnover tax)	707 1/2
	(385)

VI. SUPPLEMENT Future Plans

- 1) Introduction of new process in polishing.
- 2) Reconstruction of spinning shops (with expansion).
- 3) Expansion of weaving shop with looms without bobbins and capacities for steam and electricity.
- 4) To raise the degree of mechanization and automation up to 90% and 100% of the world level, respectively.

1/ Of which Drs. 291 million are funds belonging to the enterprise.

SELECTED COEFFICIENTS

- Mach. & equip. per factory worker on 1st shift: Drs.	2,354,000
- Value added per employee: Drs.	994,000
- Annual wage per factory worker: Drs.	353,000
- Variable input cost/gross production ratio:	67.7 %
- Gross accumulation/gross production ratio:	19.8 %
(at full capacity)	21.4 %
- Level of production at break-even point:	38 % of the 1965 actual level.

2/ Gross accumulation includes interests paid.



An old enterprise, founded in 1929, manufacturing man-made fibre fabrics and ready-made wearing apparel, umbrellas, etc. Annual capacity output is over 4.1 million sq. m. of fabrics (of which 14% further processed internally), 2.3 million sq. m. of ready-made wearing apparel on three-shift operation. The umbrella factory can produce 900,000 pcs. annually on one shift. More than one-third of materials (rayon & synthetic yarn) are imported; 4% of the output is directly exported.

**I. FIXED CAPITAL** (end of 1963)

	Original purchase value	1963 replacement value
TOTAL (Drs. million)	1,443	1,612
Buildings & land improvements	433	560
Machinery & equipment	1,008	1,050
Other capital assets	2	2

**Major machinery crucial for determining the overall production capacity:**

**Man-made fibre fabrics:** weaving looms (3 shifts);  
**Ready-made clothes:** sewing machines "SINGER" (partly 2 shifts).  
**Umbrellas:** sewing machines (1 shift).

- One fourth of machinery and equipment is of foreign origin.

**Capital expenditures in the past years: (Drs. million)**

	1953-54	1955-57	1958-60	1961-63
Gross expenditures	33	94	193	320
Retirements	50	100	106	164

Calculated average age of fixed assets: 8.3 years

**Electric motors:**

Total installed capacity: 713 KW  
 Of which actually operated in 1963:

1st shift 100 %; 2nd shift 100 %; 3rd shift 99 %

**Technological features:** A relatively old, out-dated weaving mill, combined with a new modern factory for the production of lingerie and ready-made clothes; the production of the latter factory is still much below its capacity. Mechanization falls short of the modern standard by about 20%. Location is satisfactory.

**II. LABOUR** (1963) TOTAL no. of employees: 1,141

	1st shift	2nd shift	3rd shift
1. <b>Factory workers:</b>			
Total 995 persons	648	219	128
(1,865 thous. manhrs.)	(1,211)	(412)	(242)

- Weaving mill & production of ready-made clothes	240	204	120
- Umbrellas	300	-	-
- Ancillary shops and services	108	15	8

2. **Non-factory workers:** 146 persons  
 ( 273 thous. manhours)

**III. ANNUAL PRODUCTION & CAPACITY**

	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1963 *		3,383
- Rayon & synthetic fibre fabrics **	2,997,000 m <sup>2</sup>	1,578
- Ready-made lingerie and clothes	845,000 m <sup>2</sup>	874
- Umbrellas	288,000 pcs.	541
- Other miscellaneous textile products	..	610

\* Includes turnover tax on sold products.

\*\*Drs. 220 million were internally used, and not included in the total value.

**Capacity output**

Man-made fibre fabrics	4,100,000 m <sup>2</sup>	} Rate of utilization is 48%.
Ready-made lingerie and clothes	2,300,000 m <sup>2</sup>	
Umbrellas	900,000 pcs	

- Underutilization due to unbalance between capacities of various processes (esp. almost obsolete weaving mill); engineering deficiencies; insufficient supply of raw materials. Number of factory workers required on the 1st shift for full utilization of the existing capacities is 693.

**VI. SUPPLEMENT****Future plan**

The replacement of 80-90% of machinery in the weaving mill is being planned, but the present assortment of products will be maintained.

- 1/ Of which Drs. 139 million are funds belonging to the enterprise.
- 2/ Gross accumulation includes interest paid.

**Educational background of workers:**

	Techn.	Elem.	Low	Others	Total
Univ. or higher	1	3	1	-	5
Tech. Higher sch.	-	-	1	-	1
Secondary sch.	20	16	2	22	60
Primary school	-	-	-	1,075	1,075

**IV. INTERMEDIATE INPUTS**

	Quantity	Value (Drs. Million)
TOTAL actual consumption 1963		1,876

1. <b>Energy inputs: total</b>		68
- Electricity	1,950 mwh	26
- Brown coal	6,670 t	40
- Lignite	262 t	1
- Liquid fuel	1 t	1

2. <b>Major production materials: total</b>		1,630
- Rayon yarn	330 t	) 792
- Synthetic yarn	16 t	
- Fabrics for ready-made clothes *	426,000 m <sup>2</sup>	( .. )
- Fabrics for umbrellas	68,000 m <sup>2</sup>	7
- Dyes and chemicals	..	129
- Auxiliary materials for finishing	..	702

\* Internally supplied.

3. <b>Repairs &amp; maintenance: total</b>		39
4. <b>Other material &amp; non-factor service inputs</b>		139

**V. VALUE ADDED** (1963)

	(Drs. Million)
TOTAL (except turnover tax)	1,079
- Wages of factory workers	453
- Salaries of non-factory workers	93
- Depreciation	62
- Interests paid	117
- Other accumulation (Turnover tax)	354 1/2
	(428)

**SELECTED COEFFICIENTS**

- Mach. & equip. per factory worker on 1st shift: Drs.	1,670,000
- Value added per employee: Drs.	946,000
- Annual wage per factory worker: Drs.	455,000
- Variable input cost/gross production ratio:	72.7 %
- Gross accumulation/gross production ratio: (at full capacity)	16.0 % / 21.7 %
- Level of production at break-even point:	41 % of the 1963 actual level.

A very old enterprise, founded in 1861, engaging in cotton spinning and weaving. Capable of spinning 3,600 t of cotton yarn, of which 70 % for internal use, and weaving 15.5 million m<sup>2</sup> of cotton fabrics on partial three shifts operation (only spinning and thread shops work three-shifts). Cotton and synthetic fibre (amounting to 80 % of the material expenditures) are imported; one-fourth of the output is directly exported.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 re-placement value	Capital expenditures in the past years: (Drs. million)				
				- 1954	1955-57	1958-60	1961-63	
TOTAL (Drs. million)		4,971	5,708	26	165	196	1,139	
Buildings & land improvements		1,918	2,500	81	259	332	482	
Machinery & equipment		3,027	3,178					
Other capital assets		26	30					
<p>Calculated average age of fixed assets: 8.8 years</p> <p><b>Electric motors:</b></p> <p>Total installed capacity: 4,663 KW</p> <p>Of which actually operated in 1965:</p> <p>1st shift 100 %; 2nd shift 88 %; 3rd shift 23 %</p> <p><b>Technological features:</b></p> <p>Large establishment for cotton spinning and weaving with own electricity supply. Mechanisation and automation are relatively low (fall short by about 40 % and 50 %, respectively, of the world standard). Located favourably with respect to foreign markets.</p>								
<p><b>Major machinery crucial for determining the overall production capacity:</b></p> <p><u>Cotton yarn:</u> Ring spindles (3 shifts);</p> <p><u>Cotton fabrics:</u> Weaving looms (2 shifts).</p> <p>(Almost all, viz. 99 % of machinery and equipment were imported.)</p>								
II. LABOUR (1965)		TOTAL no. of employees: 1,530			Educational background of workers:			
		1st shift	2nd shift	3rd shift	Techn. Hign.	Low	Others	Total
1. Factory workers:					Univ. or higher	-	-	2
Total	1,365 persons	870	367	128	Tech. Higher sch.	3	1	4
	(2,808 thous. manhrs.)	(1,788)	(756)	(264)	Secondary sch.	40	13	53
	- Spinning	176	116	110	Primary school	-	-	1,471
	- Manufacturing of thread	33	19	18				
	- Weaving	350	189	-				
	- Finishing	125	17	-				
	- Ancillary shops (production of spare parts, etc.)	107	10	-				
	- Transport & warehousing	49	4	-				
	- Other services	30	12	-				
2. Non-factory workers:		165 persons						
		(307 thous. manhours)						
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	IV. INTERMEDIATE INPUTS				
TOTAL actual revenue output 1965 *			5,185	Quantity		Value (Drs. Million)		
- Carded cotton yarn**		3,563 t	2,993	TOTAL actual consumption 1965				
- Cotton fabrics		15,325,000 m <sup>2</sup>	3,985	1. Energy inputs: total				
- Electricity***		(18,589 Mwh)	(93)	- Electricity				
- Others (spare parts, etc.)		..	256	- Brown coal				
				- Liquid fuel				
				2. Major production materials: total				
				- Cotton fibre				
				- Others				
				3. Repairs & maintenance: total				
				4. Other material & non-factor service inputs				
				V. VALUE ADDED (1965) (Drs. Million)				
				TOTAL (except turnover tax)				
				- Wages of factory workers				
				- Salaries of non-factory workers				
				- Depreciation				
				- Interests paid				
				- Other accumulation				
				(Turnover tax)				
VI. SUPPLEMENT		Future plans:		SELECTED COEFFICIENTS				
a) Introduction of synthetic yarn and fabrics.				- Mech. & equip. per factory worker on 1st shift: Drs. 3,653,000				
b) To supplement the bleaching system by mercerisation and dyeing processes.				- Value added per employee: Drs. 1,086,000				
c) To replace 40 % of obsolete looms with new and automatic ones.				- Annual wage per factory worker: Drs. 574,000				
d) To stop the production of spare parts which will reduce the number of workers of ancillary shops to 20 - 30 %.				- Variable input cost/gross production ratio: 51.7 %				
				- Gross accumulation/gross production ratio: 12.9 %				
				(at full capacity 13.2 %)				
				- Level of production at break-even point: 73 % of the 1965 actual level.				
1/ Drs. 174 million are funds belonging to the enterprise.				2/ Wages and salaries are considered as fixed costs.				

An enterprise (since 1919) engaging in wool and man-made fibre spinning and weaving. Annual capacity outputs are 1,400 t of carded yarn and 2,200,000 m<sup>2</sup> of fabrics on three shifts. Most wool fibres are imported; only 6% of products were sold abroad in 1964. Located favourably with respect to rail and road communication.

I. FIXED CAPITAL (end of 1963)	Original	1963 re-	Capital expenditures in the past years: (Drs. million)			
	purchase value	placement value	1953-54	1955-57	1958-60	1961-63
TOTAL (Drs. million)	3,764	4,280	153	887	90	761
Buildings & land improvements	1,135	1,521	182	415	402	405
Machinery & equipment	2,629	2,759				
Other capital assets	-	-				
<b>Major machinery crucial for determining the overall production capacity:</b>			Calculated average age of fixed assets: <u>8.7</u> years			
- Carded yarn: Spinning machines (3 shifts)			<b>Electric motors:</b>			
- Fabrics: Weaving machines, printing machines, washing machines and finishing machines (3 shifts)			Total installed capacity: <u>3,188</u> KW			
About 70% of machinery and equipment imported.			Of which actually operated in 1963:			
			1st shift <u>100</u> %; 2nd shift <u>83</u> %; 3rd shift <u>39</u> %			
			<b>Technological features:</b>			
			Spinning and weaving of wool and synthetic fibres by the conventional technology. Mechanization and automation are not satisfactory (rated as 50% and 20%, respectively, of the contemporary advanced standards). The assortment of the products is, however, considered appropriate both technologically and commercially.			

II. LABOUR (1963)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:	1,389	470	186
Total <u>2,045</u> persons	(3,171)	(1,070)	(424)
(4,665 thous. manhrs.)			
- Preparation of materials	87	4	1
- Spinning	313	152	93
- Threading	97	62	24
- Weaving	328	190	42
- Sewing	165	-	-
- Dyeing and finishing	140	48	16
- Warehouse	100	-	-
- Ancillary shops	159	14	10
2. Non-factory workers:	237		
(557 thous. manhours)			

Educational background of workers:	Total			
	Tech. High.	Elem.	Low	Others
Univ. or higher	2	6	1	3
Tech. Higher sch.	2	1	1	2
Secondary sch.	43	22	-	13
Primary school	-	-	-	2,186

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1963		5,523 **
- Carded wool yarn (pure)	452 t *	1,654
- Carded wool yarn with more than 67% of wool	461 t *	831
- Carded mixed yarn with less than 66% of wool	208 t *	407
- Fabrics of carded yarn	938,000 m <sup>2</sup>	3,372
- Heavy fabrics of artificial fibre	69,000 m <sup>2</sup>	331
- Other fabrics	778,000 m <sup>2</sup>	863
- Wool blankets and covers	103,000 m <sup>2</sup>	161
- Waste from spinning shop	287 t	112

\* 312 t of carded wool yarn (pure wool) 393 t of carded wool yarn with more than 67% of wool and 200 t of carded mixed yarn with less than 66% of wool were internally used and counted in the value of revenue output. (See also IV 2.)

\*\* Including turnover tax.

#### Capacity output

- Carded yarn	1,400 t	Overall rate of utilization is 89%
- Fabrics	2,200,000 m <sup>2</sup>	

Under-utilization due to insufficient supply of raw materials as well as imbalance between capacities of various processes. The total factory workers required for full capacity operation is estimated at 1,344.

VI. SUPPLEMENT	Future plans:
1) To increase the use of synthetic fibre.	
2) Introduction of new technology in dyeing.	
3) Mechanization of the finishing department.	
4) Replacement of old machines with semi-automatic ones.	
5) Elimination of imbalance between departments.	
1/ Of which Drs. 193 million belongs to the enterprise.	
2/ Gross accumulation includes interests paid.	

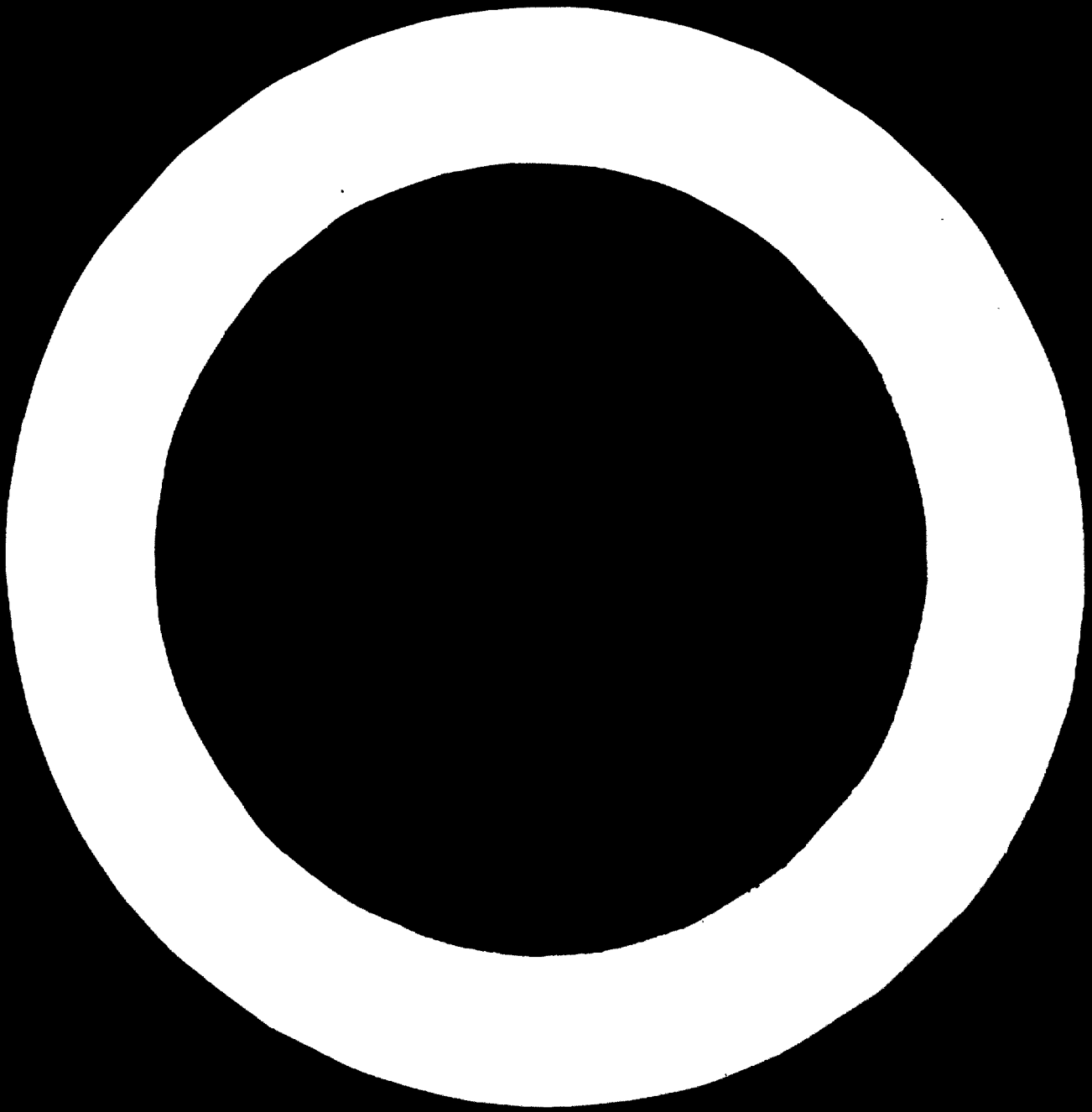
IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. Million)
TOTAL actual consumption 1963		2,890
1. Energy inputs: total		303
- Electricity	6,880 mwh	150
- Brown coal	19,183 t	149
- Liquid fuel	35 t	4
2. Major production materials: total		1,814
- Wool fibre (imported)	758 t	1,529
- Wool fibre (domestic)	77 t	161
- Synthetic fibre	196 t	124
- Carded wool yarn (pure)	312 t *	(1,104)
- Carded wool yarn with more than 67% of wool	393 t *	(702)
- Carded mixed yarn with less than 66% of wool	200 t *	(389)

\* Internally produced and not counted in the total value.

3. Repairs & maintenance: total	63
4. Other material & non-factor service inputs	700

V. VALUE ADDED (1963)	(Drs. Million)
TOTAL (except turnover tax)	1,972
- Wages of factory workers	875
- Salaries of non-factory workers	109
- Depreciation	156
- Interests paid	413
- Other accumulation (Turnover tax)	419 1/2
	(671)

SELECTED COEFFICIENTS	
- Mech. & equip. per factory worker on 1st shift: Drs.	1,990,000
- Value added per employee: Drs.	865,000
- Annual wage per factory worker: Drs.	428,000
- Variable input cost/gross production ratio:	61.7 %
- Gross accumulation/gross production ratio: (at full capacity)	17.1 %
- Level of production at break-even point:	21.0 %
	55 % of the 1963 actual level.



France : 232/243 - (1)

**MAJOR PRODUCTS:** Knitwear and other wearing apparel. Installed annual capacity is about Frs. 5 million of various knitwear and accessories on one shift operation.

**PRODUCING UNIT:** An independent one-establishment enterprise with capital stock Frs. 600,000 and employees 168 as of 1966. Founded in 1923.

**I. FIXED CAPITAL ASSETS** (end of 1966)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( 000 Frs. )	<u>3,270</u>	<u>693</u>
1. Land	1	1
2. Land improvements	-	-
3. Buildings	986	377
4. Other construction works	-	-
5. Machinery & equipment	2,195	293
6. Tools & instruments	-	-
7. Vehicles	88	23
8. Office furniture & fixtures	-	-

**DETAIL OF I.5. (No.)**

	Avg. Age (Yr.)	Oper. Cond.	Depr. rate	1966 replace. value
a. Automatic knitting machines	5	A	21	2,500
b. (Weaving) Machines "Rachel"	30	B	10	200
c. Machines for ready-made clothes	5	C	5	600

\* Annual amortization in 000 Frs.

**II. INVENTORY**

	Actual	Normal
<b>TOTAL VALUE ( 000 Frs. )</b> (end of 1966)	<u>2,282</u>	<u>..</u>
1. Direct production materials	711	-10
2. Other input materials	10	..
3. Work in process	403	..
4. Finished products	1,158	-50

- Normal inventories of finished products 12.4% of annual gross production (9.9%)\*

- Seasonal variations: ..

\* As against the total value of production including tax.

Capacity of electr. motors: 60 KW

Total load, capacity of trucks: - t

(b) Was domestically produced; the rest imported. Average age of machinery is 6.5 years.

**GENERAL COMMENTS:** Transportation, public utilities and community facilities, excellent.

**III. LABOUR** (1966 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	168	-	-
1. Direct production ( m. 15 f. 26 )	141	-	-
Annual total manhours (000)	(252)	( )	( )
a. Supply and warehousing of primary materials.	3	-	-
b. Automatic knitting	16	-	-
c. Weaving by Rachel	10	-	-
d. Dresses making and finishing	80	-	-
e. Others	32	-	-
2. Auxiliary activities ( m. 7 f. 20 )	27	-	-
a. Administrative services	8	-	-
b. Commercial services	19	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or other	Semiv.	Others
2	1	4	161
<b>Management</b>			
2	1	1	1
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	90
<b>Semi-skilled</b>			
-	-	-	26
<b>Unskilled</b>			
-	-	-	25
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	-	3	7
<b>Semi-skilled</b>			
-	-	-	12
<b>Unskilled</b>			
-	-	-	-

- Actual hours worked per annum per direct production worker: 1,787 hrs.

- **Technological features:**  
b) Automatic machines; automation is excellent.

c) Looms, Rachel. Poorly mechanized.

d) 80 dresses making machines with excellent automation.

- Skilled workers in direct production are engaged in supervision of automatic knitting machines and machines for stitching and button fixing. Those in auxiliary activities are engaged in factory management, dispatch, planning and accounting.

IV. ANNUAL PRODUCTION (1966)				V. INTERMEDIATE INPUTS (1966)			
TOTAL VALUE OF PRODUCTION ( 000 Frs. ) <u>5,823</u> (4,677)*				TOTAL VALUE OF CONSUMPTION ( 000 Frs. ) <u>2,646</u>			
		Quantity	Unit		Quantity	Unit	
		Pro-	Value		con-	value	
Product	Unit	duced	(000Fr)		sumed	(000Fr)	
a. Pullovers	000 pcs	300	12	1. <u>Energy &amp; water: total</u>			<u>9</u>
b. Brassières	"	300	2	- Electricity	000 Kwh	95.6	..
c. Dresses	"	50	12	- Ordinary liquid fuel	000 l	112	..
d. Trousers	"	93	10	2. <u>Direct production materials: total</u>			<u>2,511</u>
e. "Grenouillettes"	"	5	8	a. Thread	Ton	49.6	21.25
f. Caps	"	3	3	b. Synthetic thread	"	16.0	23.25
g. Buttons	"	10	4	c. Others	000 Frs	1,085	..
* Value of production before sales tax.				3. <u>Production materials: total</u>			<u>53</u>
<b>CAPACITY OUTPUT:</b> 10% higher than the 1966 actual production level given sufficient demand for the product (the quality, as well as the quantity, of which varies seasonally) and additional 25,000 man-hours. Various brassières can be produced without introducing any change in the present production line.				4. <u>Work performed by sub-contractors ( )</u>			<u>-</u>
Unit value of product: Market value f.o.b. after sales tax.				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>			<u>34</u>
Unit value of material: Market price c.i.f.				6. <u>Material inputs for auxiliary activities</u>			<u>-</u>
- IV(a) to (d) are all partly exported.				7. <u>Non-factor service inputs: total</u>			<u>39</u>
- Thread is domestically produced and delivered by railroad and road.				<b>SELECTED COEFFICIENTS</b>			
VI. VALUE ADDED TOTAL 1966 ( 000 Frs. ) <u>2,031</u>				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Frs. 15,560 (23,400 <sup>1/</sup> )			
1. Wages & salaries (before income tax)		1,685		- Value added per employee: Frs. 12,089.			
- Employees in direct production		{..}		- Annual wage per employee in direct production: Frs. 10,030 <sup>2/</sup>			
- Other employees		{..}		- Variable input costs/gross production ratio: 83.8% <sup>3/</sup>			
2. Other expenditures for employees		-		- Gross profit/gross production ratio: 4.4%			(at full capacity 5.5%)
3. Annual depreciation allowance		140		- Level of production at break-even point is approximately 73% of the 1966 actual level.			
4. Rental paid		-					
5. Sales & other indirect taxes (less subsidies) (not included in total) [1,146]		-					
6. Other gross business income (before income tax)		206					
VII. EXPANSION: HISTORY & PLAN				2. <u>Future Plan</u>			
1. <u>Recent Expansion</u>		Gross acquisition	Scrapped or sold	a. Investment proposed for the period 1967 to 1970			
From 1965 to 1966				Total value ( 000 Frs. )		<u>400</u>	
a. Total Investment ( 000 Frs. )		70.6	-	Of which: - Mach. & equipment		75	%
- Land		-		- Land improv. & bldg.		25	
- Land improvements		-		- Land		-	
- Buildings		-		- Others		-	
- Other construction work		-		b. Net increase in no. of employees envisaged for the same period:			
- Machinery & equipment		61.8		- Direct production:		9	
- Tools & instruments		.8		- Auxiliary:		1	
- Vehicles		-		c. Purposes: Introduction of knit articles and overhauling part of existing shops.			
- Office furniture & fixtures		8.0					
b. Corresponding increase:		From 1965	to 1966				
In no. of employees		152	168				
In annual gross production (Fr. million) (incl. tax)		4.8	5.8				
VIII. SUPPLEMENT							
1/ The numerator is the 1966 replacement value of the machines itemized in I.							
2/ Total wages and salaries divided by total number of employees.							
3/ 80% of wages and salaries are included in variable costs.							

**MAJOR PRODUCTS:** Wearing apparel. Annual capacity output is about Fr. 35 million worth of various wearing apparel on one shift operation.

**REPORTING UNIT:** An enterprise with five establishments with capital stock Fr. four million and employees 1,202 as of 1964. Founded in 1958.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE ( Frs. 000 )</b>	<u>9,215</u>	<u>3,821</u>
1. Land	140	140
2. Land improvements	2,703	1,109
3. Buildings	1,937	1,411
4. Other construction works	-	-
5. Machinery & equipment	3,443	717
6. Tools & instruments	-	-
7. Vehicles	193	121
8. Office furniture & fixtures	799	125

	Avg. Age (Yr.)	Oper. Cond.	1964 replace. value
<b>DETAIL OF I.5 (No.)</b>			
a. Sewing equipment	3	A	4
b. Ironing apparatus	3	A	19
c. Cutting equipment	2	A	6

\* Price per unit set.

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE ( Frs. 000 )</b>	<u>11,502</u>	.. g
1. Direct production materials	5,710	
2. Other input materials	-	
3. Work in process	1,413	
4. Finished products	4,380	

- Actual inventories of finished products 12.7% of annual gross production (10.5%#)  
 - Seasonal variations: ..  
 \* As compared with annual gross production including sales tax.

Capacity of electr. motors: .. KW

Total load, capacity of trucks: 1.2 t

(a) was partly imported; and (c) was imported.

Average age of machinery itemised is 2.8 years.

The enterprise is still under the initial installation / expansion process as of 1964 (see VII).

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	<u>1,202</u>	-	-
1. Direct production ( m. 53 f. 980 )	<u>1,033</u>	-	-
Annual total manhours (000)	(1,718)	( )	( )
a. Preparation	34		
b. Supply	13		
c. Collection and reproduction	54		
d. Warehouse for materials and finished products	46		
e. Sewing by machine	644		
f. Apprentices	242		
2. Auxiliary activities ( m. 66 f. 103 )	<u>169</u>	-	-
a. Administration	79		
b. Factory control	54		
c. Material handling and maintenance	36		

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Br. High sch. or equiv.	Other
13	3	1186
<b>Management</b>		
-	13	3
<b>Direct Production</b>		
-	-	628
-	-	221
-	-	184
<b>Auxiliary Activities</b>		
-	-	115
-	-	38
-	-	-

- Average working hours per annum per direct production worker : 1,660 hours.

- Average degree of mechanisation is estimated as about 80%.

- Skilled workers in direct production are those engaged in cutting, sewing, stitching, ironing and finishing.

In auxiliary activities they are engaged in research and planning on methods and measurements.

France : 243 - ( 1 )

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( Fr. 000 ) <u>34,492</u>				TOTAL VALUE OF CONSUMPTION ( Fr. 000 ) <u>21,403</u>			
<u>Product</u>	<u>Unit</u>	<u>Quantity Pro-duced</u>	<u>Unit Value (Fr.000)</u>	<u>1. ENERGY &amp; WATER: total</u>	<u>Quantity Unit con- sumed ( )</u>	<u>Unit value</u>	<u>Unit value ( )</u>
a. Skirts	000 pos.	17.5	8.8	- Electricity	000 KWH	689.5	160.00
b. Dresses	"	372.5	12.8	- Liquid fuel	hectolitre.	4,044	15.65
c. Men's and boys' shirts	"	1,058.7	7.2	- Water	m <sup>3</sup>	6,073	.45
d. Women's and children's nightgowns	"	460.6	8.4	<u>2. Direct production materials: total</u>		<u>21,496</u>	
e. Women's and children's smocks	"	1,064.6	8.0	a. Woolen and cotton fabrics		} 000 Fr. 21,496	..
f. Coats	"	5.0	96.0	b. Synthetic and silk fabrics			
g. Trousers	"	104.5	10.4				
h. Suits	"	4.6	96.0	<u>3. Packaging materials: total</u>		<u>261</u>	
i. Pajamas	"	160.2	8.8	(paper and paper products)			
j. Deshabilles	"	22.3	24.0	<u>4. Work performed by sub-contractors ( )</u>		<u>—</u>	
k. Robes	"	10.1	24.0	<u>5. Repairs &amp; maintenance (materials &amp; services purchased)</u>		<u>616</u>	
l. Blouses	"	30.0	6.4	<u>6. Material inputs for auxiliary activities</u>		<u>219</u>	
m. Others	000 Fr.	5,217	..	<u>7. Non-factor service inputs: total</u>		<u>635</u>	
n. Scrap fabric	ton	157	..	Transportation, insurance and storage (purchased separately) Fr. 505,000			
<b>CAPACITY OUTPUT:</b>				<b>SELECTED COEFFICIENTS</b>			
Same as the 1964 actual production level; constrained by the defective arrangement of reproduction, ironing and dispatch sections, the improvement of which would bring about 10% increase in output.				- Mech., equip., instruments & tools per employee in direct production on 1st shift: Frs. 3,330			
Unit value of product: Market value f.o.b. before sales tax				- Value added per employee: Frs. 9,230			
Unit value of material: Market price o.i.f.				- Annual wage per employee in direct production: Frs. 3,515			
- IV (a) to (e) are partly exported. For (f) to (l) less than 10% is exported.				- Variable input costs/gross production ratio: 74.1%			
- Direct production materials are of domestic origin and transported by railroad and road.				- Gross profit/gross production ratio: 1.2%			
- Level of production at break-even point is approximately 95 % of the 1964 actual level.							
<b>VI. VALUE ADDED TOTAL 1964 ( Frs. 000 ) <u>11,069</u></b>							
1. Wages & salaries (before income tax)							
- Employees in direct production				3,630			
- Other employees				5,741			
2. Other expenditures for employees				217			
3. Annual depreciation allowance				1,054			
4. Rental paid (buildings)				31			
5. Sales & other indirect taxes (less subsidies)(not included in total)				[7,370]			
6. Other gross business income (before income tax)				416			
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>2. Future Plan</b>			
1. <u>Recent Expansion</u>				a. Investment proposed for the period 1964 to 1967			
From 1962 to 1964				Total value (Frs. million) <u>8</u>			
a. Total Investment ( Frs. 000 ) <u>4,962</u>				Of which: - Mech. & equipment			
- Land				25 %			
- Land improvements				- Land improv. & bldg.			
- Buildings				75			
- Other construction work				- Land			
- Machinery & equipment				-			
- Tools & instruments				- Others			
- Vehicles				-			
- Office furniture & fixtures				-			
b. Corresponding increase: <u>From 1962 to 1964</u>				b. Net increase in no. of employees envisaged for the same period:			
In no. of employees				- Direct production: 300			
In annual gross production (incl. taxes) 35				- Auxiliary: 300			
(Frs. million) 42				c. Purposes: Selective expansion of existing capacity concentrating on blouses and linen goods and dispatch.			
<b>VIII. SUPPLEMENT</b>							



**MAJOR PRODUCTS:** Wearing apparel : Installed annual capacity is 320,000 pieces of coats, jackets, suits, skirts and dresses on one-shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with capital stock Fr. 2 million, and employees 505 as of 1965. Founded in 1927.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( Frs. 000 )	<u>4,673</u>	<u>2,279</u>
1. Land	76	76
2. Land improvements	-	-
3. Buildings	1,899	1,433
4. Other construction works	-	-
5. Machinery & equipment	2,261	602
6. Tools & instruments	-	-
7. Vehicles	130	64
8. Office furniture & fixtures	307	104

**DETAIL OF I.5 (No.)**

	Total* Bk value bef. depr.	Avr. Age (Yr.)	Oper. rate Cond.	Depr. rate (%)
a. Presses	20	1	A	15
b. Sewing machines	2	1-10	"	"
c. Special machines	6	1-5	"	"
d. Cutting machines	1.5	1-5	"	"
e. Pressing machines	34	1	"	"

\* Price per unit est.

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Frs. 000 )	<u>3,500</u>	<u>3,500</u>
1. Direct production materials	978	-
2. Other input materials	-	-
3. Work in process	577	-
4. Finished products	1,945	-

- Actual inventories of finished products 14.3% of annual gross production (12.0%\*)

- Seasonal variations: ..

\* as against annual gross production including value added tax. The level at the end of 1964 was about Frs. 1,000,000

Capacity of electr. motors: .. KW

Total load, capacity of trucks: 4 t

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> (m. 1)	<u>505</u>	<u>-</u>	<u>-</u>
1. Direct production ( f. 352 )	<u>353</u>	<u>-</u>	<u>-</u>
Annual total manhours (000)	(583)	( )	( )
a. Preparation	5	-	-
b. Tailoring (cutting)	33	-	-
c. Assembly - sewing	230	-	-
d. Cutting	58	-	-
e. Pressing	9	-	-
f. Finishing	18	-	-
2. Auxiliary activities ( m. 56 / f. 96 )	<u>152</u>	<u>-</u>	<u>-</u>
a. Administrative and commercial services	33	-	-
b. Warehouse and dispatch	15	-	-
c. Technical direction and control	26	-	-
d. Study of method and model making	9	-	-
e. Supply	7	-	-
f. Chocking and inspection	15	-	-
g. Material handling	25	-	-
h. Tracing	5	-	-
i. Maintenance	17	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

	Univ. or higher		Sr. High sch. or equiv.		Other
	Engi-ners	Other	equiv.	Other	
<b>TOTAL</b>	4	4	32	465	
<b>Management</b>	4	4	12	-	
<b>Direct Production</b>	-	-	-	53	
Skilled	-	-	-	300	
Semi-skilled	-	-	-	-	
Unskilled	-	-	-	-	
<b>Auxiliary Activities</b>	-	-	20	30	
Skilled	-	-	-	46	
Semi-skilled	-	-	-	-	
Unskilled	-	-	-	36	

- Actual hours worked per annum per direct production worker: 1,652 hours.

- Proportion of motors occupied 80% on 1st shift.

- Degree of mechanisation is excellent in (b) and (e), and excellent to fair in (c) and (d).

- Skilled workers in direct production are mainly engaged in finishing.

Those in auxiliary activities are engaged in creation of models, tracing and checking work flows and machine maintenances.

France : 243 - ( 2 )

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION ( Fr. 000 ) <u>13,630</u>				TOTAL VALUE OF CONSUMPTION ( Fr. 000 ) <u>7,262</u>			
<u>Product</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Value (Fr.000)</u>	<u>1. Energy &amp; water: total</u>	<u>Quantity</u>	<u>Unit value</u>	
		<u>Produced</u>			<u>Unit</u>	<u>summed (Fr.)</u>	
a. Overcoats	000 pos.	71.5	66.72	- Electricity	000 KWH	381.8	123
b. Jackets	"	109.0	50.55	- Miscellaneous	000 Fr.	31	..
c. Suits	"	19.6	77.19	<u>2. Direct production materials: total</u>			<u>5,825</u>
d. Skirts	"	43.6	35.82	a. Fabrics	000 met.	305	16,140
e. Dresses	"	6.6	41.61	b. Linings	000 met.	225	3,940
<b>CAPACITY OUTPUT:</b>				<u>3. Packaging materials: total</u> <u>95</u>			
20% higher than the 1965 actual production level, given sufficient demand for the products and 20% additional man-hours on the 1st shift.				<u>4. Work performed by sub-contractors ( )</u> <u>—</u>			
Unit value of product: Market value f.o.b. before sales tax				<u>5. Repairs &amp; maintenance (materials &amp; services purchased)</u> <u>113</u>			
Unit value of material: Market price o.i.f. (partial)				<u>6. Material inputs for auxiliary activities</u> <u>14</u>			
- IV.(a) to (e) are all partly exported.				<u>7. Non-factor service inputs: total</u> <u>1,137</u>			
- Fabrics and linings are both domestically produced but has a significant amount of import contents.				Of which transportation, insurance and storage purchased separately Fr. 162,000			
They are delivered by railroad.							
<b>VI. VALUE ADDED TOTAL 1965 ( Frs. 000 ) <u>6,363</u></b>				<b>SELECTED COMMENTARY</b>			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Frs. 6,405			
- Employees in direct production 2,096				- Value added per employee: Frs. 12,279			
- Other employees 3,361				- Annual wage per employee in direct production: Frs. 5,938			
2. Other expenditures for employees 117				- Variable input costs/gross production ratio: 59.2%			
3. Annual depreciation allowance 430				- Gross profit/gross production ratio: 1.9%			
4. Rental paid 104				- (at full capacity: 8.4% ) 1/			
5. Sales & other indirect taxes (less subsidies)(not included in total) [2,565]				- Level of production at break-even point is approximately 95 % of the 1965 actual level.			
6. Other gross business income (before income tax) 260							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>2. Future Plan: None</b>			
1. <u>Recent Expansion</u>				a. Investment proposed for the period 19 to 19			
From 1960 to 1963				Total value ( ) _____ \$			
a. Total Investment ( Frs. 000 ) <u>2,162</u>				Of which: - Mach. & equipment _____ \$			
- Land -				- Land improv. & bldg. _____			
- Land improvements -				- Land _____			
- Buildings 1,124				- Others _____			
- Other construction work 822				b. Net increase in no. of employees envisaged for the same period:			
- Machinery & equipment -				- Direct production: _____			
- Tools & instruments 102				- Auxiliary: _____			
- Vehicles 113				c. Purposes:			
- Office furniture & fixtures -							
b. Corresponding increase: <u>From 1960 to 1963</u>							
In no. of employees 377 419							
In annual gross production ( Frs. million)(incl. tax) 10.0 15.0							
<b>VIII. SUPPLEMENT</b>							
1/ From 1964 to 1965 the demand for the products declined sharply and the production was curtailed from 271,000 pieces in 1964 to 250,000 in 1965. The profit / production ratio in 1964 was actually close to 12%, reflecting factors diverging from the behaviour of variable and fixed costs as assumed in this study.							

**MAJOR PRODUCTS:** Nylon and cotton knitwear (socks, vests, drawers etc.) Capable of knitting some 140 tons of nylon and cotton yarn annually producing Rs. 11 million worth knitwear. Mostly operated with two shifts (only crimping and stores have three shifts).

**REPORTING UNIT:** An independent one-establishment enterprise with total assets of Rs. 9 million (net worth Rs. 2 million) and employees 480 as of 1965. Founded in 1961.

I. FIXED CAPITAL ASSETS (end of year)		1964		1965		II. INVENTORIES (end of 1965)		
		After deprec.	After deprec.	After deprec.	After deprec.	Actual	Normal	
<b>TOTAL BOOK VALUE</b>	(Rs. million)	3.35		2.45		<b>TOTAL VALUE (Rs. million)</b>	5.41	-13 %
1. Land		-		-		1. Direct production materials	4.01	- 1
2. Land improvements		-		-		2. Other input materials	Negligible ..	
3. Buildings (rented)		-		-		3. Work in process		
4. Other construction works		-		-		4. Finished products	1.40	-47
5. Machinery & equipment		2.90		2.09		- Normal inventories of finished products 6.4 % of annual gross production		
6. Tools & instruments						- Seasonal variations: None		
7. Vehicles		.08		.05				
8. Office furniture & fixtures		.37		.31				
		<b>Total Bk value</b>	<b>Avg. Age</b>	<b>Depr. Oper. rate</b>	<b>196 replace value</b>			
<b>DETAIL OF I.5 (No.)</b>		<b>After deprec.</b>	<b>(Yr.)</b>	<b>Cond. (%)</b>				
a. Knitting machines	(40)	2.80	4-5	A 15	3.08	Capacity of electr. motors: 70 KW		
b. Linking machines	(13)					Total load, capacity of trucks: - t		
c. Stitching machine	(1)					(d), (g) and (h) were in part		
d. Hand preessing machines	(400)					imported, in part: home made. The		
e. Overlocking machinee	(800)					rest were imported.		
f. Interlocking machines	(600)							
g. Circular machines	(20)							
h. Other equipment								
						<b>GENERAL CONDITIONS:</b>		
						Transport and public utilities, excellent; community facilities, fair.		

III. LABOUR (1965 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				
					Univ. or higher	Sr. High sch. or equiv.	Other	Others	
<b>TOTAL EMPLOYED</b>	<u>480</u>	326	129	25					
1. Direct production ( m. 336 )	f. 54	255	116	19					
Annual total manhours (000)		(503)	(187)	(82)					
a. Knitting department		98	31	-					- Actual hours worked per annum per direct production worker: 1,979 hours.
b. Linking department		31	22	-					- Proportion of motors occupied: 95% for each of the three shifts.
c. Preessing department		27	12	-					- <b>Technological features:</b>
d. Dyeing department		13	8	-					Principal operations
e. Printing department		11	3	-					employ excellently mech-
f. Crimping department		31	17	13					anised and highly automated
g. Packing + despatching		27	13	-					equipment. The rest are:
h. Stores		17	10	6					(o): Moderately mechanised
2. Auxiliary activities ( m. 84 )	f. 6	71	13	6					and automated.
Technical and managerial department		71	13	6					(g): Fairly to poorly mech-
					<b>EDUCATIONAL BACKGROUND (No. of employees)</b> Univ. or higher: 1 Sr. High sch. or equiv.: 43 Other: 7 Others: 429 <b>Management</b> 1 4 3 7 <b>Direct Production</b> Skilled: - - 21 53 Semi-skilled: - - 7 102 Unskilled: - - - 207 <b>Auxiliary Activities</b> Skilled: - 3 5 3 Semi-skilled: - - 7 10 Unskilled: - - - 47				
					- <b>Skilled workers:</b> On direct production: knitters, etchers, press-men, dyers, printers, dispatchers, etc. Those in auxiliary services are: administrative assistants, purchase, sales, stores and accounts assistants, etc.				

IX. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION (Rs. million) <u>11.63</u>				TOTAL VALUE OF CONSUMPTION (Rs. million) <u>8.38</u>			
Product	Unit	Quantity Produced	Unit Value (Rs.)		Quantity consumed	Unit value (Rs.)	
a. Nylon socks	000 pairs	2,970.0	3,350	1. Energy & water: total			.09
b. Cotton socks	"	254.0	250	- Electricity	000 KWH	811	80.00
c. Cotton vests	000 Nos.	347.0	1,800	- Water	000 litre	17,150	.38
d. Cotton drawers	"	10.5	1,500	- Petroleum	000 Rs.	10	..
e. Nylon drawers	"	53.0	4,500	- Other fuel oils	000 Rs.	6	..
f. Others	Rs. million	0.16	..	2. Direct production materials: total			7.85
				a. Nylon yarn	Kg.	70,503	100
				b. Cotton yarn	"	65,322	10
				c. Colours	Rs.	49,000	..
				d. Others	"	97,000	..
<b>CAPACITY OUTPUT:</b>				3. Packaging materials: total			.28
No increase from the 1965 actual production level.				Metel containers Rs. 276,000			
Product-mix is flexible.				4. Work performed by sub-contractors ( )			-
Unit value of product: Market value f.o.b. before sales tax				5. Repairs & maintenance (materials & services purchased)			.03
Unit value of material: Market price c.i.f.				6. Material inputs for auxiliary activities			.08
- Some colours and other materials than nylon and cotton yarn are imported. All other materials are domestic - ally produced, but nylon yarn contains a significant amount of import content. Freight costs 1% for nylon yarn and 10% for cotton yarn of c.i.f. value. Delivery by railroad and road (for yarns) and also by sea (for others)				Stationery, printing and other auxiliary inputs.			
				7. Non-factor services inputs: total			.05
				Transportation, insurance and storage purchased separately.			.02
<b>VI. VALUE ADDED</b>				<b>ANALYSED COST/CLIMATE</b>			
TOTAL 1965 (Rs. million) <u>3.25</u>				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 11,372 (Rs. 12,470 1/)			
1. Wages & salaries (before income tax)		1.11		- Value added per employee: Rs. 6,770			
- Employees in direct production		(..)		- Annual wage per employee: Rs. 2,312 2/			
- Other employees		(..)		- Variable input costs/gross production ratio: 73.8% 3/			
2. Other expenditures for employees		.70		- Gross profit/gross production ratio: 3.6%			
3. Annual depreciation allowance		.90		- Level of production at break-even point is approximately 86 % of the 1965 actual level.			
4. Rental paid (buildings)		.12					
5. Sales & other indirect taxes (less subsidies)		-					
6. Other gross business income (before income tax)		.42					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>2. Future Plan : Nons.</b>			
1. Recent Expansion				a. Investment proposed for the period 19 to 19			
From 1963 to 1965				Total value ( )			
e. Total Investment (Rs. million)		1.35	.42	Of which: - Mach. & equipment			\$
- Land		-	-	- Land improv. & bldg.			
- Land improvements		-	-	- Land			
- Buildings		-	-	- Others			
- Other construction work		.03	-	b. Net increase in no. of employees envisaged for the same period:			
- Machinery & equipment		1.26 4/	.42	- Direct production:			
- Tools & instruments		-	-	- Auxiliary:			
- Vehicles		-	-	c. Purposes:			
- Office furniture & fixtures		.06	-				
b. Corresponding increase:		From 1963	to 1965				
In no. of employees		400	480				
In annual gross production			+6%				
<b>VIII. SUPPLEMENT</b>				Structure of liquid assets and short-term liabilities (end of 1965, Rs. million).			
				Accounts receivable 0.20; loans and advances 1.09; Taxes payable 0.13; accounts payable 1.18			
				short term loans from commercial banks 4.69; short-term loans from directors and other parties 1.30.			
				1/ The numerator is the 1965 replacement value.			
				2/ Total wages and salaries divided by the total number of employees.			
				3/ Two thirds of wages and salaries are regarded as variable cost.			
				4/ Of which about 15% is for simple repair and maintenance.			

**MAJOR PRODUCTS:** Knitting mills (stockinet, underwear, stockings, socks, etc.) capable of producing annually 130 - 140 t or Rs. 1.8 million worth of knittings on partial three shifts (only knitting shop works three shifts).

**REPORTING UNIT:** An independent one-establishment enterprise with total assets of Rs. one million (net worth Rs. 0.1 million) and employees 121 as of 1964. Founded in 1928. The enterprise is a partnership concern, and the net worth is the investment by the partners.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( 000 Rs. )	211	114
1. Land	1	1
2. Land improvements	-	-
3. Buildings	65	34
4. Other construction works	-	-
5. Machinery & equipment	97	47
6. Tools & instruments	-	-
7. Vehicles	48	32
8. Office furniture & fixtures	-	-

**DETAIL OF I.5 (No.)**

	Total bk. value	Avg. Age (Yr.)	Depr. rate (%)	1964 replace value
a. Knitting machines (50)	97	32*	B	9
b. Stitching machines (30)				
c. Pressing machine (1)				
d. Calenders (3)				
e. Kier boiler (1)				
f. Steam boiler (1)				
g. Bleaching winch (1)				
h. Drying machine (1)				

\* The first substantial expansion took place in 1933/34, which doubled the originally installed capacity.

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> ( 000 Rs. )	697	+ 20 %
1. Direct production materials	163	+ 17
2. Other input materials	-	..
3. Work in process	393	+ 25
4. Finished products	141	+ 9

- Normal inventories of finished products 13.0 % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 36 KW

Total load, capacity of trucks: - t

Only (b) and (g) were domestically produced; the others were imported.

**GENERAL CONDITIONS:** Transportation and public utilities, excellent. Community facilities, poor.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	121		
1. Direct production (all male)	54	13	6
Annual total manhours (000)	(195.0)	(14.4)	(14.4)
a. Knitting	6	6	6
b. Stitching	23	-	-
c. Cutting	10	-	-
d. Pressing	8	-	-
e. Bleaching	7	7	-
2. Auxiliary activities (all male)	48	-	-
a. Technical and managerial control	9	-	-
b. Other shops and stores	39	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other
1	4	4
41	10	22
4	-	35

- Actual hours worked per annum per direct production worker: 3,066 hours.

- Proportion of motors occupied 100 % on the first shift, 12 % on the second and third shifts.

- **Technological features:**

a) Knitting of yarn. Excellent mechanization and fair automation.

b) Stitching of edges. Fairly mechanized.

c) Cutting of garment. Poorly mechanized.

d) Pressing of finished goods. Poor mechanization!

- **Skilled workers** in direct production are knitters, stitchers, pressmen and boiler attendants.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( 000 Rs. ) <u>1,182</u>				TOTAL VALUE OF CONSUMPTION ( 000 Rs. ) <u>994</u>			
Product	Unit	Quantity Produced	Unit Value	1. Energy & water: total	Quantity consumed	Unit value (Rs.)	
a. Stockinet	kg	53,431	7.10	- Electricity	000 kWh	63.3	170.0
b. Underwear	dozen	83,238	9.00	- Coal	ton	119.0	50.5
c. Stockings and socks	dozen prs	11,400	4.02	- Water			negligible
d. Others	000 Rs.	8	..	2. Direct production materials: total			<u>900</u>
<b>CAPACITY OUTPUT:</b>				a. Cotton yarn	ton	163	5,350
50% higher than the 1964 actual production level with sufficient demand and additional manhours of 97,500 on the first shift and 7,200 each on the second and third shifts.				b. Caustic soda	"	4	750
The proportions of the production of (a) and (b) mutually changeable.				c. Soda ash	"	2	500
Unit value of product: market value f.o.b. before sales tax				d. Bleaching powder	"	1	2,000
Unit value of material: market price c.i.f.				e. Sulphuric acid	"	2	500
(2): (f) has a large amount of import content.				f. Coloure	"	1	12,000
All the rest are of domestic origins.				g. Metal	"	.8	5,000
				h. Hydrogen peroxide	"	.6	3,500
				i. Others	000 Rs.	3	..
				3. Packaging materials: total			<u>14</u>
				4. Work performed by sub-contractors (			<u>-</u>
				5. Repairs & maintenance (materials & services purchased)			<u>18</u>
				6. Material inputs for auxiliary activities			<u>15</u>
				7. Non-factor service inputs: total			<u>30</u>
<b>VII. VALUE ADDED TOTAL 1964 ( 000 Rs. ) <u>188</u></b>				<b>SELECTED COEFFICIENTS</b> in 1964 replacement value			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools/per employee in direct production on 1st shift:			Rs. 3,700
- Employees in direct production		117		- Value added per employee:			Rs. 1,554
- Other employees		18		- Annual wage per employee in direct production:			Rs. 1,603
2. Other expenditures for employees		7		- Variable input costs/gross production ratio:			88.7%
3. Annual depreciation allowances		17		- Gross profit/gross production ratio:			2.5%
4. Rental paid		-		- (at full capacity):			5.4%
5. Sales & other indirect taxes (less subsidies)(not included in total)		[ 16 ]		- Level of production at break-even point is approximately			79% of the 1964 actual level.
6. Other gross business income (before income tax)		29					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. Recent Expansion				2. Future Plan : None			
a. Total Investment ( 000 Rs. )		112	27	a. Investment proposed for the period 19 to 19			
- Land		-	-	Total value ( )			\$
- Land improvements		-	-	Of which: - Mach. & equipment			
- Buildings		13 1/2	3	- Land improv. & bldg.			
- Other construction work		-	-	- Land			
- Machinery & equipment		50 1/2	24	- Others			
- Tools & instruments		1	-	b. Net increase in no. of employees envisaged for the same period:			
- Vehicles		44 1/2	-	- Direct production:			
- Office furniture & fixtures		4	-	- Auxiliary:			
b. Corresponding increase:				c. Purposes:			
In no. of employees		85	121				
In annual gross production ( 000 Rs. )		762	1,182				
<b>VIII. SUPPLEMENT</b>				<b>Structure of liquid assets and current liabilities (end of 1964; 000 Rs.)</b>			
Cash on hand and in bank		8	Accounts payable			420	
Accounts receivable		215	Short-term loans from commercial banks			510	
1/3 of buildings, 10% of machinery, 2% of vehicles, and 1% of furniture and fixtures were for simple repair and maintenance.							

**MAJOR PRODUCTS:** Stockings and tights. Capable of knitting about 150 tone of synthetic-fibre yarns per annum on the basis of partial 3-shift operation.

**REPORTING UNIT:** Branch of a 2-establishment enterprise. The other branch (stocking manufacturer) is located abroad, on which data is unavailable. This branch, founded in 1961, has total assets IL 3.5 million and employees 120 as of 1964.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec. *
<b>TOTAL BOOK VALUE ( 000 IL )</b>	1,354	899
1. Land (1,000 sq.m.)	-	(rented)
2. Land improvements	-	(rented)
3. Buildings (1,800 sq.m.)	30	20
4. Other construction works	1,200	800
5. Machinery & equipment	-	-
6. Tools & instruments	24	19
7. Vehicles	100	60
8. Office furniture & fixtures	-	-

\* Revalued in 1964

DETAIL OF I.5 (No.)	Total Bk. value	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Knitting machines	1,000	5	A	10	1,725
b. Sewing machines	16	5	A	10	29
c. Controlling machine (scrutator)	22	5	A	10	39

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE ( 000 IL )</b>	319	-11 %
1. Direct production materials	113	-30
2. Other input materials	16	-
3. Work in process	170	-
4. Finished products	20	-

- Normal inventories of finished products 8.5 % of annual gross production

- Seasonal variations: None.

Capacity of electr. motors: 75 KW

Total load, capacity of trucks: 4 t

All the itemized machines were imported; (a) from several different Italian firms.

**EXTERNAL CONDITIONS:** Transportation, public utilities and community facilities, all excellent.

**III. LABOUR (1964 average)**

	(1964 average)			EDUCATIONAL BACKGROUND (No. of employees)			
	1st shift	2nd shift	3rd shift	Univ. or higher	Sr. High sch. or equiv.	Other	Others
<b>TOTAL EMPLOYED</b> $\frac{120}{m. 30}$ $\frac{f. 70}{}$	103	11	6				
1. Direct production (Annual total manhours (000))	83	11	6				
	(227)	(24)	(13)				
a. Knitting	6	6	6				
b. Sewing	12	-	-				
c. Control	12	-	-				
d. Dyeing and printing	4	5	-				
e. Classification	20	-	-				
f. Packaging	8	-	-				
g. Miscellaneous	21	-	-				
2. Auxiliary activities ( $\frac{m. 10}{f. 10}$ )	20	-	-				
				Management			
				2	1	-	-
				<b>Direct Production</b>			
				Skilled		2	2
				Semi-skilled		-	18
				Unskilled		-	78
				<b>Auxiliary Activities</b>			
				Skilled		-	2
				Semi-skilled		-	-
				Unskilled		-	15

- Average working hours per annum per direct production worker: 2,640 hrs.

- Proportion of motors occupied: 80-90% on the first shift; about 70% on the 2nd and the 3rd shifts.

- Conventional processes are employed. Degree of mechanization is fair in (a) and (b) and poor in (c) and (d). Conventional manual work in (e) and (f). Automation is rated as poor for (a), (b), (c) and (d), and non-existent in (e) and (f).

<b>IV. ANNUAL PRODUCTION (1964)</b>		<b>V. INTERMEDIATE INPUTS (1964)</b>	
TOTAL VALUE OF PRODUCTION ( 000 IL ) <u>2,356</u>		TOTAL VALUE OF CONSUMPTION ( 000 IL ) <u>1,435</u>	
	Quantity Unit Pro- Value Amount (000 IL)		Quantity Unit con- Unit summed value ( IL )
a. Women's nylon stockings	000 doz. 135 9.5	<b>1. Energy &amp; water: total</b>	<u>17</u>
a*. Women's nylon stockings (intrafirm transfer)**	" " 105 6.0	- Electricity	000 kwh 540 30
b. Stretch stockings (all intrafirm transfer)	" " 33 12	- Water	000 cu.m. 3 300
c. Tights (all intrafirm transfer)	" " 2 25	<b>2. Direct production materials: total</b>	<u>870</u>
** The intrafirm transfers are counted in the total value of production at the indicated price.		a. Nylon yarn	ton 55 ..
		b. Synthetic fibre stretch yarn	ton 65 ..
		c. Sewing yarn	kg. 50 ..
		d. Cotton yarn	ton 1 ..
<b>CAPACITY OUTPUT:</b> 20% higher than the 1964 actual production level, given sufficient supply of labour (additional 5% on 1st shift, 70% on the second and 80% on the 3rd). The capacity of knitting shop is presently disproportionately small in relation to the rest of the production facilities.		<b>3. Packaging materials: total</b>	<u>197</u>
Unit value of product: Market value f.o.b. before sales tax Unit value of material: Market price c.i.f.		- Board sheets	000 pcs. 3,300 23
- Women's nylon stockings and stretch stockings are partly exported.		- Board containers	" 27,500 20
- Nylon yarn, synthetic fibre stretch yarn and sewing yarn directly imported.		- Polyethylene bags	" 3,300 20
		<b>4. Work performed by sub-contractors (see VIII )</b>	<u>10</u>
		<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>	<u>161</u>
		<b>6. Material inputs for auxiliary activities</b>	<u>45</u>
		<b>7. Non-factor service inputs: total</b>	<u>135</u>
<b>VI. VALUE ADDED TOTAL 1964 ( 000 IL ) <u>921</u></b>		<b>SELECTED COEFFICIENTS</b>	
1. Wages & salaries (before income tax)	444	- Mach., equip., instruments & tools per employee in direct production on 1st shift: IL 14,458 <sup>1/</sup>	
- Employees in direct production	49	- Value added per employee: IL 7,675	
- Other employees	118	- Annual wage per employee in direct production: IL 4,440	
2. Other expenditures for employees	130	- Variable input costs/gross production ratio: 65%	
3. Annual depreciation allowance	30	- Gross profit/gross production ratio: 6.3% (at full capacity: 11%)	
4. Rental paid (land and buildings)	[ .. ]	- Level of production at break-even point is approximately 81 % of the 1964 actual level.	
5. Sales & other indirect taxes (less subsidies)	150		
6. Other gross business income (before income tax)			
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>		<b>2. Future Plan</b>	
1. Recent Expansion : None	Gross Scrapped acqui- or sition sold	a. Investment proposed for the period 19 66 to 19 67	
From 19 to 19		Total value ( IL ) <u>50,000</u>	
a. Total Investment ( )		Of which: - Mach. & equipment 100 %	
- Land		- Land improv. & bldg. -	
- Land improvements		- Land -	
- Buildings		- Others -	
- Other construction work		b. Net increase in no. of employees envisaged for the same period:	
- Machinery & equipment		- Direct production: 4% increase	
- Tools & instruments		- Auxiliary: 1% increase	
- Vehicles		c. Purposes: Largely balanced expansion of the existing capacity in the same location.	
- Office furniture & fixtures			
b. Corresponding increase : From 19 to 19			
In no. of employees			
In annual gross production			
<b>VIII. SUPPLEMENT</b>			
		Work performed by sub-contractor: Dyeing is partly done by a sub-contractor under a short-term contract.	
1/ Would be some 70% higher in terms of the 1964 replacement value.			



**MAJOR PRODUCTS:** Sweaters and sports shirts (knitting and sewing). The establishment is operating close to its capacity in 1964, which is about 65,000 of sweaters and 36,000 of sports shirts on one shift (the full-fashion knitting shop operates two shifts).

**REPORTING UNIT:** A one-establishment enterprise with total assets about ¥ 100 million and employees 109 as of 1964. Founded in 1955.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (¥ million)	<u>76.5</u>	<u>50.4</u>
1. Land (1,000 m <sup>2</sup> )	5.3	5.3
2. Land improvements	-	-
3. Buildings (total floor area, 200 m <sup>2</sup> )	21.0	18.1
4. Other construction works	-	-
5. Machinery & equipment	43.0	26.3
6. Tools & instruments	4.0	1.3
7. Vehicles	3.2	1.4
8. Office furniture & fixtures	-	-

DETAIL OF 1,5 (No.)	Total bk. value	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace* value
a. Winders (2)	1.8	5	B	15	1.5
b. Hand knitting machines (40)	3.1	2-10	B	15	3.0
c. Full fashion knitting machines (1)	30.0	3	A	17	30.0
d. Linking machines (25)	5.1	2-10	B	15	4.0
e. Electric sewing machines (12)	1.9	2-10	B	15	1.5

\* Refers to re-sale value rather than re-purchase value.

**II. INVENTORY**

	Actual	Normal
<b>TOTAL VALUE</b> (¥ million)	<u>11.6</u>	<u>..</u>
1. Direct production materials	4.0	
2. Other input materials	.1	
3. Work in process	1.5	
4. Finished products	8.0	
- Actual inventories of finished products 8.1% of annual gross production		
- Seasonal variations:		
High	+ 50% (June)	+ 50% (July) + 300% (Aug.)
Low	- 30% (Sept.)	- 20% (Oct.)

Capacity of electr. motors: 50 kW  
Capacity of other prime movers: 40 kW

Total load, capacity of trucks: 6 t

Machine (c) was imported.

The rest were domestically produced. Average life of machinery is estimated at 4 years.

**EXTERNAL CONDITIONS:** Transportation, public utilities, educational, health and recreational facilities, excellent. Residential facilities, fair.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 109	<u>107</u>	<u>2</u>	<u>-</u>
1. Direct production ( 7: 14 )	<u>96</u>	<u>2</u>	<u>-</u>
Annual total manhours (000)	(241)	(5)	( )
a. Winding	8	-	-
b. Flat knitting machines	31	-	-
c. Full fashion knitting machine	2	2	-
d. Supplement of knitting	3	-	-
e. Linking	24	-	-
f. Sewing	17	-	-
g. Inspection	3	-	-
h. Receipt of materials and delivery of products	6	-	-
i. Repairing	2	-	-
2. Auxiliary activities ( m. 6 w. 5 )	<u>11</u>	<u>-</u>	<u>-</u>
a. Management	3	-	-
b. Sales, accounting and other office work	8	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Engi- neers	Other	Sr. High sch. or equiv.	Others
TOTAL	3	16	90
<b>Management</b>			
-	1	2	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	7	61
<b>Semi-skilled</b>			
-	-	2	23
<b>Unskilled</b>			
-	-	-	5
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	2	3	1
<b>Semi-skilled</b>			
-	-	2	-
<b>Unskilled</b>			
-	-	-	-

- Actual hours worked per annum per direct production worker: 2,510 hrs

- Motors are 100% occupied (2.5 hrs running a day on the average).

- Mechanization and automation: (c), excellent; (e) & (f), fair (b), poor.

- Skilled workers in direct production are trained for (e), (b), (c) and adjustment of machines. Those in auxiliary activities are engaged in sales and accounting.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( ¥ million )				TOTAL VALUE OF CONSUMPTION ( ¥ million )			
98.6				47.0			
Product	Unit	Quantity Produced (000 ¥)	Unit Value (000 ¥)				
a. Sweaters	piece	64,800	.8				
b. Short shirts	"	36,000	1.3				
				1. Energy & water: total			
				.9			
				Quantity Unit			
				con- value			
				Unit consumed (000 ¥)			
				- Electricity			
				(000 kwh) 37.7 7.7			
				- Crude oil			
				Kl 38.3 14			
				- Water			
				000 m <sup>3</sup> 14.0 5			
				2. Direct production materials: total			
				32.2			
				a. Synthetic fibre yarn			
				Ton 24.7 1.2-			
				1.4			
				3. Finishing materials: total			
				3.0			
				Paper products ( ¥ 30/ct) 101,000 cts			
				4. Work performed by sub-contractors ( See VIII )			
				5.0			
				5. Repairs & maintenance (materials & services purchased)			
				.1			
				Of which knitting needles ¥ 1.5 million			
				6. Material inputs for auxiliary activities			
				1.4			
				Welfare ¥ .2 million			
				Transportation (other than within yard) ¥ 1.2 million			
				7. Non-factor service inputs: total			
				2.4			
				Transportation, insurance and storage (purchased separately) ¥ .2 million.			
CAPACITY OUTPUT: close to the 1964 actual production level							
Unit value of product: market value f.o.b. before ad val taxes							
Unit value of material: market price c.i.f.							
- The material is delivered by road: freight rate 1% of c.i.f. value.							
VI. VALUE ADDED TOTAL 1964 ( ¥ million )				SELECTED COEFFICIENTS			
51.6							
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in			
- Employees in direct production				direct production on 1st shift: ¥ 490,000			
28.2				- Value added per employee: ¥ 474,000			
- Other employees				- Annual wage per employee in direct production: ¥ 28,000			
4.8				- Variable input costs/gross production ratio: 70.3%			
2. Other expenditures for employees				- Gross profit/gross production ratio: 10.6%			
4.0							
3. Annual depreciation allowance				- Level of production at break-even point is approximately			
7.5				77 % of the 1964 actual level.			
4. Rental paid							
-							
5. Indirect taxes (business tax)							
(less subsidies)							
.4							
6. Other gross business income (before income tax)							
.7							
VII. EXPANSION: HISTORY & PLAN							
1. Recent Expansion				2. Future Plan			
From 1962 to 1964				a. Investment proposed for the period 1965 to 1966			
a. Total Investment ( ¥ million )				Total value ( ¥ million )			
38.6				50.0			
- Land				Of which: - Mach. & equipment			
-				50 ¥			
- Land improvements				- Land improv. & bldg.			
-				40			
- Buildings				- Land			
5.5				5			
- Other construction work				- Others			
-				5			
- Machinery & equipment				b. Net increase in no. of employees envisaged for the same			
32.4				period: - Direct production: 40			
- Tools & instruments				- Auxiliary: 5			
-				c. Purpose: Introduction of new processes and thereby			
- Vehicles				balanced expansion of the existing capacity in a new			
.5				locality.			
- Office furniture & fixtures							
.1							
b. Corresponding increase: From 1962 to 1964							
In no. of employees							
84							
In annual gross production ( ¥ million )							
50.0							
98.6							
VIII. SUPPLEMENT				V.4 Work performed by subcontractors (detail)			
Dyeing of yarn was totally performed by a specialized firm (with employees about 300) under a long term contract.							
Drestuff was supplied by the subcontractor. Rate of fee was about ¥ 180 - 240 per kg.							

**MAJOR PRODUCTS:** Knitwear (men's sweaters, finished and semi-finished). Annual capacity output is about 34,000 pieces of finished and semi-finished sweaters which amount to some ¥ 56 million in revenue terms on one shift operation. Part of semi-finished sweaters are produced by small subcontractors working on the knitting and sewing machines owned by this enterprise.

**REPORTING UNIT:** A small one-establishment enterprise with total assets of ¥ 20 million (net worth ¥ 3 million) and employees 32 as of 1966. Founded in 1948.

**I. FIXED CAPITAL ASSETS** (end of 1966)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (\$ million )	<u>6.23</u>	<u>4.30</u>
1. Land (rented)	-	-
2. Land improvements	.004	.001
3. Buildings (rented)	-	-
4. Other construction works	-	-
5. Machinery & equipment	5.16	3.71
6. Tools & instruments	.05	.03
7. Vehicles	.96	.52
8. Office furniture & fixtures	.06	.04

DETAIL OF I.5 (No.)	Total Bk. value bef. deprec. (\$ 000)	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (\$)	1966 replac. value (\$ 000)
a. Spooling machine (1)	61	20	C	17.5	125
b. Semi-automatic knitting machines (3)	1,469	2	B	"	1,469
c. Manual knitting machines (34) *	1,894	4	B	"	2,220
d. Special sewing machines (2)	240	4	B	"	250
e. Final sewing machines (2)	85	2	B	"	95
f. Linking sewing machines (28) *	669	5	C	"	819
g. Set of finishing boiler (simplified type) (1)	155	2	B	"	170

\* 24 manual knitting machines and 18 linking sewing machines are used by the sub-contractors working for this enterprise ( See VIII ).

**II. INVENTORIES**

(end of 1966)	Actual	Normal
<b>TOTAL VALUE</b> (\$ million )	<u>6.76</u>	<u>- 20</u>
1. Direct production materials	2.16	± 0
2. Other input materials	.10	+ 26
3. Work in process	2.48	- 20
4. Finished products	2.02	- 42

- Normal inventories of finished products 2.1 % of annual gross production

- Seasonal variations: Prod. materials: Seasonal high (July) and low (Feb.) Other materials: high (July) and low (Feb.) Work in process: high (Aug.) and low (Jan.). Finished products: high (Aug.) and low (Mar.).

Capacity of electr. motors: 6 KW

Total load, capacity of trucks: 0.8 t

(b) and (d) were imported. All the rest were domestically produced.

Average age of the itemized machinery (89 % of total) is 6 years.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities, all excellent.

**III. LABOUR** (1966 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 32 m. 8	32	-	-
1. Direct production ( f. 20 )	28	-	-
Annual total manhours (000)	(67.2)	( )	( )
a. Spooling	1	-	-
b. Knitting machines:			
with semi - automatic	3	-	-
with manual	7	-	-
c. Cutting	2	-	-
d. Sewing	10	-	-
e. Design and sample making	2	-	-
f. Finishing	2	-	-
g. Inspection	1	-	-
* There are 20 - 25 sub-contracting workers not listed here (See VIII).			
2. Auxiliary activities ( m. 3 )	4	-	-
a. Management	1	-	-
b. Control of outside orders	1	-	-
c. Sales	2	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	
		Engi-ners	Others
TOTAL	0	2	30
<b>Management</b>			
-	1	-	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	23
<b>Semi-skilled</b>			
-	-	-	4
<b>Unskilled</b>			
-	-	-	1
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	1	-	1
<b>Semi-skilled</b>			
-	-	-	1
<b>Unskilled</b>			
-	-	-	-

- Actual hours worked per direct production worker: 2,400 hours.

- Proportion of motors occupied 100 % for 1st shift.

- Technological features: (b): Mechanisation of the semi-automatic knitting type, fair; but the hand knitting type is practically a handcraft.

(f): Dyeing is done solely by a sub-contracting firm.

Skilled workers in direct production are engaged in knitting, cutting, sewing, finishing and inspection.

IV. ANNUAL PRODUCTION (1966)		TOTAL VALUE OF PRODUCTION ( ¥ million )		55.66	
Product	Unit	Quantity Produced ( # )	Unit Value ( ¥ )		
a. Men's sweaters	pcs.	9,250	1,800		
b. Semi - finished men's summer sweaters *	"	6,030	1,100		
c. Semi - finished men's winter sweaters *	"	18,500	1,750		
* Mostly made by subcontractors ( See VIII ).					
CAPACITY OUTPUT:					
Close to the 1966 actual production. The knitting section is a constrained factor (hence a sizable part of knitting is currently done by outside sub-contractors). An investment of approx. ¥ 715 thous. is required to increase the capacity by 20 %. Ladies' and children's sweaters may be made without introducing substantial changes in the present production facility.					
Unit value of product: Market value f.o.b. before sales tax					
Unit value of material: Market price c.i.f.					
- All production materials are domestically produced, but (a), (b) and (d) have a significant import contents; freight cost 10 % of c.i.f. value for (a), (b) and (d) and 2 % for (c); transportation seaborne.					
VI. VALUE ADDED		TOTAL 1966 ( ¥ million )		13.69	
1. Wages & salaries (before income tax)					
- Employees in direct production 6.36					
- Other employees 1.87					
2. Other expenditures for employees .38					
3. Annual depreciation allowance 1.02					
4. Rental paid (land 3.18; buildings 1.80) 1.97					
5. Taxes and other public charges .12					
6. Other gross business income (before income tax) 1.97					
VII. EXPANSION: HISTORY & PLAN		Gross acq- or		Scrapped or	
1. Recent Expansion		situation		sold	
From 1964 to 1965					
e. Total Investment ( ¥ million )					
- Land 1.71 .21					
- Land improvements - -					
- Buildings - -					
- Other construction work - -					
- Machinery & equipment 1.71 .21					
- Tools & instruments - -					
- Vehicles - -					
- Office furniture & fixtures - -					
b. Corresponding increase: From 1964 to 1965					
In no. of employees 24 27					
In annual gross production ( ¥ million ) 30.05 40.36					
VIII. SUPPLEMENT		V. INTERMEDIATE INPUTS (1966)			
		TOTAL VALUE OF CONSUMPTION ( ¥ million )		41.97	
1. Energy & water: total .32					
- Electricity KWH 18,000 7.3					
- Gas m <sup>3</sup> 6,350 25.5					
- Water m <sup>3</sup> 560 44.0					
2. Direct production materials: total 23.60					
a. Worsted yarn Kg. 5,600 2,000					
b. Woollen yarn * " 5,500 1,100					
c. Mixed synthetic and hemp yarn " 1,550 2,000					
d. Cotton yarn " 300 550					
e. Buttons and other ¥ mil. 3.09 ..					
* Undyed. Dyeing is totally performed by an outside specialized subcontractor ( See VIII ).					
3. Packaging materials: total 1.60					
a. Various cartons ( ¥ 50/pc. ) 16,400 pcs.					
b. Cellophane bags ( ¥ 8/pc. ) 34,900 pcs.					
c. Packing paper ( ¥ 18/pc. ) 18,400 pcs.					
4. Work performed by sub-contractors ( See VII ) 15.65					
5. Repairs & maintenance .24					
Of which services purchased ¥ 197,000					
6. Material inputs for auxiliary activities .44					
Gasoline ¥ 188,000					
Tribal manufacture materials ¥ 152,000					
Stationery ¥ 101,000					
7. Non-factor service inputs: total .12					
SELECTED COEFFICIENTS					
- Mach., equip., instruments & tools per employee in direct production on let shift: ¥ 186,000 ( ¥ 206,600 1/ )					
- Value added per employee: ¥ 428,000					
- Annual wage per employee in direct production: ¥ 227,000					
- Variable input costs/gross production ratio: 85.4 %					
- Gross profit/gross production ratio: 3.5 %					
- Level of production at break-even point is approximately 76 % of the 1966 actual level.					
2. Future Plan					
a. Investment proposed for the period 1967 to 1968					
Total value ( ¥ thous. ) 715					
Of which: - Mach. & equipment 68 %					
- Land improv. & bldg. 30					
- Land -					
- Others 2					
b. Net increase in no. of employees envisaged for the same period: - Direct production: 3					
- Auxiliary: 1					
c. Purposes: New additions to knitting machines.					
4. Work performed by sub-contractors: A specialized dyer (with 100 employees) dyed 5.5 tons of woollen yarn receiving a fee of ¥ 4.16 million in 1966 on a long-term contract. Three small subcontractors (with 2 or 3 employees each), which are completely dependent on this enterprise, engaged in knitting 23,000 pieces of semi-finished sweaters for total fees of ¥ 10.69 million. The fifth subcontractor (with 15 employees) sewed them to produce most of products IV.(b) and (c) receiving a fee of ¥ 0.8 million. Knitting and sewing machines were lent to those small subcontractors by this enterprise.					
Structure of liquid assets and current liabilities (end of 1966; ¥ million). Cash on hand and in bank 5.5, accounts receivable 3.8, advanced money 0.5, disbursement 0.1, taxes payable 0.1, accounts payable 11.3, internal deposit 0.5, short-term loan from commercial banks 3.6.					
1/ The numerator is the 1964 replacement value. The figure could be lowered by 40-45% by including the subcontracting workers in the denominator.					

**MAJOR PRODUCTS:** Socks. Annual capacity output is about 800,000 pairs of various kinds of socks (of which 20% made by subcontractors) on partial two shift operation (one shift except for knitting shops).

**REPORTING UNIT:** An one-establishment enterprise with total assets ¥ 55 (of which net worth ¥ 10) million and employees 30 as in 1966. Founded in 1948.

**I. FIXED CAPITAL ASSETS** (end of 1966)

TOTAL BOOK VALUE (¥ thousand.)	Before deprec.		After deprec.	
	37,699		19,440	
1. Land (2,640 m <sup>2</sup> )	3,140		3,140	
2. Land improvements	2,172		2,103	
3. Buildings (total floor space : 277 m <sup>2</sup> )	4,042		3,418	
4. Other construction works	-		-	
5. Machinery & equipment	25,142		9,063	
6. Tools & instruments	-		-	
7. Vehicles	2,290		1,367	
8. Office furniture & fixtures	913		349	

DETAIL OF I.5 (No.)	Total Bk. value bef. depr.	Avr. Age (Yr.)	Depr. Oper. Cond.	rate (%)	196 6 replac value
b. CMIE type hosiery knitting (automatic furrow-boss pattern) machines (8)	6,420	"	"	"	6,400
c. LW type knitting (links-boss pattern) machines (10)	9,910	2	A	"	10,000
d. Automatic furrow knitting machines (10)	5,382 *	9	C	"	4,000
e. Spooling machines for 6 spindles (6)	106	3	B	"	120
f. Spooling machines for patterned yarns (3)	107	4	"	"	120

\* These automatic furrow-knitting machines were installed (purchased second-hand) during the recent expansion (1963-64).

**II. INVENTORIES**

(end of 1966)	Actual	Normal
TOTAL VALUE (¥ thousand)	10,868	+ 12 %
1. Direct production materials	2,420	+ 39
2. Other input materials	275	- 11
3. Work in process	4,438	+ 6
4. Finished products	3,735	+ 3

- Normal inventories of finished products 4.0 % of annual gross production

- Seasonal variations: (%):

	1	2	3	4
High (month)	+4(Oct)	+15(Oct)	+26(Jul)	+82(Jul)
Low (month)	-16(Dec)	-12(Dec)	-26(Sep)	-61(Sep)

Capacity of electr. motors: 7 KW

Total load, capacity of trucks: 1 t

All machines are of domestic origins. Average age of machinery (97% of total) is 4 years. The enterprise's liquid assets (excluding inventories) amount to ¥ 25 million and short-term liabilities to ¥ 42 million as of the end of 1966.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities, all excellent.

**III. LABOUR**

(1966 average)	1st shift			2nd shift			3rd shift			EDUCATIONAL BACKGROUND (No. of employees)	- Actual hours worked per annum per direct production worker : 2,574 hours.
	28	2	-	22	2	-	22	2	-		
TOTAL EMPLOYED	30			28	2	-	22	2	-		
1. Direct production ( f. 14 m. 10 )				22	2	-	22	2	-		
Annual total manhours (000)	(55.8)	(5.9)	( )	(55.8)	(5.9)	( )	(55.8)	(5.9)	( )		
a. Receiving of raw materials	1	-	-	1	-	-	1	-	-		
b. Spooling	2	-	-	2	-	-	2	-	-		
c. Spooling of patterned yarns	1	-	-	1	-	-	1	-	-		
d. Knitting	3	2	-	3	2	-	3	2	-		
e. Inspection of finished products	3	-	-	3	-	-	3	-	-		
f. Inspection of products delivered by subcontractors	3	-	-	3	-	-	3	-	-		
g. Packing	9	-	-	9	-	-	9	-	-		
2. Auxiliary activities ( m. 5 f. 1 )	6	-	-	6	-	-	6	-	-		
a. Management	1	-	-	1	-	-	1	-	-		
b. Product planning	1	-	-	1	-	-	1	-	-		
c. Trade	1	-	-	1	-	-	1	-	-		
d. Control of subcontractors	2	-	-	2	-	-	2	-	-		
e. General affairs	1	-	-	1	-	-	1	-	-		

**EDUCATIONAL BACKGROUND  
(No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	
		Other	Other
2	3	25	
<b>Management</b>			
-	2	2	1
<b>Direct Production</b>			
-	-	-	20
-	-	-	2
<b>Auxiliary Activities</b>			
-	-	-	2
-	-	1	-
-	-	-	-
-	-	-	-

- Mechanisation and automation: (b) and (c) fair; (d) excellent.

- Skilled workers in direct production are in (b), (c), (d), (e) and (f). Those in auxiliary activities are mainly engaged in controlling subcontractors.

IV. ANNUAL PRODUCTION (1966)		V. INTERMEDIATE INPUTS (1966)	
TOTAL VALUE OF PRODUCTION ( ¥ thousand )		TOTAL VALUE OF CONSUMPTION ( ¥ thousand )	
97,647		72,414	
Product	Unit	Quantity Produced ( ¥ )	Unit consumed ( ¥ )
a. Men's socks (furrow-base pattern)	10 prs.	42,896	1,300
b. Men's socks (manual-clocked)	"	11,420	1,600
c. Men's socks (machine-clocked)	"	2,317	1,600
d. Ladies' socks	"	15,623	1,200
e. Children's socks	"	1,360	800
f. Knitting wastes (internally used)	Kg.	679	(100)
g. Waste (sold)	¥000	68	..
<p><b>1. Energy &amp; water: total</b> 602</p> <p>- Electricity KWH 30,970 7.7 - Heavy oil lit. 9,420 13.0 - Water m<sup>3</sup> 5,630 43.0</p> <p><b>2. Direct production materials: total</b> 41,099</p> <p>a. Nylon yarn Kg. 16,420 1,450 b. Blended yarn of polyester and wool " 2,430 1,500 c. Cotton yarn " 2,385 2,000 d. Acrilo-nitrile yarn " 1,250 1,200 e. Other synthetic yarns " 1,310 1,800 f. Rubber yarn " 1,060 1,750 g. Others ¥000 3,162 ..</p> <p><b>3. Packaging materials: total</b> 1,446 Cellophane bags ( ¥ 1.11/pc. ) 696,000 pcs. Cartons ( ¥ 10/pc. ) 68,000 pcs.</p> <p><b>4. Work performed by sub-contractors ( see VII )</b> 25,334</p> <p><b>5. Repairs &amp; maintenance</b> 3,497 Repairing parts ¥ 228,000 Services purchased ¥ 3,269,000</p> <p><b>6. Material inputs for auxiliary activities</b> 266 Testing tools ¥ 82,000 Stationery ¥ 184,000</p> <p><b>7. Non-factor service inputs: total</b> 170</p>			
<p><b>CAPACITY OUTPUT:</b> 10% higher than the 1966 actual production level with no addition to man-hours. The knitting shop presently constitutes a constraining factor; an investment of ¥ 13 million would increase the capacity by about 30% over the 1966 actual production level. Product - mix is flexible.</p> <p>Unit value of product: Market value before sales tax Unit value of material: Market price c.i.f. ; electricity and water are f.o.b. at producer's factory.</p> <p>IV. - Only part of (a) is directly exported.</p> <p>V.2.- All materials are domestically produced with a significant amount of import contents.</p>			
<b>VI. VALUE ADDED</b>		TOTAL 1966 ( ¥ thousand )	
25,233		25,233	
<p>1. Wages &amp; salaries (before income tax)</p> <p>- Employees in direct production 11,087 - Other employees 4,650</p> <p>2. Other expenditures for employees 1,590</p> <p>3. Annual depreciation allowance 3,559</p> <p>4. Rental paid (land 72; buildings 711) 783</p> <p>5. Business tax 260</p> <p>6. Other gross business income (before income tax) 3,304</p>		<p><b>SHOWN COEFFICIENTS</b></p> <p>- Mach., equip., instruments &amp; tools per employee in direct production on 1st shift: ¥ 1,143,000 - Value added per employee: ¥ 841,000 - Annual wage per employee in direct production: ¥ 462,000 - Variable input costs/gross production ratio: 70% 1/ - Gross profit/gross production ratio: 3.4% - (at full capacity : 5.8%) - Level of production at break-even point is approximately 88 % of the 1966 actual level.</p>	
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>		<b>2. Future Plan</b>	
<p>1. <b>Recent Expansion</b></p> <p>From 1963 to 1964</p> <p>a. Total Investment ( ¥ thousand )</p> <p>- Land 5,382 385 - Land improvements - - - Buildings - - - Other construction work - - - Machinery &amp; equipment 5,382 385 - Tools &amp; instruments - - - Vehicles - - - Office furniture &amp; fixtures - -</p> <p>b. Corresponding increase: From 1963 to 1964</p> <p>In no. of employees (direct prod. only) 19 22 In annual gross production ( ¥ million ) 61 79</p>		<p>a. Investment proposed for the period 1968 to 1969</p> <p>Total value ( ¥ million ) 26</p> <p>Of which: - Mach. &amp; equipment 50 ¥ - Land improv. &amp; bldg. 39 - Land - - Others 11</p> <p>b. Net increase in no. of employees envisaged for the same period: - Direct production: 5 persons - Auxiliary: -</p> <p>c. Purposes: Largely balanced expansion of the existing capacity in the same location.</p>	
<b>VIII. SUPPLEMENT</b>			
<p><b>Work performed by subcontractors:</b> A subcontractor with 50 employees dyed 7.7 tons of nylon yarn on a long-term contract; receiving a fee of ¥ 2.8 million. Three subcontractors (two having 4 employees and one having 20) made some 430,000 pairs of half-finished hosiery goods with a total fee of ¥ 14.5 million; they are more or less heavily dependent on this enterprise. Another three subcontractors (two with 2 employees and one with 10) manufactured some 150,000 pairs of socks receiving a total fee of ¥ 7.9 million; they work almost solely for this enterprise.</p> <p>1/ Excluding wages as well as salaries.</p>			

**MAJOR PRODUCTS:** Golf shirts and sweaters (includes knitting). Annual capacity output of 164,000 golf shirts and 11,000 sweaters on one shift (only knitting shop operates two shifts). The establishment is operating close to the capacity in 1964.

**REPORTING UNIT:** A one-establishment enterprise with total assets about ¥ 130 million and employees 104 as of 1964. Founded in 1947.

I. FIXED CAPITAL ASSETS (end of 1964)						II. INVENTORIES (end of 1964)		
TOTAL BOOK VALUE ( ¥ million )		Before deprec.	After deprec.			Actual	Normal	
		64.7	44.7			26.6	-	
1. Land (1,300 m <sup>2</sup> )		4.0	4.0					
2. Land improvements		-	-					
3. Buildings (total floor space 1,200 m <sup>2</sup> )		35.0	27.2		1. Direct production materials	15.0	-	
4. Other construction works		-	-		2. Other input materials	.2	-	
5. Machinery & equipment		22.6	11.5		3. Work in process	9.0	-	
6. Tools & instruments		-	-		4. Finished products	2.4	-	
7. Vehicles		2.8	1.9		- Normal inventories of finished products 1.2% of annual gross production			
8. Office furniture & fixtures		.3	.1		- Seasonal variations:			
		Total Bk. value	Avg. Age (Yr.)	Depr. rate (%)	1964 replace. value	Seasonal high for (1),(2)and(3): + 50% for (4) : + 400%		
<b>DETAIL OF I.5 (No.)</b>						Seasonal low for (1),(2)and(3): - 40% for (4) : - 30%		
a. Winders (4)	2.5	10-2	B	15	2.0	Capacity of electr. motors: 60 KW Capacity of other prime movers: 30 HP Total load, capacity of trucks: 7.5 t		
b. Knitting machines (1)	4.5	3	A	15	4.5	Machine (c) was imported. All others were domestically produced. Average age of machinery is estimated at 6 years.		
c. Knitting machines (56)	9.8	10-2	B	15	10.0	<b>EXTERNAL CONDITIONS:</b> Transportation and public utilities, excellent. Community facilities, fair.		
d. Electric sewing machines (30)	3.8	10-1	B	15	4.0			

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				
TOTAL EMPLOYED 104		102	2	-	Univ. or higher	Sr. High sch. cr.	Others		
1. Direct production ( m. 14 f. 64 ) Annual total manhours (000)		76 (170.9)	2 (4.5)	-	Engi-neers	Other	Sr. High sch. cr.	Others	
a. Knitting		17	2		TOTAL	1	10	36	57
b. Sewing		42	-		Management	1	2	2	-
c. Winding		4	-		Direct Production				
d. Cutting		5	-		Skilled	-	1	15	50
e. Inspection		3	-		Semi-skilled	-	2	2	5
f. Packing		5	-		Unskilled	-	-	1	2
2. Auxiliary activities ( m. 15 f. 11 )		26	-		Auxiliary Activities				
a. Sales		21	-		Skilled	-	3	1	-
b. Administration		5	-		Semi-skilled	-	2	2	0
					Unskilled	-	-	13	-

- Normal work hours per day: 8 hrs.

- Normal work days per annum: 300 days.

- Actual hours worked per annum per direct production worker: 2,237 hrs.

- Motors occupied:  
1st shift; 90%  
2nd shift; 5%

- Technological features:  
(a) uses automatic and semi-automatic knitting machines,  
(b) electric sewing machines, and (c) winders.

- Mechanisation and automation: part of (a) which uses automatic knitting machines, excellent; others, fair.

- Skilled workers are named for (a), (b) and (c) of direct production. Those in auxiliary activities are engaged in sales promotion.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( ¥ million )				TOTAL VALUE OF CONSUMPTION ( ¥ million )			
196.8				125.2			
Product	Unit	Quantity Produced	Unit Value (000 ¥)		Quantity consumed	Unit value (000 ¥)	
a. Sweaters	piece	10,900	1.5	- Electricity	000 KWH	39	6
b. Golf shirts	,,	164,000	1.1	- Crude oil	KL	31	15
				- Water	000 M <sup>3</sup>	16	5
				2. <u>Direct production materials: total</u>			
				92.0			
				a. Worsted yarn			
				Kg. 52,600 1.6-1.8			
				3. <u>Packaging materials: total</u>			
				.5			
				Paper and paper products ( ¥ 2.9/mt)			
				175,000 sets			
				4. <u>Work performed by sub-contractors ( See VIII )</u>			
				25.4			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>			
				2.5			
				6. <u>Material inputs for auxiliary activities</u>			
				-			
				7. <u>Non-factor service inputs: total</u>			
				4.0			
				Transportation, insurance and storage (purchased separately) ¥ 1.2 million.			
CAPACITY OUTPUT: close to the 1964 actual production level. Bottlenecks exist at knitting, cutting and sewing processes, though part of them are currently circumvented by means of subcontracting.				3. <u>Packaging materials: total</u>			
Unit value of product: market value f.o.b. before sales tax				.5			
Unit value of material: market price c.i.f.				Paper and paper products ( ¥ 2.9/mt)			
- Worsted yarn is domestically produced with a significant amount of import content. Delivery by road; freight rate about 1% of c.i.f. value.				175,000 sets			
				4. <u>Work performed by sub-contractors ( See VIII )</u>			
				25.4			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>			
				2.5			
				6. <u>Material inputs for auxiliary activities</u>			
				-			
				7. <u>Non-factor service inputs: total</u>			
				4.0			
				Transportation, insurance and storage (purchased separately) ¥ 1.2 million.			
VI. VALUE ADDED TOTAL 1964 ( ¥ million )				SELECTED COEFFICIENTS			
71.6				- Mach., equip., instruments & tools per employee in direct production on let shift: ¥ 297,000			
1. Wages & salaries (before income tax)				- Value added per employee: ¥ 688,000			
- Employees in direct production				- Annual wage per employee in direct production: ¥ 326,000			
25.4				- Variable input costs/gross production ratio: 73.3%			
- Other employees				- Gross profit/gross production ratio: 9.6%			
18.1				- Level of production at break-even point is approximately 62% of the 1964 actual level.			
2. Other expenditures for employees							
3.7							
3. Annual depreciation allowances							
4.3							
4. Rental paid							
-							
5. Indirect taxes (business tax) (less subsidies)							
1.3							
6. Other gross business income (before income tax)							
18.8							
VII. EXPANSION: HISTORY & PLAN				Gross acquisition			
1. <u>Recent Expansion</u>				Scrapped or sold			
From 1960 to 1963							
a. Total Investment ( ¥ million )				32.3			
- Land				-			
- Land improvements				-			
- Buildings				25.0			
- Other construction work				-			
- Machinery & equipment				5.0			
- Tools & instruments				.2			
- Vehicles				2.0			
- Office furniture & fixtures				.1			
b. Corresponding increase:				From 1960 to 1963			
In no. of employees				110 105			
In annual gross production ( ¥ million )				140 180			
2. <u>Future Plan</u>							
a. Investment proposed for the period 1964 to 1965							
Total value ( ¥ million )				30			
Of which: - Mach. & equipment				30			
- Land improv. & bldg.				70			
- Land				-			
- Others				-			
b. Net increase in no. of employees envisaged for the same period:							
- Direct production:				15			
- Auxiliary:				-			
c. Purpose: Selective expansion of the existing capacity and construction of a company house.							
VIII. SUPPLEMENT				V4. <u>Work performed by subcontractors (detail)</u>			
				Dyeing of yarn was totally performed by a specialized firm with employees 300 under a long term contract. Dyestuff was supplied by the subcontractor. Total fees paid to it was ¥ 11.7 million. About 20 subcontractors (with employees 4 to 5 each) produced 20,500 t of knitting cloth from yarn supplied by the enterprise for total fee ¥ 13.7 million. These small subcontractors are heavily, if not entirely, dependent on this enterprise in terms of their annual proceeds.			



Japan : 243/232-(2)

**MAJOR PRODUCTS:** Underwear, girdles, bathing suits and other garments. Annual capacity output is about 400,000-450,000 pieces of these goods (with one shift) plus some additional knitting work (with three shifts).

**REPORTING UNIT:** A newly integrated knitmill-tailoring enterprise with total assets of ¥ 130 million (net worth ¥ 14 m.) and employees 88 as of 1966. Founded in 1964.

**I. FIXED CAPITAL ASSETS** (end of 1966)

TOTAL BOOK VALUE ( ¥ million )	Before deprec.		After deprec.	
	69.17		56.50	
1. Land (4.540m <sup>2</sup> )	13.86		13.86	
2. Land improvements	.47		.39	
3. Buildings (total floor space: 1.834m <sup>2</sup> )	37.21		30.94	
4. Other construction works	-		-	
5. Machinery & equipment	9.65		6.98	
6. Tools & instruments	2.81		1.39	
7. Vehicles	3.76		2.35	
8. Office furniture & fixtures	1.41		.62	

DETAIL OF 1,5 (No.)	Total Bk value bef. deprec. ( ¥ 000 )	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1966 replace. value ( ¥ 000 )
<u>Knitting section</u>					
a. Fraisee(9)	1,245	7	B	17.5	1,800
b. Double-faced machines(20)	3,030	10	B	"	4,500
c. Preparation machines, winders (2)	210	8	C	"	700
<u>Tailoring Section</u>					
d. Grey goods stretching machine (1)	1,500	2	A	22.6	1,600
e. Cubic cutting machine (1)	380	2	A	"	400
f. Sewing machines(44)	3,110	2	B	"	3,210
- Final sewing machines(21)					
- Overlock stitching machines(13)					
- Special sewing machines(10)					
<u>Finishing Section</u>					
g. Boiler (1)	80	3	C	"	80
h. Irons(3)	43	3	B	"	45

**II. INVENTORIES**

(end of 1966)	Actual	Normal
TOTAL VALUE ( ¥ million )	36.52	+ 14 %
1. Direct production materials	7.21	- 7
2. Other input materials	3.47	+ 0
3. Work in process	14.25	+ 22
4. Finished products	11.59	+ 20

- Normal inventories of finished products 4.7% of annual gross production

- Seasonal variations: Seasonal low is normally attained in December for all items. Seasonal high for (1) and (2) takes place in July with +25 and +20%, respectively, of the normal level; in Sept for (3),(4) with +10,+40%, respectively.

Capacity of electr. motors: 46 KW

Total load, capacity of trucks: 2.4 t

The establishment has in addition a bus. Special sewing machines were imported. All the rest domestically produced. Before 1964, the enterprise was a small, old knitmill.

**EXTERNAL CONDITIONS:**

Transportation, public utilities and community activities, all excellent.

**III. LABOUR** (1966 average)

TOTAL EMPLOYED 88	1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
	84	2	2	Univ. or higher	Sr. High sch. or equiv.	Other	Other
1. Direct production (m.22; f.55)	73	2	2	Engi-ners			
Annual total manhours (000)	(182.0)	(4.8)	(4.8)	TOTAL	1	2	24
<u>Knitting section</u>				Management			
a. Preparation (reeling)	2	-	-	Direct Production			
b. Knitting	5	2	2	Skilled			
c. Inspection	1	-	-	Semi-skilled			
<u>Tailoring section</u>				Unskilled			
d. Cutting	12	-	-	Auxiliary Activities			
e. Tailoring	40	-	-	Skilled			
f. Inspection	2	-	-	Semi-skilled			
<u>Finishing section</u>				Unskilled			
g. Finishing	4	-	-				
h. Packing	7	-	-				
2. Auxiliary activities (m.7; f.4)	11	-	-				
Administration and technical management	11	-	-				

- Actual hours worked per annum per direct production workers: 2,468 hours

- Proportion of motors occupied: 90%, 15% and 15% for 1st, 2nd and 3rd shifts, respectively.

- Technological features:

(a) Knitting of elastic fibers with rubber and spuntex.

(d) Uses automatic grey goods stretching machine.

- Skilled workers on direct production are engaged in knitting, cutting and tailoring (particularly, trial manufacturing and sample manufacturing).

- Mechanisation: fair in (a), (b), (d) and (e); poor in (c), (f) and (h); obsolete in (g). No automation.

IV. ANNUAL PRODUCTION (1966)				V. INTERMEDIATE INPUTS (1966)			
TOTAL VALUE OF PRODUCTION ( ¥ million )				TOTAL VALUE OF CONSUMPTION ( ¥ million )			
Product	Unit	Quantity	Unit Value ( ¥ )		Unit	Quantity	Unit Value ( ¥ )
TOTAL VALUE OF PRODUCTION ( ¥ million ) 196.57				TOTAL VALUE OF CONSUMPTION ( ¥ million ) 146.52			
a. Underwear	000 pieces	242.0	310,000	1. <u>Energy &amp; water: total</u> .95			
b. Bathing suit	"	46.1	575,000	- Electricity	000 kwh	96	6,600
c. Girdle	"	94.8	620,000	- Gas	kg	360	60
d. Outer garment	"	77.6	410,000	- Water	m <sup>3</sup>	6,940	43
e. Grey goods	kg	2,267	2,200	2. <u>Direct production materials: total</u> 106.12			
e'. Grey goods (commission work) *	"	2,965	600	a. Synthetic fibre yarn	kg	36,000	1,680
f. Other major and secondary products	¥ mil.	27.21	..	b. Blended yarn of cotton and synthetic fibres	"	8,300	670
g. Cutting scraps	kg	1,190	100	c. Elastic thread	"	6,330	1,950
*The establishment manufactured some 3t grey goods from the synthetic fibre yarn supplied by a contractor (500 employees) receiving fee ¥ 1,773,000.				d. Grey cloths of various laces	"	65,800	235
<b>CAPACITY OUTPUT:</b> 10% higher than the 1966 actual production level with over-all sufficient demand and labor (additional 9,000 manhours on 1st shift). Product-mix is <u>not</u> possible				e. Annexed grey cloth and others	¥ mil.	7.07	..
Unit value of product, market value f.o.b. before sales tax				3. <u>Packaging materials: total</u> 1.25			
Unit value of material: market price c.i.f.				Paper and paper products (¥ 17/pc) 73,000 pcs			
- Only part of girdles and outer garments are directly exported.				4. <u>Work performed by sub-contractors</u> (see VIII) 32.04			
- Synthetic fibre yarn has a significant import content; freight rate thereof, 15%; transportation is seaborne.				5. <u>Repairs &amp; maintenance</u> (materials & services purchased) .98			
				Repairing ¥ 431,000			
				Consumption articles ¥ 553,000			
				6. <u>Material inputs for auxiliary activities</u> 1.84			
				Gasoline for transport 1.16; knitting needles .43; sewing machine needles .10; others .15.			
				7. <u>Non-factor service inputs: total</u> 1.34			
				Transportation, insurance and storage purchased separately ¥ 80,000.			
<b>VI. VALUE ADDED</b> TOTAL 196 ( ¥ million ) 50.05				<b>SELECTED COEFFICIENTS</b>			
1. <u>Wages &amp; salaries</u> (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 170,710 ( ¥ 222,970) <sup>1/</sup>			
- Employees in direct production 23.79				- Value added per employee: ¥ 570,000			
- Other employees 4.20				- Annual wage per employee in direct production: ¥ 308,960			
2. <u>Other expenditures for employees</u> 3.92				- Variable input costs/gross production ratio: 84.5%			
3. <u>Annual depreciation allowance</u> 9.60				- Gross profit/gross production ratio: 4%			
4. <u>Rental paid</u> -				(at full capacity: 5.0%)			
5. <u>Business tax and other public charges</u> .70				- Level of production at break-even point is approximately 74 % of the 1966 actual level.			
6. <u>Other gross business income</u> (before income tax) 7.84							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u>				2. <u>Future Plan</u>			
From 1964 to 1965				a. Investment proposed for the period 1967 to 1968			
a. Total Investment ( ¥ million )		59.22	26.49	Total value ( ¥ million )		7.85	
- Land		13.86	20.36	Of which: - Mach. & equipment		95.5	%
- Land improvements		.47	-	- Land improv. & bldg.		-	
- Buildings		37.21	4.66	- Land		-	
- Other construction work		-	-	- Others		4.5	
- Machinery & equipment		4.14	.33	b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments		1.06	-	- Direct production:		4	
- Vehicles		2.08	.92	- Auxiliary:		0	
- Office furniture & fixtures		.38	-	c. Purposes: Introduction of new products in knitting section (outer garment grey goods); overhauling of the finishing section.			
.. Corresponding increase:		From 1964	to 1965				
In no. of employees		69	78				
In annual gross production ( ¥ million )		143	172				
<b>VIII. SUPPLEMENT</b>				V.4. <u>Work performed for this establishment by sub-contractors:</u>			
Type of sub-contract		Materials supplied by this establishment	Contract work done	Total fees paid (¥000)	Additional material supplied by sub-contractors		
a. Long-term contract (with employees)	100	Yarn/grey goods	5t/33t	14,400	Dye		
b. Mostly subordinate	"	Yarn	4t	4,200	None		
c. Mostly subordinate	"	Grey goods	120t	14,035	Sewing thread		
d. Other	"	Semi-manufactured goods	300t	2,400	Steam and gas		
Structure of liquid assets and current liabilities (end of 1966; ¥ million)							
- Cash on hand/bank 20.4; accounts receivable 9.0; suspense payment 0.1; loan 0.1; taxes payable 1.3; accounts payable 57.7; short-term debt 1.1; deposit 2.0; bad loan allowance 0.9; reserves for price fluctuations 2.2.							
1/ The denominator is the 1961 replacement value.							

A large old enterprise (founded in 1912) producing knitted clothes, underwear, socks and stockings from wool, cotton and synthetic yarn. Annual capacity output is 6.2 million pieces of knitwear and 3.8 million pairs of socks and stockings on full three-shift operation. Crepe, wool and synthetic yarn, accounting for one-third of material expenditures, are imported; 21% of the output is directly exported.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		2,249	2,429	105	263	525	1,102		
Buildings & land improvements		665	845	94	165	170	285		
Machinery & equipment		1,582	1,582						
Other capital assets		2	2						
Calculated average age of fixed assets:		5.6 years							
<b>Major machinery: crucial for determining the overall production capacity:</b>		<b>Electric motors:</b>							
Knitted cotton underwear: Circle knitting machines: SUPLEXA and INTERBLOCK (3 shifts).		Total installed capacity: 799 KW							
Knitted wool and synthetic clothes: Knitting machines (2 or 3 shifts).		Of which actually operated in 1963:							
Socks and stockings: Knitting machines: STANDARD (2 or 3 shifts). (Only 8% of machinery and equipment was imported).		1st shift 100%; 2nd shift 26%; 3rd shift 19%							
<b>Technological features:</b>		Large-scale production with processes ranging from the preparation of yarns to the finishing of ready-to-use goods. With relatively low level of mechanization and automation (rated as 60% and 40% respectively). Located in a large shopping area. Product mix satisfactory.							
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn. Esch.	Low	Others	Total	
1. Factory workers:					Univ. or higher	3	1	1	5
Total	2,440 persons	1,182	825	433	Tech. Higher sch.	4	1	-	3
	(5,520 thous. manhrs.)	(2,262)	(1,868)	(1,390)	Secondary sch.	30	15	-	25
- Knitted cotton underwear		532	519	133	Primary school	-	-	-	2,596
- Knitted wool clothes		400	150	150					
- Socks and stockings		250	156	150					
2. Non-factory workers:		244 persons							
		(525 thous. manhours)							
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		IV. INTERMEDIATE INPUTS				
					Quantity	Value (Drs. Million)			
TOTAL actual revenue output 1963 *			6,007		TOTAL actual consumption 1963				
- Knitted cotton underwear	5,310,000 pcs	2,627			1. Energy inputs: total				
- Knitted wool clothes	360,000 pcs	2,402			- Electricity				
- Knitted synthetic clothes	2,000 pcs	21			- Brown coal				
- Men's cotton socks	150,000 prs	19			- Liquid fuel				
- Men's synthetic socks	364,000 prs	112			2. Major production materials: total				
- Ladies' cotton stockings	803,000 prs	211			- Wool yarn				
- Ladies' synthetic stockings	851,000 prs	438			- Synthetic yarn				
- Children's cotton stockings	521,000 prs	99			- Cotton yarn				
- Children's synthetic socks	266,000 prs	78			3. Repairs & maintenance: total				
* Including turnover tax on sold products.						4. Other material & non-factor service inputs (of which services 121)			
<b>Capacity Output</b>						V. VALUE ADDED (1963) (Drs. Million)			
Knitted cotton underwear	5,800,000 pcs	Overall rate of utilization is 85%.		TOTAL (except turnover tax)					
Knitted wool clothes	400,000 pcs			- Wages of factory workers					
Knitted synthetic clothes	10,000 pcs			- Salaries of non-factory workers					
Socks and stockings	3,800,000 prs			- Depreciation					
- The same number of workers can operate the existing capacity to the full extent.				- Interests paid					
				- Other accumulation					
				- (Turnover tax)					
VI. SUPPLEMENT		Future Plans		SELECTED COEFFICIENTS					
a) Introduction of new machines.				- Mach. & equip. per factory worker on 1st shift: Drs. 1,338,000					
b) To raise the level of mechanization and automation to 80% and 60%, respectively, of the most advanced technology in the world.				- Value added per employee: Drs. 798,000					
c) Balanced expansion of the existing capacities.				- Annual wage per factory worker: Drs. 400,000					
1. Of which Drs. 261 million are funds belonging to the enterprise.				- Variable input cost/gross production ratio: 2/ 52.5 %					
2. Wages and salaries regarded as fixed cost.				- Gross accumulation/gross production ratio: 3/ 17.2 %					
3. Gross accumulation is "interests paid" plus "other accumulation".				- Level of production at break-even point: 64 % of the 1963 actual level.					

An old but well-modernized knitting mill producing stockings and socks from wool, cotton and synthetic yarn (founded in 1924). Annual capacity output is about 5.5 million stockings and socks on partial three shift operation (dyeing and finishing shops operate only two shifts). Wool and cotton yarn are of domestic origins, but almost half of the synthetic yarn is imported. Share of exports is only 9 % of the output. The factory is favourably located.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
TOTAL (Drs. million)		1,996	2,244	1953-54	1955-57	1958-60	1961-63		
Buildings & land improvements		381	419	Gross expenditures	20	185	119		
Machinery & equipment		1,571	1,781	Retirements	27	84	105		
Other capital assets		44	44	Calculated average age of fixed assets: 5.6 years					
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Electric motors:</b>					
Stockings: Round knitting machines (3 shifts) and dyeing apparatus (2 shifts).				Total installed capacity: 435 KW					
(65 % of machinery and equipment are of foreign origin.)				Of which actually operated in 1963:					
				1st shift 100 %; 2nd shift 89%; 3rd shift 83 %					
				<b>Technological features:</b> A classical system for knitting. Uses round knitting machines of fineness 54 with 400 needles. The "post-boarding" method for the finishing of synthetic filament. Medium rate of mechanization and automation, rated as 75 % and 60 %, respectively, of the world advanced standard. The assortment of products is too large both technologically and commercially.					
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:				
		1st shift	2nd shift	3rd shift					
1. Factory workers:					Techn. Econ. Law Others Total				
Total 736 persons		407	247	82	Univ. or higher 1 - - 1 - 1				
(1,674 thous. manhrs.)		( 921 )	( 562 )	( 191 )	Tech. Higher sch. - - - - -				
- Knitting		215	134	78	Secondary sch. 15 7 - - 15				
- Dyeing		12	8	-	Primary school - - - 792 792				
- Finishing		157	99	-					
- Auxiliary shop		23	6	4					
2. Non-factory workers: 72 persons					IV. INTERMEDIATE INPUTS				
( 191 thous. manhours )					Quantity Value (Drs. Million)				
					TOTAL actual consumption 1963 1,219				
					1. Energy inputs: total 25				
					- Electricity 1,130 Mwh 14				
					- Lignite coal 3,390 t 11				
					2. Major production materials: total 772				
					- Synthetic yarn 118 t 705				
					- Wool yarn 15 t 61				
					- Cotton yarn 6 t 6				
					3. Repairs & maintenance: total 71				
					4. Other material & non-factor service inputs (of which services 84) 225				
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1963) (Drs. Million)				
TOTAL actual revenue output 1963 *			2,204		TOTAL (except turnover tax) 805				
- Men's socks (wool)		187,000 prs	89		- Wages of factory workers 352				
- Men's socks (cotton)		9,000 "	3		- Salaries of non-factory workers 64				
- Men's socks (synthetic)		1,409,000 "	456		- Depreciation 88				
- Ladies' stockings (cotton)		44,000 "	9		- Interests paid 84				
- Ladies' stockings (synthetic)		2,417,000 "	1,351		- Other accumulation 217 1/				
- Children's socks (synthetic)		576,000 "	296		(Turnover tax) 306				
* Including turnover tax on sold products.					VI. SUPPLEMENT Future plans:				
Capacity output:					SELECTED COEFFICIENTS				
Socks and stockings: 5,500,000 prs.					- Mach. & equip. per factory worker on 1st shift: Drs. 4,376,000				
Rate of utilisation is 84 %.					- Value added per employee: Drs. 996,000				
- Underutilisation due to inefficient supply of raw materials. No additional factory workers are required on 1st shift for full utilization of the existing capacity.					- Annual wage per factory worker: Drs. 478,000				
					- Variable input cost/gross production ratio: 51.3 %				
					- Gross accumulation/gross production ratio: 1/15.8 %				
					(at full capacity 21.1 %)				
					- Level of production at break-even point: 67 % of the 1963 actual level.				
					3/ Gross accumulation includes interest paid.				
1/ Of which Drs. 63 million are funds belonging to the enterprise.									
2/ Only half of wages and salaries considered as variable costs.									

A knitting mill producing socks and stockings. Annual capacity output is about 8.5 million pairs on two shifts (4 workers attend the knitting shop during the third shift). About 60% of cotton and synthetic yarn is imported, but only nominal amount of products are sold abroad. Located in a large consumers' centre with no competitor.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)		1,363	1,657	11	84	60	428			
Buildings & land improvements		95	264							
Machinery & equipment		1,257	1,382	4	72	145	163			
Other capital assets		11	11	Calculated average age of fixed assets: 8.2 years						
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Electric motors:</b>						
All sorts of socks and stockings: Circular knitting machines (3 shifts).				Total installed capacity: 391 KW						
44% of machinery and equipment is of foreign origin).				Of which actually operated in 1963:						
				1st shift 100%; 2nd shift 100%; 3rd shift - %						
				<b>Technological features:</b>						
				A classical technology for knitting. Satisfactorily mechanized, and knitting is automatic. (Mechanization still falls short by about 30% of the world standard). The 1962 investment was accompanied by reduction of production workers from 63% to 59%. Still 30% of workers are considered surplus.						
II. LABOUR (1963)		TOTAL no. of employees: 687			Educational background of workers:					
		1st shift	2nd shift	3rd shift	Tech.	Econ.	Low	Others	Total	
1. Factory workers:										
Total	591 persons	381	206	4	Univ. or higher	1	-	3	-	4
	(1,108 thous. manhrs.)	(723)	(385)	(-)	Tech. Higher sch.	-	-	1	1	2
- Knitting		252	146	4	Secondary sch.	9	2	-	9	20
- Finishing and dyeing		65	35	-	Primary school	-	-	-	661	661
- Adjustment		44	25	-	IV. INTERMEDIATE INPUTS					
- Auxiliary shop		20	-	-	Quantity		Value (Drs. Million)			
2. Non-factory workers: 96 persons		(181 thous. manhours)			TOTAL actual consumption 1963					
					1. Energy inputs: total 33					
					- Electricity 1,242 mwh 15					
					- Brown coal 2,196 t 18					
					2. Major production materials: total 1,107					
					- Cotton and synthetic fibre yarn 356 t 1,035					
					- Dyes and chemicals .. 31					
					- Parts .. 41					
					3. Repairs & maintenance: total 10					
					4. Other material & non-factor service inputs (of which services 33) 144					
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	V. VALUE ADDED (1963) (Drs. Million)						
TOTAL actual revenue output 1963*, **		2,797		TOTAL (except turnover tax) 1,272						
- Men's socks	4,364,000 prs	1,145		- Wages of factory workers 402						
- Ladies' stockings	2,883,000 prs	1,452		- Salaries of non-factory workers 65						
- Children's socks	697,000 prs	200		- Depreciation 63						
				- Interests paid 93						
				- Other accumulation 649 1						
				(Turnover tax) (231)						
				VI. SUPPLEMENT						
				Introduction of new machines is being planned in 1964.						
				1 of which Drs. 228 million are funds belonging to the enterprise.						
				2 The denominator is 361; excluding workers in "auxiliary shops".						
				3 Wages and salaries are considered as fixed costs in the vicinity of current operation scale.						
				SELECTED COEFFICIENTS						
				- Mach. & equip. per factory worker on 1st shift: Drs. 3,028,000 2						
				- Value added per employee: Drs. 1,352,000						
				- Annual wage per factory worker: Drs. 680,000						
				- Variable input cost/gross production ratio: 3/ 44.4 %						
				- Gross accumulation/gross production ratio: 4/ 28.9 %						
				(at full capacity) 33.4 %						
				- Level of production at break-even point: 3/ 48 % of the 1963 actual level.						
				4/ Gross accumulation includes interests paid.						

A very old but well-rejuvenated knitting mill manufacturing socks and stockings from cotton and synthetic yarn. Annual capacity output is about 3.2 million pairs of socks and stockings on full three-shift operation. Around 30% of the materials (synthetic yarn, dyes, chemicals and spare parts) are imported, but only 1% of the output is exported directly. The establishment was founded in 1898. Has good communication lines.

I. FIXED CAPITAL		(end of 1963)	Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)						
					1953-54 1955-57 1958-60 1961-63						
TOTAL (Drs. million)					37 91 45 281						
Buildings & land improvements					24 36 46 67						
Machinery & equipment											
Other capital assets											
Calculated average age of fixed assets: 6.6 years											
<u>Major machinery crucial for determining the overall production capacity:</u>					<u>Electric motors:</u>						
Socks and stockings:					Total installed capacity: 151 KW						
Circular knitting machines (3 shifts).					Of which actually operated in 1963:						
(91% of machinery and equipment is of foreign origins).					1st shift 100%; 2nd shift 35%; 3rd shift 25%						
					<u>Technological features:</u> A conventional system for knitting and finishing of socks and stockings. Uses the "preboarding" system for the finishing of synthetic stockings. Sufficiently mechanized and automated (rated 90% and 30%, respectively). Most of the machines are of foreign origins, unlike in many other knitting mills in this country.						
II. LABOUR		(1963)	TOTAL no. of employees: 369			<u>Educational background of workers:</u>					
			1st shift	2nd shift	3rd shift		Techn. Hchn.	Low	Others	Total	
1. Factory workers:						Univ. or higher	1	-	-	-	1
Total	317 persons	(720 thous. manhrs.)	176	98	43	Tech. Higher sch.	-	-	-	-	-
			(401)	(225)	(94)	Secondary sch.	5	9	-	-	14
						Primary school	-	-	-	354	354
						IV. INTERMEDIATE INPUTS					
						Quantity		Value (Drs. Million)			
						TOTAL actual consumption 1963					
						539					
						1. Energy inputs: total					
						15					
						- Electricity					
						310 Kwh					
						4					
						- Coke					
						3 t					
						-					
						- Hard coal					
						501 t					
						7					
						- Lignite					
						847 t					
						4					
						2. Major production materials: total					
						493					
						- Cotton and synthetic yarn					
						119 t					
						493					
						5. Repairs & maintenance: total					
						18					
						6. Other material & non-factor service inputs (services)					
						13					
III. ANNUAL PRODUCTION & CAPACITY			Quantity	Value (Drs. Million)	V. VALUE ADDED (1963) (Drs. Million)						
TOTAL actual revenue output 1963*				1,119	TOTAL (except turnover tax)						
					429						
					- Wages of factory workers						
					147						
					- Salaries of non-factory workers						
					51						
					- Depreciation						
					28						
					- Interests paid						
					42						
					- Other accumulation						
					161 1/						
					(Turnover tax)						
					(151)						
					VI. SUPPLEMENT						
					Future plans:						
					Expansion of the existing capacity through replacement of obsolete machines and equipment.						
					1/ Of which Drs. 55 million are funds belonging to the enterprise.						
					2/ The denominator is 150; excluding workers on "auxiliary shop" and "other services".						
					3/ Wages and salaries regarded as fixed costs.						
					SELECTED COEFFICIENTS						
					- Mach. & equip. per factory worker on 1st shift: Drs. 3,400,000 <sup>2/</sup>						
					- Value added per employee: Drs. 1,163,000						
					- Annual wage per factory worker: Drs. 454,000						
					- Variable input cost/gross production ratio: 50.5 3/4%						
					- Gross accumulation/gross production ratio: 21.0 2/4%						
					(at full capacity)						
					23.1 2/4%						
					- Level of production at break-even point: 54 % of the 1963 actual level.						
					4/ Gross accumulation includes interests paid.						

An enterprise engaged in wool spinning and knitting. Founded in 1949. Capable of producing 160t wool yarn and 90t knit-wear annually with two shifts. Wool and mixed yarn, accounting for 37% of the material expenditures, are imported, but 92% of the products are for domestic use.

I. FIXED CAPITAL		(end of 1963)	Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)							
					1958-60	1961-63						
TOTAL (Drs. million)					328	360	Gross expenditures 40 123					
Buildings & land improvements					74	95	Retirements 19 39					
Machinery & equipment					254	265	Calculated average age of fixed assets: 7.1 years					
Other capital assets					-	-	Electric motors: 104 KW					
<u>Major machinery crucial for determining the overall production capacity:</u>					Total installed capacity: 104 KW							
<u>Yarn:</u> Spindles (2 shifts);					Of which actually operated in 1963:							
<u>Knit-wear:</u> Knitting and finishing machines (2 shifts).					1st shift 100 %; 2nd shift 83 %; 3rd shift - %							
(One third of machinery and equipment was imported).					<u>Technological features:</u>							
					A conventional system for spinning and knitting with medium level of mechanization and automation, rated 80% and 50%, respectively. Located near spinning factories. The assortment of products is too large technologically but appropriate for sales purposes.							
II. LABOUR		(1963)	TOTAL no. of employees: 379			Educational background of workers:						
			1st shift	2nd shift	3rd shift	Techn. Econ.	Law	Others	Total			
1. Factory workers:						Univ. or higher	-	1	-	-	1	
Total	318 persons		198	120	-	Tech. Higher sch.	3	-	-	1	4	
	(72 thous. manhrs.)	(144)	(276)	(-)		Secondary sch.	5	4	-	6	15	
- Spinning		29	23	-		Primary school	-	-	-	359	359	
- Knitting		75	50	-	IV. INTERMEDIATE INPUTS							
- ready-made clothes		78	40	-	Quantity		Value (Drs. Million)					
- Dyeing and ancillary shops		16	7	-	TOTAL actual consumption 1963					634		
2. Non-factory workers:		61 persons			1. Energy inputs: total		8					
	(128 thous. manhours)				- Electricity		158 Mwh	3				
					- Hard coal		798 t	5				
III. ANNUAL PRODUCTION & CAPACITY		Quantity		Value (Drs. Million)		2. Major production materials: total		595				
TOTAL actual revenue output 1963*				1,133		- Wool yarn waste		127 t	267			
- Combed wool yarn		144 t	623		- Cotton yarn		11 t	28				
- Wool knit-wear		58 t	506		- Wool yarn		49 t	216				
- By-products		-	4		- Synthetic yarn		21 t	84				
* Including turnover tax on sold products.						3. Repairs & maintenance: total		4				
Capacity Output:						4. Other material & non-factor service inputs (services)		27				
Combed wool yarn		160 t	Overall rate of utilisation is 76%.		V. VALUE ADDED (1963)		(Drs. Million)					
Wool knit-wear		90 t			TOTAL (except turnover tax)		299					
- Underutilization due to imbalance between capacities of various processes and insufficient supply of raw materials.						- Wages of factory workers		121				
The present work force is sufficient to achieve full capacity operation on the 1st shift.						- Salaries of non-factory workers		41				
						- Depreciation		20				
						- Interests paid		37				
						- Other accumulation (Turnover tax)		80		1'		
								200				
VI. SUPPLEMENT		Future Plans			SELECTED COEFFICIENTS							
a) To raise the level of mechanisation and automation by 20% - 30%.					- Mach. & equip. per factory worker on 1st shift: Drs. 1,340,000							
b) Introduction of new products.					- Value added per employee: Drs. 789,000							
c) Expansion of the finishing department.					- Annual wage per factory worker: Drs. 381,000							
1/ Of which Drs. 35 million are funds belonging to the enterprise.					- Variable input cost/gross production ratio: 2/ 64.6 %							
2/ Variable costs exclude wages and salaries.					- Gross accumulation/gross production ratio: 3/ 12.5 %							
3/ Gross accumulation includes interests paid.					(at full capacity) 17.9 %							
					- Level of production at break-even point: 64 % of the 1963 actual level.							

A knitting mill producing woollen knitwear. Annual capacity output is 100t on two shifts operation. No imported materials are used, while one-fourth of the output is sold abroad. The enterprise was founded in 1948; located 50 Km from the basic raw materials and also close to a large consumers' centre.

I. FIXED CAPITAL (end of 1963)	Original purchase value	1963 re- placement value	Capital expenditures in the past years: (Drs. million)			
			1953-54	1955-57	1958-60	1961-63
TOTAL (Drs. million)	119	123				
Buildings & land improvements	23	33				
Machinery & equipment	95	95				
Other capital assets	-	-				
<b>Major machinery crucial for determining the overall production capacity:</b>			<b>Electric motors:</b>			
Woollen knitwear: Flat and circular knitting machines (2 shifts).			Total installed capacity: 9 KW			
(About half of machinery and equipment are foreign makes).			Of which actually operated in 1963:			
			1st shift 1.5 \$; 2nd shift 1.5 \$; 3rd shift - \$			
			<b>Technological features:</b> Flat knitting machines are manually operated. Finishing is done on modern machines. Mechanization and automation are insufficient (rated at only 5. and 3, respectively). The assortment of products is too large technologically but appropriate commercially.			

II. LABOUR (1963)	TOTAL no. of employees:			Educational background of workers:				
	1st shift	2nd shift	3rd shift	Techn.	Econ.	Low	Others	Total
1. Factory workers:								
Total 22 persons	122	90	-					
(432 thous. manhrs.)	(324)	(1.8)	(-)					
- Winding of yarn	16	8	-					
- Knitting	63	57	-					
- Finishing	4	33	-					
- Auxiliary shops	3	-	-					
2. Non-factory workers:	36 persons							
(75 thous. manhours)								

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1963 *		617
Woollen knitwear	68 t	617

\* Including turnover tax on sold products.

**Capacity output:**

Woollen knit-wear: 100t - Rate of utilisation is 68%.

Operation was curtailed in 1963 owing to a large increase in the inventory of finished products in the preceding year, when demand was weak. Optimum number of factory workers on the 1st shift for full capacity operation is estimated to be 186, i.e. 52% more than the actual employment in 1963.

VI. SUPPLEMENT	Future Plans
-	Mechanization and automation of the factory.
-	Overhauling of the existing shops.
1/	Of which Drs. 23 million are funds belonging to the enterprise.
2/	The denominator is 119; excluding workers in "auxiliary shops".
3/	Gross accumulation includes interests paid.

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. Million)
TOTAL actual consumption 1963		335
1. Energy inputs: total		1
- Electricity	8 Mwh	1
2. Major production materials: total		295
- Combed wool yarn	73 t	295
3. Repairs & maintenance: total		4
4. Other material & non-factor service inputs		35

V. VALUE ADDED (1963)	(Drs. Million)
TOTAL (except turnover tax)	220
- Wages of factory workers	105
- Salaries of non-factory workers	30
- Depreciation	7
- Interests paid	14
- Other accumulation (Turnover tax)	64 1/2

**SELECTED COEFFICIENTS**

- Mach. & equip. per factory worker on 1st shift:	Drs. 789,000 2'
- Value added per employee:	Drs. 859,000
- Annual wage per factory worker:	Drs. 477,000
- Variable input cost/gross production ratio:	72.3 %
- Gross accumulation/gross production ratio:	13.9 3/ %
(at full capacity)	18.7 %
- Level of production at break-even point:	49 % of the 1963 actual level.



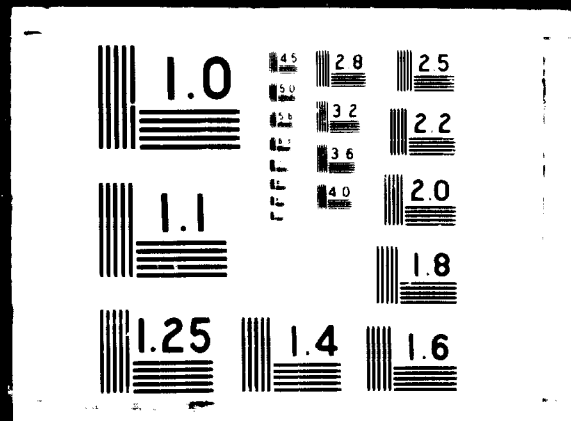


**18 . 12 . 73**

# 4 OF 10

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# 6 1 8



A large enterprise manufacturing underwear and ready-made clothes. Founded in 1944. Annual capacity output is over 4.5 million pieces of underwear and ready-made clothes on partial two-shifts operation. 7 % of materials (artificial leather, wool fabrics, parachute silk and artificial fur) were imported in 1963; only 10 % of the output was directly exported.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 re- placement value	Capital expenditures in the past years: (Drs. million)							
TOTAL (Drs. million)		1,623	1,670	1953-54	1955-57	1958-60	1961-63				
Buildings & land improvements		956	970	Gross expenditures	142	238	278	338			
Machinery & equipment		667	700	Retirements	94	142	145	147			
Other capital assets		-	-	Calculated average age of fixed assets: 8 years							
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Electric motors:</b>							
All products: Sewing machines, irons, tailoring machines, hand tailoring machines, tailoring tables and trimming machines (2 shifts). (40 % of machinery & equipment were imported.)				Total installed capacity: 490 KW Of which actually operated in 1963: 1st shift 100 %; 2nd shift 100 %; 3rd shift - %							
Technological features: Assembly-line system for production of ready-made clothes. Assortment of products from the standpoint of technological efficiency is too large (but appropriate for sales purposes). Sufficient mechanisation, rated at 80 %. Located in a large consumer centre and serves mostly the domestic markets.											
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:						
		1st shift	2nd shift	3rd shift	Techn. High.	Elem.	Low	Others	Total		
1. Factory workers:					Univ. or higher	1	5	6	3	15	
Total 2,597 persons		1,480	1,117	-	Tech. Higher sch.	6	3	4	-	13	
(5,750 thous. manhrs.)		(3,277)	(2,473)	(-)	Secondary sch.	26	31	-	29	86	
- Tailoring		362	-	-	Primary school	-	-	-	3,160	3,160	
- Sewing		958	957	-	IV. INTERMEDIATE INPUTS						
- Finishing		160	160	-	Quantity		Value (Drs. Million)				
2. Non-factory workers: 677 persons		(1,400 thous. manhours)			TOTAL actual consumption 1963 6,942						
					1. Energy inputs: total 54						
					- Electricity 720 Mwh 26						
					- Brown coal 156 t 3						
					- Liquid fuel 276 t 25						
					2. Major production materials: total 6,297						
					- Wool fabrics 1,927,000 m2 2,406						
					- Silk fabrics 1,145,000 m2 1,057						
					- Cotton fabrics 4,897,000 m2 1,697						
					- Synthetic fabrics 330,000 m2 1,137						
					3. Repairs & maintenance: total 56						
					4. Other material & non-factor services inputs 535						
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1963) (Drs. Million)						
TOTAL actual revenue output 1963				10,564	TOTAL (except turnover tax) 2,806						
- Underwear		1,319,000 pos.	1,843		- Wages of factory workers 1,373						
- Dresses		57,000 "	108		- Salaries of non-factory workers 392						
- Jackets		5,000 "	49		- Depreciation 57						
- Raincoats		144,000 "	1,215		- Interests paid 195						
- Men's coats and overcoats		56,000 "	987		- Other accumulation 789 1/						
- Men's suits		92,000 "	1,426		(Turnover tax) 816						
- Men's jackets		80,000 "	580								
- Men's trousers		351,000 "	1,303								
- Ladies' coats and overcoats		51,000 "	802								
- Ladies' suits		2,000 "	16								
- Ladies' blouses		30,000 "	40								
- Children's clothes		290,000 "	1,095								
- Other ready-made clothing		370,000 "	1,100								
* Includes turnover tax on sold products.											
Capacity output:											
Underwear		2,100,000 pos.									
Men's jackets		220,000 "									
Ladies' coats & overcoats		60,000 "									
Men's coats, overcoats & raincoats		260,000 "									
Other ready-made clothing		1,980,000 "									
				Overall rate of utilisation is 62 %.							
- One-third of the underutilisation attributable to insufficient demand; another one-third to insufficient supply of raw materials. The same number of workers on the 1st shift can achieve the full utilization of the existing capacity.											
VI. SUPPLEMENT						SELECTED COEFFICIENTS					
- Introduction of semi-automatic production lines is being planned.						- Mach. & equip. per factory worker on 1st shift: Drs: 472,000					
1/ Drs. 304 million are funds belonging to the enterprise.						- Value added per employee: Drs. 857,000					
2/ Wages and salaries are considered as fixed costs.						- Annual wage per factory worker: Drs. 528,000					
3/ Gross accumulation includes interests paid.						- Variable input cost/gross production ratio: 65.3 %					
						- Gross accumulation/gross production ratio: 10.1 %					
						(at full capacity) 19.4 %					
						- Level of production at break-even point: 71 % of the 1963 actual level					

An enterprise producing men's shirts, ready-made clothes and underwear. Annual capacity output is around 5.8 million sq. m. of shirts, underwear and ready-made clothes on full two-shift operation. Various fabrics (36 % of the material expenditures) are imported; almost half of the output is directly exported. The enterprise was founded in 1949.

I. FIXED CAPITAL (end of 1965)	Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)			
			1953-54	1955-57	1958-60	1961-63
TOTAL (Drs. million)	778	898	Gross expenditures 13	89	125	223
Buildings & land improvements	425	545	Retirements 13	21	35	71
Machinery & equipment	307	307	Calculated average age of fixed assets: 7.2 years			
Other capital assets	46	46	<b>Electric motors:</b>			
<b>Major machinery crucial for determining the overall production capacity:</b>			Total installed capacity: 214 KW			
Ready-made clothes and underwear: Sewing machines (2 shifts).			Of which actually operated in 1965:			
(70 % of machinery & equipment were imported from abroad.)			1st shift 100 %; 2nd shift 88 %; 3rd shift - %			
			<b>Technological features:</b> Serial production of ready-made clothes (tailoring, sewing and ironing). Medium mechanisation (rated at 70 %). One-fourth of the production material are supplied by six sub-contractors, three of which devote their entire capacity to the production for this enterprise. Good communication lines with both domestic and foreign markets. Product-mix technologically too large.			

II. LABOUR (1965)	TOTAL no. of employees:			Educational background of workers:					
	1st shift	2nd shift	3rd shift	Univ. or higher	Tech. Higher sch.	Secondary sch.	Primary school	Others	Total
1. Factory workers:	915	779	-	-	2	11	-	1	15
Total	1,685 persons	(1,831)	(1,519)	2	11	-	-	-	13
	(3,350 thous. manhrs.)	(1,831)	(1,519)	11	21	-	-	39	71
- Clothes	535	390	-	Secondary sch. 11 21 - - 39 71					
- Underwear	380	380	-	Primary school - - - 1,846 1,846					
2. Non-factory workers:	360 persons			IV. INTERMEDIATE INPUTS					
	(898 thous. manhours)			TOTAL actual consumption 1965					

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. million)	Quantity	Value (Drs. million)
TOTAL actual revenue output 1965*		8,097	1. Major production materials: total	4,601*
- Overcoats and coats	240,000 m2	948	- Cotton fabrics	2,976,000 m2 913
- Jackets	182,000 m2	647	- Wool fabrics	1,352,000 m2 2,155
- Trousers	396,000 m2	1,017	- Synthetic silk fabrics	831,000 m2 332
- Children's ready-made clothes	502,000 m2	1,450	- Other synthetic fabrics	1,130,000 m2 958
- Men's shirts	2,996,000 m2	3,709	- Card board (for packaging)	338 t 48
- Other ready-made underwear	198,000 m2	288	- Others	.. 197

\* Including turnover tax on sold products.  
Individual values include packaging costs which amount to Drs. 200 million altogether.

## Capacity output:

Ready-made clothes	1,800,000 m2	Overall rate of utilization is 77 %.
Ready-made underwear	4,000,000 m2	

Full capacity output can be achieved without additional manhours on the first shift.

2. Other material & non-factor services inputs	501
3. Repairs & maintenance: total	41
4. Other material & non-factor services inputs	501

V. VALUE ADDED (1965)	(Drs. million)
TOTAL (except turnover tax)	2,408
- Wages of factory workers	847
- Salaries of non-factory workers	388
- Depreciation	30
- Interests paid	239
- Other accumulation (Turnover tax)	964 1/
	(587)

VI. SUPPLEMENT	Future plans:	SELECTED COEFFICIENTS
a) To narrow the assortment and increase the extent of serial production.		- Mach. & equip. per factory worker on 1st shift: Drs. 335,000
b) To replace old machines with up-to-date ones.		- Value added per employee: Drs. 1,177,000
c) Introduction of test system.		- Annual wage per factory worker: Drs. 502,000
d) To raise the degree of mechanization up to the world level.		- Variable input cost/gross production ratio: 61.0
1/ Of which Drs. 371 million are funds belonging to the enterprise.		- Gross accumulation/gross production ratio: 15.9
		(at full capacity 21.1)
		- Level of production at break-even point: 59 % of the 1965 actual level
		1/ Wages and salaries are considered as fixed costs.
		2/ Gross accumulation includes interests paid.

An enterprise, founded in 1947, producing underwear and ready-made clothes from wool, cotton and synthetic fabrics. Annual capacity output is 5.5 million m<sup>2</sup> of underwear and ready-made clothes plus 15t woollen knitwear on full two-shift operation. Synthetic fabrics are imported (accounting for 13% of the total materials expenditure); exports amount to 24% of the total output.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 re-placement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)		914	1,084	21	34	73	631			
Buildings & land improvements		568	738	1	12	16	75			
Machinery & equipment		309	309							
Other capital assets		37	37							
<p><u>Major machinery crucial for determining the overall production capacity:</u></p> <p>Underwear and other ready-made clothes: Sewing machines, irons and tailoring equipment (2 shifts).</p> <p>Knitwear: knitting machines and sewing machines (2 shifts).</p> <p>3% of machinery and equipment was imported).</p>				<p>Gross expenditures: 21 34 73 631</p> <p>Retirements: 1 12 16 75</p> <p>Calculated average age of fixed assets: 4.2 years</p> <p><u>Electric motors:</u></p> <p>Total installed capacity: 203 KW</p> <p>Of which actually operated in 1965:</p> <p>1st shift 100%; 2nd shift 100%; 3rd shift -</p> <p><u>Technological features:</u> Tailoring on tailoring tables, sewing on an assembly-line system for each category of products. Mechanization is at the European level (rated as some 85% to 90% of the world standard).</p>						
II. LABOUR (1965)		TOTAL no. of employees:			Educational background of workers:					
		1st shift	2nd shift	3rd shift					Total	
1. Factory workers:		636	547	-	Univ. or higher	2	-	-	-	2
Total 1,183 persons		(2,377 thous. manhrs.)	(1,275)	(1,095)	Tech. Higher sch.	6	-	-	-	6
					Secondary sch.	6	15	-	8	29
					Primary school	-	-	-	1,239	1,239
- Underwear		436	382	-	IV. INTERMEDIATE INPUTS					
- Ready-made clothing		175	145	-	Quantity		Value (Drs. Million)			
- Knit-wear		25	20	-	TOTAL actual consumption 1965					
2. Non-factory workers:		93 persons			1. Energy inputs: total		3,320			
		(197 thous. manhours)			- Electricity		879 Mwh	14		
					- Coke		55 t	-		
					- Brown coal		774 t	3		
					- Liquid fuel		63 t	3		
					2. Major production materials: total		3,165			
					- Cotton fabrics		3,690,000 m <sup>2</sup>	1,717		
					- Synthetic silk fabrics		231,000 m <sup>2</sup>	140		
					- Wool fabrics		332,000 m <sup>2</sup>	670		
					- Synthetic fabrics		712,000 m <sup>2</sup>	570		
					- Cotton yarn		2 t	6		
					- Wool yarn		14 t	62		
					3. Repairs & maintenance: total		13			
					4. Other material & non-factory services inputs		122			
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1965)		(Drs. Million)			
TOTAL actual revenue output 1965 *			4,998		TOTAL (except turnover tax)		1,223			
- Underwear		4,017,000 m <sup>2</sup>	3,505		- Wages of factory workers		574			
- Ready-made clothes		476,000 m <sup>2</sup>	1,389		- Salaries of non-factory workers		95			
- Woollen knit-wear		14 t	104		- Depreciation		26			
Including turnover tax on sold products.					- Interests paid		152			
<u>Capacity output:</u>					- Other accumulation (Turnover tax)		376 1/2			
Underwear		4,500,000 m <sup>2</sup>	Overall rate of utilization is 66%				455			
Ready-made clothes		1,000,000 m <sup>2</sup>								
Woollen knit-wear		15 t								
- Underutilization due to the shortage of labour; additional 264 factory workers would be needed on the first shift for full utilisation of the existing capacity.										
VI. SUPPLEMENT		REMARKS CONCERNING								
1. Of which Drs. 115 million are funds belonging to the enterprise.		- Mach. & equip. per factory worker on 1st shift: Drs. 486,000		- Value added per employee: Drs. 958,000		- Annual wage per factory worker: Drs. 485,000		- Variable input cost/gross production ratio: 82.5 %		
2. Gross accumulation includes interests paid and other accumulation.		- Level of production at break-even point: 32 % of the 1965 actual level.		- Gross accumulation/gross production ratio: 21.5 % (at full capacity)						

An enterprise producing men's shirts; also makes ready-made underwear on commission work for a foreign firm. Annual capacity output including commission work is some 2.7 million pieces or 3.5 million m<sup>2</sup> on two shift operation. Nylon and cotton fabrics, which account for some one-third of the material expenditures, are imported and about the same proportion of the output is exported. The enterprise was founded in 1945.

I. FIXED CAPITAL (end of 1965)	Original purchase value	1965 replacement value
	TOTAL (Drs. million)	233
Buildings & land improvements	104	134
Machinery & equipment	125	130
Other capital assets	4	4

Major machinery crucial for determining the overall production capacity:

Men's shirts: Sewing machines (2 shifts).

(90 % of machinery and equipment was imported.)

Capital expenditures in the past years: (Drs. million)

	1953-54	1955-57	1958-60	1961-63
Gross expenditures	4	8	53	105
Retirements	6	10	18	26

Calculated average age of fixed assets: 6 years

Electric motors:

Total installed capacity: 89 KW  
Of which actually operated in 1965:

1st shift 100 %; 2nd shift 98 %; 3rd shift - %

Technological features: Specialized in men's shirts (tailoring, sewing and finishing). Partly engages in a sub-contract work for a foreign firm. Mechanization and automation are not satisfactory, but can compete in the domestic market. Mechanization falls short of the world standard by about 20 %. The large renovation programme was undertaken mostly in 1964; the 1963 production (and installed capacity) was yet almost unaffected by this programme.

II. LABOUR (1965)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:	282	214	-
Total 496 persons (1,013 thous. manhrs.)	(579)	(434)	(-)
- Men's shirts	266	210	-
- Warehousing and other services	14	4	-
2. Non-factory workers:	79 persons		
	(178 thous. manhrs.)		

Educational background of workers:

	Tech.	Elem.	Low	Others	Total
Univ. or higher	-	-	-	-	-
Tech. Higher sch.	-	-	-	-	-
Secondary sch.	8	9	5	17	39
Primary school	-	-	-	536	536

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. million)
	TOTAL actual revenue output 1965 *	
- Men's shirts	1,054,000 pcs	1,992
- ready-made underwear **	464,000 pcs	161

\* Including turnover tax on sold products.

\*\* Commission work for a foreign firm, which supplies materials.

Capacity output:

Men's shirts: 2,690,000 pcs.  
Rate of utilization is 71 %.

- No additional factory workers would be needed for full capacity, operation on the 1st shift.

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. million)
	TOTAL actual consumption 1965	
1. Energy inputs: total		8
- Electricity	226 Mwh	5
- Brown coal	268 t	2
- Liquid fuel	8 t	1
2. Major production materials: total *		1,154
- Cotton fabrics	1,630,000 m <sup>2</sup>	650
- Synthetic fabrics	951,000 m <sup>2</sup>	504

(\* Some Drs. 350 million imported.)

3. Fuel and lubricants: total	12
4. Other material & non-factory services inputs	250

V. VALUE ADDED (1965)	(Drs. million)
TOTAL (except turnover tax)	300
- Wages of factory workers	236
- Salaries of non-factory workers	49
- Depreciation	11
- Interests paid	36
- Other accumulation	208 1/2
(Turnover tax)	(100)

#### VI. SUPPLEMENT Future plans:

The enterprise is planning to improve the existing technology through further mechanization.

- 1/ Of which Drs. 66 million are funds belonging to the enterprise.
- 2/ The denominator is 268, L. s. excluding the workers in "warehousing" and "other services".
- 3/ Gross accumulation includes interest paid.

#### SELECTED COEFFICIENTS

- Mach. & equip. per factory worker on 1st shift: Drs. 485,000 ✓
- Value added per employee: Drs. 919,000
- Annual wage per factory worker: Drs. 476,000
- Variable input cost/gross production ratio: 72 %
- Gross accumulation/gross production ratio: ✓ 12.4 %
- Level of production at break-even point: 99 % of the 1965 actual level.

An old enterprise manufacturing ready-made underwear from cotton fabrics. Capable of producing 7.25 million m<sup>2</sup> of finished underwear on two-shift operation. More than three-fourths of direct production materials (mainly cotton fabrics) are of domestic origin; however 42% of the output is directly exported. The enterprise was founded in 1914.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)																																		
TOTAL (Drs. million)		634	730	<table border="1"> <thead> <tr> <th></th> <th>1953-54</th> <th>1955-57</th> <th>1958-60</th> <th>1961-63</th> </tr> </thead> <tbody> <tr> <td>Gross expenditures</td> <td>142</td> <td>42</td> <td>85</td> <td>273</td> </tr> <tr> <td>Retirements</td> <td>4</td> <td>20</td> <td>33</td> <td>81</td> </tr> </tbody> </table>					1953-54	1955-57	1958-60	1961-63	Gross expenditures	142	42	85	273	Retirements	4	20	33	81																
	1953-54	1955-57	1958-60	1961-63																																		
Gross expenditures	142	42	85	273																																		
Retirements	4	20	33	81																																		
Buildings & land improvements		267	340	Calculated average age of fixed assets: 6.2 years																																		
Machinery & equipment		256	270	Electric motors: 137 KW																																		
Other capital assets		111	120	Total installed capacity: Of which actually operated in 1963:																																		
<p><u>Major machinery crucial for determining the overall production capacity:</u></p> <p>Men's, ladies' and children's underwear: Sewing machines (2 shifts).</p> <p>5% of machinery and equipment is of foreign origin).</p>				<p>1st shift 100%; 2nd shift 92%; 3rd shift - %</p> <p><u>Technological features:</u></p> <p>Employs a system of synchronization with relatively highly mechanized set-up. (Mechanization rate 90%). Uses cotton materials only. Excellent location with respect to markets.</p>																																		
II. LABOUR (1963)		TOTAL no. of employees: 977			<u>Educational background of workers:</u>																																	
		1st shift	2nd shift	3rd shift	<table border="1"> <thead> <tr> <th></th> <th>Techn. Highb.</th> <th>Low</th> <th>Others</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Univ. or higher</td> <td>-</td> <td>1</td> <td>-</td> <td>1</td> </tr> <tr> <td>Tech. Higher sch.</td> <td>3</td> <td>1</td> <td>-</td> <td>4</td> </tr> <tr> <td>Secondary sch.</td> <td>-</td> <td>26</td> <td>-</td> <td>26</td> </tr> <tr> <td>Primary school</td> <td>-</td> <td>-</td> <td>-</td> <td>946</td> </tr> </tbody> </table>						Techn. Highb.	Low	Others	Total	Univ. or higher	-	1	-	1	Tech. Higher sch.	3	1	-	4	Secondary sch.	-	26	-	26	Primary school	-	-	-	946				
	Techn. Highb.	Low	Others	Total																																		
Univ. or higher	-	1	-	1																																		
Tech. Higher sch.	3	1	-	4																																		
Secondary sch.	-	26	-	26																																		
Primary school	-	-	-	946																																		
1. Factory workers:																																						
Total 321 persons		452	369	-																																		
(\$,910 thous. manhrs.) (1,050) (860) (-)																																						
- Tailoring		2	16	-																																		
- Sewing		305	239	-																																		
- Ironing		55	-	-																																		
- Packing		11	-	-																																		
- Mechanical shop		1	5	-																																		
- Other shop and services		51	12	-																																		
2. Non-factory workers:		156 persons																																				
		(317 thous. manhours)																																				
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	IV. INTERMEDIATE INPUTS																																		
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- Underutilization due to imbalance between capacities of various processes and insufficient supply of materials. No additional factory workers are required on the 1st shift for full utilization of the existing capacity.																																						
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- Wages of factory workers		a) Introduction of synthetic materials.																																				
- Salaries of non-factory workers		b) Automation of sewing and ironing.																																				
- Depreciation		1 of which Drs. 147 million internally kept as funds belonging to the enterprise.																																				
- Interests paid		2 The denominator is 41, excluding workers in "other shop and services".																																				
- Other accumulation (Turnover tax)		3 Gross accumulation includes interests and other accumulation.																																				

An enterprise producing suits, coats, overcoats, jackets, trousers and other ready-made clothes. Annual capacity output is 320,000 pieces on two shifts. The establishment was founded in 1946. Solely serves the local market and uses the locally produced materials only.

I. FIXED CAPITAL (end of 1965)	Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)			
			1953-54	1955-57	1958-60	1961-63
TOTAL (Drs. million)	127	144	3	8	37	92
Buildings & land improvements	59	67	-	-	4	12
Machinery & equipment	58	61				
Other capital assets	10	16				
<b>Major machinery crucial for determining the overall production capacity:</b>			Calculate: average age of fixed assets: <u>2.5</u> years			
<b>Ready-made clothes:</b> Capacity of the tailoring shops (1 shift); sewing and other special machines and steam irons (2 shifts). (50 % of machinery and equipment was imported.)			<b>Electric motors:</b> Total installed capacity: <u>46</u> KW Of which actually operated in 1965: 1st shift <u>100</u> %; 2nd shift <u>87</u> %; 3rd shift <u>-</u> %			
			<b>Technological features:</b> Serial production of ready-made clothing. Product-mix is technologically too large but appropriate commercially. Well mechanised (rated at about 80 % of the European standard). Location is unfavourable with respect to road and train transport lines.			

II. LABOUR (1965)	TOTAL no. of employees: <u>368</u>		
	1st shift	2nd shift	3rd shift
1. <b>Factory workers:</b>			
Total <u>300</u> persons	<u>165</u>	<u>135</u>	<u>-</u>
( <u>684</u> thous. manhrs.)	( <u>372</u> )	( <u>312</u> )	( <u>-</u> )
- Tailoring	138	110	-
- Mechanical and other ancilliary shops	27	25	-
2. Non-factory workers: <u>68</u> persons			
( <u>118</u> thous. manhours)			

Educational background of workers:	Total				
	Tech. High.	Elem.	Low	Others	Total
Univ. or higher	-	3	-	-	3
Tech. Higher sch.	-	1	-	-	1
Secondary sch.	4	5	-	-	9
Primary school	-	-	-	355	355

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1965		<u>1,208</u>
- Men's coats and overcoats	16,000 pos	190
- Men's suits	10,000 "	168
- Men's jackets	19,000 "	137
- Men's trousers	24,000 "	45
- Ladies' coats and overcoats	24,000 "	328
- Children's clothes	25,000 "	136
- Other ready-made clothing	110,000 "	198

\* Including turnover tax on sold products.

**Capacity output:**

ready-made clothes: 318,000 pos. - Rate of utilisation is 75 %.

- More than half of underutilisation attributable to engineering deficiencies; the rest to unbalance between capacities of different processes. The number of workers required in the first shift for full utilisation of the existing capacity is estimated to be 180; i.e. 10 % more than the actual employment in 1963.

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. Million)
TOTAL actual consumption 1965		<u>764</u>
1. <b>Energy inputs: total</b>		<u>5</u>
- Electricity	138 Kwh	4
- Brown coal	74 t	1
- Lignite	30 t	(negligible)

2. <b>Major production materials: total</b>		<u>703</u>
- Fabrics (cotton, wool and synthetic)	957,000 m <sup>2</sup>	703

3. <b>Repairs &amp; maintenance: total</b>		<u>56</u>
4. <b>Other material &amp; non-factor services inputs</b>		

V. VALUE ADDED (1965)	(Drs. Million)
TOTAL (except turnover tax)	<u>188</u>
- Wages of factory workers	126
- Salaries of non-factory workers	27
- Depreciation	5
- Interests paid	58
- Other accumulation	112 1/2
(Turnover tax)	( 110 )

VI. SUPPLEMENT	Future plans:
a)	Improvement of the existing production processes.
b)	Enlargement of warehouses in order to preserve the quality of the finished products.
1)	Of which funds belonging to the enterprise are Drs. of million.
2)	Gross accumulation includes interest and other accumulation.

SELECTED COEFFICIENTS	
- Mach. & equip. per factory worker on 1st shift:	Drs. 370,000
- Value added per employee:	Drs. 891,000
- Annual wage per factory worker:	Drs. 420,000
- Variable input cost/gross production ratio:	76.3 %
- Gross accumulation/gross production ratio:	15.5 %
(at full capacity)	17.8 %
- Level of production at break-even point:	34 % of the 1965 actual level.



An enterprise (founded in 1946) manufacturing ladies' blouses, dresses and jackets, coats, overcoats and other ready-made clothing. Annual capacity output is about 770 thousand pieces on one shift operation. 32 % of materials (mainly cotton fabrics, velvet and artificial leather) are imported; 19 % of the products are exported.

1. FIXED CAPITAL	(end of 1963)	Original purchase value	1963 re-placement value
TOTAL (Drs. million)		406	425
Buildings & land improvements		316	400
Machinery & equipment		90	95
Other capital assets		-	-

Major machinery crucial for determining the overall production capacity:

Ladies' ready-made clothes: Electric sewing machines and special machines (1 shift).

(43 % of the machinery and equipment were imported.)

Capital expenditures in the past years: (Drs. million)				
	1953-54	1955-57	1958-60	1961-63
Gross expenditures	2	13	55	376
Retirements	2	6	8	18

Calculated average age of fixed assets: 1 year

Electric motors:

Total installed capacity: 40 KW  
Of which actually operated in 1963:

1st shift 100 %; 2nd shift - %; 3rd shift - %

Technological features: Small scale serial production of clothing. Of medium level of mechanization. The capacity expansion in 1963 was incomplete and unbalanced yet, with disproportionately large additions to the building relative to equipment. The assortment of products is too large both technologically and commercially.

II. LABOUR	(1963)	TOTAL no. of employees:		
		1st shift	2nd shift	3rd shift
1. <u>Factory workers:</u>				
Total	273 persons	273	-	-
	( 700 thous. manhrs. )	( 700 )	( - )	( - )
- Sewing		227	-	-
- Ironing		30	-	-
- Tailoring		16	-	-
2. <u>Non-factory workers:</u>	74 persons			
	( 134 thous. manhours )			

Educational background of workers:

	Tech.	Econ.	Law	Others	Total
Univ. or higher	-	-	-	-	-
Tech. Higher sch.	-	1	-	-	1
Secondary sch.	3	11	-	-	14
Primary school	-	-	-	332	332

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1963 *		1,730
- Ladies' dresses	78,000 pos.	234
- Ladies' jackets	3,000 pos.	24
- Coats	27,000 pos.	243
- Overcoats	61,000 pos.	990
- Children's coats	44,000 pos.	176
- Ladies' blouses	22,000 pos.	36
- Other ready-made clothes	27,000 pos.	27

\* Including turnover tax on sold products.

Capacity output:

Ready-made clothes: 770,000 pos. - Rate of utilization is 29 %.

- The underutilization due to reconstruction of the factory in 1963 (engineering adjustments for new machines not completed yet). Number of factory workers required on the first shift for full utilisation of the present capacity is 240, i.e. 12 % less than the existing employment in 1963.

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. Million)
TOTAL actual consumption 1963		1,169
1. <u>Energy inputs:</u> total		4
- Electricity	118 Mwh	4
2. <u>Major production materials:</u> total		1,057
- Fabrics*	916,000 m <sup>2</sup>	1,057

(\* Of which about one-fourth purchased under long-term contracts.)

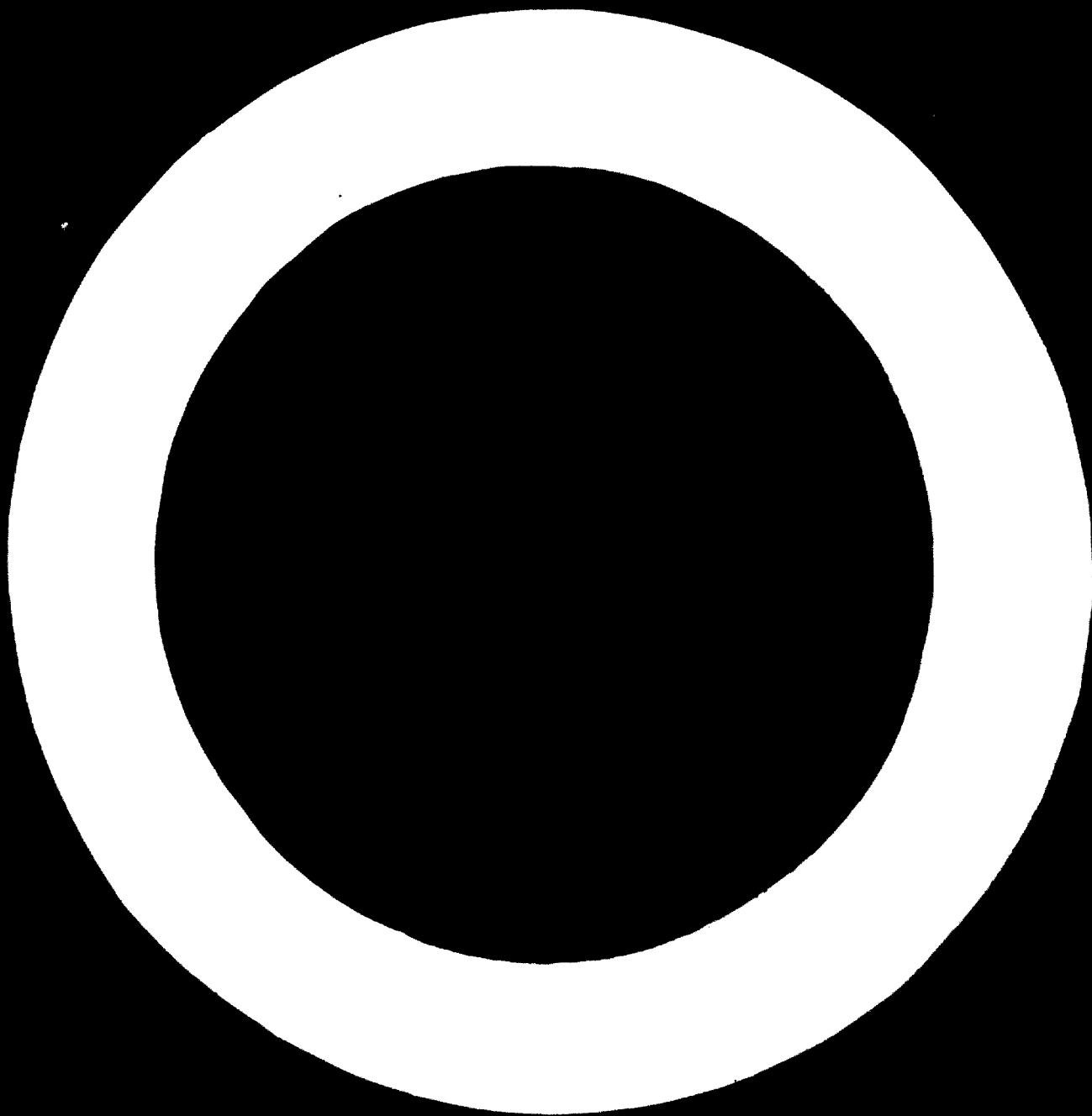
3. <u>Repairs &amp; maintenance:</u> total		1
4. <u>Other material &amp; non-factor service inputs</u>		104

V. VALUE ADDED	(1963)	(Drs. Million)
TOTAL (except turnover tax)		482
- Wages of factory workers		154
- Salaries of non-factory workers		35
- Depreciation		11
- Interests paid		57
- Other accumulation (Turnover tax)		205
		( 79 )

VI. SUPPLEMENT	Future plans:
	- Better and more rational utilisation of the installed capacity is being planned.
	1/ Of which Drs. 97 million are funds belonging to the enterprise.
	2/ Wages and salaries are considered as fixed costs.
	3/ Gross accumulation includes interest paid.

SELECTED COEFFICIENTS

- Mach. & equip. per factory worker on 1st shift: Drs.	348,000
- Value added per employee: Drs.	1,389,000
- Annual wage per factory worker: Drs.	564,000
- Variable input cost/gross production ratio:	64.3 %
- Gross accumulation/gross production ratio: (at full capacity)	15.83 %
- Level of production at break-even point:	30.0 %
	56 % of the 1963 actual level.



**MAJOR PRODUCTS:** Plywood panels. Annual capacity output is about 15,000 cu. m. on the basis of one shift operation.

**REPORTING UNIT:** Branch of a two-establishment enterprise (the other establishment is engaged in logging) with Fr. two million capital stock and employees 290 as of 1964. Founded in 1917.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( Fr. 000 )	<u>5,239</u>	<u>2,374</u>
1. Land	142	142
2. Land improvements	-	-
3. Buildings	988	553
4. Other construction works	528	420
5. Machinery & equipment	3,361	1,237
6. Tools & instruments	5	1
7. Vehicles	134	2
8. Office furniture & fixtures	81	18

**DETAIL OF 1.5 (No.)**

	Total bk. value net. depr.	Avg. Age (Yr.)	Oper. rate Cond.	Depr. rate (%)
a. Wood peeling machine : D17	122	4	A	15
b. Wood peeling machine : D27	..	10	"	-
c. Wood peeling machine : D32	..	10	"	-
d. Drier : Fouché	..	10	"	-
e. Drier : Valette	..	10	"	-
f. Drier : Siespeltkamp	..	10	"	-
g. Drier : Schilde	362	1	"	15
h. Guillotines : Muller (2)	240	1	"	15
i. Guillotines : MS 17	..	10	"	-
j. Guillotines : MS 21	43	8	"	-
k. Guillotines : John (2)	..	7	"	15
l. Dresser : Dielh	50	6	"	15
m. Press : Becker	73	8	"	-
n. Presses (3) : Huideoau and 2 Valettes	..	10	"	-
o. Sander : C 1850	48	9	"	-
p. Sander : B 1350	58	2	"	15
q. Sander : B 1850	97	1	"	15
r. Boilers : Faroot & Babcock	..	10	"	-
e. Boilers : Neura	213	1	"	15

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> ( Fr. 000 )	<u>2,942</u>	.. %
1. Direct production materials	1,682 *	
2. Other input materials	-	
3. Work in process	132	
4. Finished products	1,128	

- Actual inventories of finished products 9.5 % of annual gross production

- Seasonal variations: ..

\* Increased from the level of 1963 by more than Fr. one million.

Capacity of electr. motors: 1550 KW

Total load, capacity of trucks: 35 t

Machines were part imported, part domestically made.

Sign " - " under depreciation rate indicates that the machine is already completely amortized.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities are excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	<u>250</u>	-	-
1. Direct production ( n. 158 )	<u>213</u>	-	-
Annual total manhours (000)	( 519 )	( )	( )
a. Boiler room	6	-	-
b. Cutting	7	-	-
c. Peeling	24	-	-
d. Trimming (on guillotine)	28	-	-
e. Drying	30	-	-
f. Selection - joining	8	-	-
g. Dressing	6	-	-
h. Glue preparation	4	-	-
i. Panels setting	56	-	-
j. Presses	6	-	-
k. Sanding	6	-	-
l. Storehouse	22	-	-
2. <b>Auxiliary activities</b> ( n. 30 )	<u>37</u>	-	-
(including maintenance)			

**EDUCATIONAL BACKGROUND** (No. of employees)

Educational Background	Univ. or higher		Sr. High sch. or equiv.		Other	
	Engl.	Other	Engl.	Other	Engl.	Other
<b>TOTAL</b>	2	-	11	237	-	-
<b>Management</b>	2	-	-	-	-	-
<b>Direct Production</b>	-	-	-	-	-	-
<b>Skilled</b>	-	-	-	22	-	-
<b>Semi-skilled</b>	-	-	-	93	-	-
<b>Unskilled</b>	-	-	-	98	-	-
<b>Auxiliary Activities</b>	-	-	-	-	-	-
<b>Skilled</b>	-	-	11	19	-	-
<b>Semi-skilled</b>	-	-	-	-	-	-
<b>Unskilled</b>	-	-	-	-	-	5

- Average working hours per annum per direct production worker: 2,434 hours.

- Proportion of motors occupied: 98%.

- **Technological features:**  
a): Uses masut.  
d) & e): Continuous operation.

- Degree of mechanization is high for (a), fair for (j) and poor for (d) and (e). Automation is poor for (d) and (e); out of date for (j).

- Direct production workers classified as "skilled" are engaged in: operation of steam boilers, peeling, trimming on continuous delivery chain and sanding. Auxiliary activities workers classified as "skilled" are engaged in: maintenance, administrative jobs and truck driving.

IX. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)																																											
TOTAL VALUE OF PRODUCTION ( Fr. 000 ) 11,838				TOTAL VALUE OF CONSUMPTION ( Fr. 000 ) 7,645																																											
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<p><b>CAPACITY OUTPUT:</b></p> <p>About the same as the 1964 actual production level.</p>				<p>* Of which 4,480 ton transferred from the other establishment of the company and valued at Fr. 341 / ton.</p> <p>** In 1964 some Fr. 8 million worth of direct production materials were purchased, but more than one million was not used and accumulated as inventory.</p>																																											
<p>Unit value of product: Market value f.o.b. before sales tax</p> <p>Unit value of material: Market price c.i.f.</p> <p>- Plywood panels partly exported.</p> <p>- Logs other than supplied by the other establishment of the company are imported. Glue made domestically and delivered with freight rate 7% of c.i.f. value.</p>				<table border="1"> <tbody> <tr> <td>3. Packaging materials: total</td> <td></td> <td></td> <td>28</td> </tr> <tr> <td>4. Work performed by sub-contractors (</td> <td></td> <td></td> <td>14</td> </tr> <tr> <td>5. Repairs &amp; maintenance (materials &amp; services purchased)</td> <td></td> <td></td> <td>148</td> </tr> <tr> <td>6. Material inputs for auxiliary activities (mostly for transport)</td> <td></td> <td></td> <td>29</td> </tr> <tr> <td>7. Non-factor service inputs: total</td> <td></td> <td></td> <td>395</td> </tr> </tbody> </table> <p>Of which transportation, insurance and storage services purchased separately 344</p>				3. Packaging materials: total			28	4. Work performed by sub-contractors (			14	5. Repairs & maintenance (materials & services purchased)			148	6. Material inputs for auxiliary activities (mostly for transport)			29	7. Non-factor service inputs: total			395																				
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<p><b>VII. EXPANSION: HISTORY &amp; PLAN</b></p> <table border="1"> <thead> <tr> <th>1. Recent Expansion From 19 60 to 1964</th> <th>Gross acquisition</th> <th>Scrapped or sold</th> </tr> </thead> <tbody> <tr> <td>a. Total investment ( Fr. 000 )</td> <td>1,925</td> <td>123</td> </tr> <tr> <td>- Land</td> <td>47</td> <td>78</td> </tr> <tr> <td>- Land improvements</td> <td>-</td> <td>-</td> </tr> <tr> <td>- Buildings</td> <td>52 1/</td> <td>-</td> </tr> <tr> <td>- Other construction work</td> <td>281</td> <td>-</td> </tr> <tr> <td>- Machinery &amp; equipment</td> <td>1,402 1/</td> <td>-</td> </tr> <tr> <td>- Tools &amp; instruments</td> <td>5</td> <td>-</td> </tr> <tr> <td>- Vehicles</td> <td>132</td> <td>45</td> </tr> <tr> <td>- Office furniture &amp; fixtures</td> <td>6</td> <td>-</td> </tr> <tr> <td>Corresponding increase:</td> <td>From 1950</td> <td>To 19 64</td> </tr> <tr> <td>In no. of employees (direct prod.)</td> <td>247</td> <td>213</td> </tr> <tr> <td>In annual gross production (ou. m.)</td> <td>14,121</td> <td>14,444</td> </tr> </tbody> </table>				1. Recent Expansion From 19 60 to 1964	Gross acquisition	Scrapped or sold	a. Total investment ( Fr. 000 )	1,925	123	- Land	47	78	- Land improvements	-	-	- Buildings	52 1/	-	- Other construction work	281	-	- Machinery & equipment	1,402 1/	-	- Tools & instruments	5	-	- Vehicles	132	45	- Office furniture & fixtures	6	-	Corresponding increase:	From 1950	To 19 64	In no. of employees (direct prod.)	247	213	In annual gross production (ou. m.)	14,121	14,444	<p>2. Future Plan: None</p> <p>a. Investment proposed for the period 19 to 19</p> <p>Total value ( ) \$</p> <p>Of which: - Mach. &amp; equipment</p> <p>- Land improv. &amp; bldg.</p> <p>- Land</p> <p>- Others</p> <p>b. Net increase in no. of employees envisaged for the same period: - Direct production:</p> <p>- Auxiliary:</p> <p>c. Purpose:</p>				
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<p><b>VIII. SUPPLEMENT</b></p> <p>1/ Fr. 14,000 for buildings and Fr. 38,000 for machinery and equipment are the cost of the works done by the establishment itself.</p>																																															

France : 251 - ( 2 )

**MAJOR PRODUCTS:** Particle board: Capable of processing more than 5,000 tons of wood annually.  
Operates with partial three shifts.

**REPORTING UNIT:** A new one-establishment enterprise with capital stock Fr. 1 million and employees 38 as of 1964.  
Founded in 1963 and first commercial production started in 1964.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( Fr. 000 )	<u>3,152</u>	<u>2,589</u>
1. Land	24	24
2. Land improvements	-	-
3. Buildings	505	386
4. Other construction works	323	289
5. Machinery & equipment	2,298	1,889
6. Tools & instruments	-	-
7. Vehicles	-	-
8. Office furniture & fixtures	1	1

**DETAIL OF I.5 (No.)**

	Total Bk. value	Avg. Age	Oper. rate	Depr. rate
a. Boiler	84	1	B	10.5
b. Manufacturing line	1791	1	A	20.0
c. Polishing machines	116	0	A	10.5

**II. INVENTORIES**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> ( 000 Frs )	<u>181</u>	<u>...</u>
1. Direct production materials	17	
2. Other input materials	6	
3. Work in process	-	
4. Finished products	157	
- Actual inventories of finished products 10.6% of annual gross production		
- Seasonal variations: ..		

Capacity of electr. motors: 650 KW

Total load, capacity of trucks: .. t

(a) is domestically made. The rest imported.

(c) was installed at 1964; the others at 1963.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 38	17	14	7
1. Direct production ( all male )	14	14	7
Annual total manhours (000)	(47.1)	(22.0)	(..)
a. Wood storage yard	2	2	2
b. Cutting and grinding	2	2	2
c. Panel board manufacturing	3	3	3
d. Boiler	1	1	-
e. Sawing	2	2	-
f. Polishing	2	2	-
g. Warehouse for products	1	1	-
h. Maintenance	1	1	-
2. Auxiliary activities ( m. 2 f. 1 )	3	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch or equiv.	Other
Management	1	1
Direct Production	-	-
Skilled	-	5
Semi-skilled	-	3
Unskilled	-	27
Auxiliary Activities	-	-
Skilled	-	1
Semi-skilled	-	-
Unskilled	-	-
TOTAL	1	36

- Actual hours worked per annum per direct production worker: 1,975 hours.

- Proportion of motors occupied: 60% on both shifts.

**Technological features:**

- o): Highly automatic operation.
- d): Uses fuel oils and saw dusts. Fairly mechanized and automated.
- e): Automatic, highly mechanized.

- **Skilled workers** in direct production are engaged in stacking and handling of raw materials, sawing, polishing and controlling product warehouse. In 1963, 20 workers were at work in the factory. It is believed that the 1964 manning pattern is complete in relation to the installed capacity.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( Fr. 000 ) 1,490

Product	Unit	Quantity	Unit Price (Fr.)	Unit Value (Fr.)
a. Particle board	ton	3,058*	330	
b. Other revenues (from renting and transport)	000 Fr.	380	..	

\* Includes 414 t. produced within the year and constituted the first inventory accumulation.

**CAPACITY OUTPUT:**

1964 being the year when the operation was started, the production line was yet undergoing the process of adjustment. The 1964 actual production may not be considered as that of full capacity operation. Unfortunately the data for subsequent years could not be released.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Only about 2% of wood panel board is exported.

- Wood is delivered by road.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( Fr. 000 ) 807

1. Energy & water: total	Quantity	Unit value (Fr.)	Unit value (Fr.)
- Electricity	000 KWH	935.0	80.5
- Fuel oil	ton	600.0	100
- Water	000 m <sup>3</sup>	12.8	1,560
<b>2. Direct production materials: total</b>			<b>484</b>
a. Wood	ton	4,590*	33.4
b. Glue	"	480	590.0
c. Other ingredients	"	30	1,574.0

\* Excludes about 500 t. which was purchased within the year but was stocked.

3. Purchasing materials: total			
4. Work performed by sub-contractors ( )			
5. Repairs & maintenance (materials & services purchased)			45
6. Material inputs for auxiliary activities			
7. Non-factor service inputs: total			123
Transportation, insurance and storage (purchased separately) Fr. 52,000			

**VI. VALUE ADDED TOTAL 1964 ( Fr. 000 ) 683**

1. Wages & salaries (before income tax)	266
- Employees in direct production	(..)
- Other employees	(..)
2. Other expenditures for employees	
3. Annual depreciation allowance	
4. Rental paid	403
5. Sales & other indirect taxes (less subsidies) (not included in total)	[339]
6. Other gross business income (before income tax)	14

**SELECTED CONCLUSIONS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Fr. 164,143
- Value added per employee: Fr. 17,974
- Annual wage per employee in direct production: Fr. 7,600 1/
- Variable input costs/gross production ratio: 62.0% 2/
- Gross profit/gross production ratio: 0.9%
- Level of production at break-even point is approximately 98 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
1. Recent Expansion : None		
From 19 to 19		
a. Total Investment ( )		
- Land		
- Land improvements		
- Buildings		
- Other construction work		
- Machinery & equipment		
- Tools & instruments		
- Vehicles		
- Office furniture & fixtures		
b. Corresponding increase : From 19 to 19		
In no. of employees		
In annual gross production ( )		

2. Future Plan : None
- a. Investment proposed for the period 19 to 19
- Total value ( )
- Of which: - Mach. & equipment \$
- Land improv. & bldg.
- Land
- Others
- b. Net increase in no. of employees envisaged for the same period: - Direct production:
- Auxiliary:
- c. Purposes:

**VIII. SUPPLEMENT**

1/ Wages and salaries divided by total number of employees.

2/ Wages and salaries are all included in variable costs.

**MAJOR PRODUCTS:** Wooden parts and accessories for jute and cotton mills (shuttles, card stars, bobbins, etc.). Annual capacity output is about 12 million with two shifts.

**REPORTING UNIT:** A one-establishment enterprise with total assets Rs. 12 million (net worth Rs. 1.9 million) and 444 employees as of 1965. Founded in 1958.

I. FIXED CAPITAL ASSETS		End of 1964 after deprec.	End of 1965 After deprec.*	II. INVENTORY	
(Rs. million)		2.43	2.95	(End of 1965)	Actual
<b>TOTAL BOOK VALUE</b>				<b>TOTAL VALUE (Rs. million)</b>	3.80
1. Land		.15	.15		- 15
2. Land improvements		-	-	1. Direct production materials	2.12
3. Buildings		.72	1.05	2. Other input materials	.11
4. Other construction works		-	-	3. Work in process	
5. Machinery & equipment		1.31	1.48	b. Finished products	1.57
6. Tools & instruments		-	-		- 20
7. Vehicles		.07	.09	- Normal inventories of finished products 12.9% of annual gross production	
8. Office furniture & fixtures		.17	.18	- Seasonal variations: ..	
* Including those capitalized during the year.				Capacity of electr. motors: 626 KW	
				" " " furnaces 50 KW	
				Total load, capacity of trucks: 5 t	
				Machines itemised were all imported.	
				Average age is 5 years.	
				GENERAL CONDITIONS: Transportation, public utilities and educational facilities, excellent. Residential, health and recreational facilities, fair.	

III. LABOUR (1965 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
		402	38	4	Univ. or higher	Sr. High sch. or equiv.	Other	Illiterate
<b>TOTAL EMPLOYED</b>	444	402	38	4				
1. Direct production (all mills)		334	35	4				
Annual total manhours (000)		(830)	(110)	(Neglig.)				
<b>Direct production - jute mill parts and accessories</b>								
• Jute mill parts		4	1	-				
• Accessories		4	1	-				
• Jute mill parts		4	1	-				
• Accessories		4	1	-				
<b>Direct production - cotton mill accessories</b>								
• Cotton mill accessories		4	1	-				
• Cotton mill accessories		4	1	-				
<b>Auxiliary activities</b>								
• Auxiliary activities		4	1	-				
• Auxiliary activities		4	1	-				
<b>2. Auxiliary activities (all mills)</b>		68	-	-				
• Auxiliary activities		68	-	-				
• Auxiliary activities		68	-	-				

- Actual hours worked in 1965 per direct production worker: 2,520 hrs.

- Proportion of productive facilities occupied: 80% on 1st shift and 20% on 2nd shift for motors; for furnaces 70% and 20% on 1st and 2nd shift, respectively.

- Degree of mechanisation and automation is generally moderate.

- Skilled workers in direct production are hydraulic press operators, furnace operators, loche operators, welders, motor binders, etc.

**IV. ANNUAL PRODUCTION (1965)**

**TOTAL VALUE OF PRODUCTION (Rs. million)** 9.77

Product	Unit	Quantity	Unit Price	Unit Value (Rs.)
a. Shuttles for late and cotton looms	000 pcs.	117		5,540
b. Card stares	"	129		
c. Bobbins	"	870		
d. Card/gill pins	million pcs.	495	10,000	
e. Revenue from repair work	000 Rs.	870		..

**CAPACITY OVER:** 20% higher than the 1965 actual production level without additional manhours. Underutilization was due to insufficient supply of production materials. Inflexible product-mix.

Unit value of product: market value f.o.b. before sales tax  
 Unit value of material: market price c.i.f.

- If a) to d) are all partly exported.
- Direct production materials are all of domestic origin and transported by railroad and road.

**V. INTERMEDIATE INPUTS (1965)**

**TOTAL VALUE OF CONSUMPTION (Rs. million)** 7.01

**1. Power & water: total** 1.11

Item	Unit	Quantity	Unit Price	Unit Value (Rs.)
- Electricity	000 kwh	98	100	9,800
- Firewood	ton	500	10	5,000
- Liquid fuel	000 litres	35	150	5,250
- Water	000 gal.	2,850	1	2,850

**2. Direct production materials: total** 6,241

a. Perannnon horn beam for wood shuttles	} 000 Rs. 6,241 ..
b. Brass eyes-jaw tips	
c. Nylon fibre bristle-drag spring catch	
d. Beech wood	
e. Card pins	
f. Mild steel sheet screws	
g. Mango wood	
h. Aluminum pipes and fibre sheets	
i. Metal rings	
j. High carbon	
k. Steel wire	

**3. Indirect materials: total wooden boxes** .06

**4. Work performed by sub-contractors ( )** -

**5. Repairs & maintenance (materials & services purchased)** .11

Repairs of buildings and plant

**6. Material issues for auxiliary activities** .02

Printing and stationery

**7. Non-factor service issues: total** .40

**VI. VALUE ADDED TOTAL 196 ( 000 Rs. )** 2.76

1. Wages & salaries (before income tax)	.64
- Employees in direct production	(..)
- Other employees	(..)
2. Other expenditures for employees	.03
3. Annual depreciation allowance	.29
4. Rental paid	.04
5. Sales & other indirect taxes (less subsidies) (not included in total)	[.18]
6. Other gross business income (before income tax)	1.76

**ANALYSIS OF COSTS** In 1965 replacement value

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 1,390
- Value added per employee: Rs. 6,220
- Annual wage per employee in direct production: Rs. 1,440
- Variable input costs/gross production ratio: 66.1%
- Gross profit/gross production ratio: 18.4%
- Gross profit/assets ratio: (at full capacity: 31.6%)
- Level of production at break-even point is approximately 47% of the 1965 actual level.
- \* Wages and salaries are excluded from variable costs.

**VII. EXPANSION: HISTORY & PLAN**

Item	Gross equi- sition	% of repair
1. <b>Recent Expansion</b> (for diversification) From 1963 to 1965	.83	
a. Total Investment (Rs. million)		
- Land	-	-
- Land improvements	-	-
- Buildings	.39	7
- Other construction work	-	-
- Machinery & equipment	.37	10
- Tools & instruments	-	-
- Vehicles	.03	10
- Office furniture & fixtures	.04	5
b. Corresponding increase: In no. of employees	400	444
In annual gross production (Rs. million)	9.00	9.77

- 2. Future Plan :** None
- a. Investment proposed for the period 19 to 19  
 Total value ( )  
 Of which: - Mach. & equipment \$  
 - Land improv. & bldg.  
 - Land  
 - Others
- b. Net increase in no. of employees envisaged for the same period:  
 - Direct production:  
 - Auxiliary:
- c. Purpose:

**VIII. SUPPLEMENT**

**Structure of liquid assets and short term liabilities (end of 1965; Rs. million)**

Cash on hand and in bank	.13	Taxes payable	.26
Marketable securities and bonds	2.11	Accounts payable	1.74
Accounts receivable	3.09	Short term loans from commercial banks	6.02

- 1) Wages and salaries divided by the total number of employees. Unadjusted for the operating costs of the central office.
- 2) Prior to this expansion, the enterprise had another expansion, involving Rs. 1 million, aimed at the diversification of products.



**MAJOR PRODUCTS** Veneer and plywood: Installed annual capacity is 450,000 sq.m. of plywood and veneer products on three shift operation.

**REPORTING UNIT** A non-establishment enterprise with total assets Rs. 5 million (net worth Rs. 0.8 million) and 1,200 employees as of 1965. Founded in 1940.

I. FIXED CAPITAL ASSETS (end of 1965)		End of 1964 After deprec.	End of 1965 After deprec.	II. INVENTORY (End of 1965)		
TOTAL BOOK VALUE (Rs. million)		1.27	1.12	TOTAL VALUE (Rs. million)	Actual	Normal
1. Land		.01	.01	1. Direct production materials	1.30	- 7.6
2. Land improvements				2. Other input materials	-	-
3. Buildings		.41	.30	3. Work in process	.30	- 50
4. Other construction works				4. Finished products	.84	+ 1
5. Machinery & equipment		.57	.55	- Normal inventories of finished products 11.1 % of annual gross production		
6. Tools & instruments				- Seasonal variations: None		
7. Vehicles		.08	.04			
8. Office furniture & fixtures						
		Total Bk. value after deprec.	Avg. Age (Yr.)	Depr. rate (%)	1965 replace. value	
<b>DETAIL OF I.5 (No.)</b>						
a. Saw section (4)		10	B		.06	
b. Veneer cutting equipment (4)		11	B		.60	
c. Seasoning kilns (5)		5	B		.08	
d. Mechanical veneer (over 10)		1	A		.18	
e. Veneer cutting machines and equipment (4)		5	B	20	.06	
f. Wood treating equipment (1)		16	B		.02	
g. Trusses		12	A		.30	
h. Sanitary machines (4)		25	B		.20	
				(Subtotal)	1.52	

Capacity of electr. motors: 1,115 KW

Total load, capacity of trucks: 15 t

Nominal installed capacity of diesel electric generator (used only in emergency): 100 KW.

(a) and part of (e) were internally made. The rest were imported.

Average age of equipment (88% of total) is 14 years.

**GENERAL CONDITIONS:** Long distance transport, excellent. Local transport, public utilities and educational facilities, fair. Residential, health and recreational facilities, poor.

III. LABOUR (1965 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				- Actual hours worked in 1965 per direct production worker: 2,424 hrs.	
TOTAL EMPLOYED	1,200	524	393	280	Univ. or higher	Sr. High	Med. or eq.	Other		
1. Direct production (all male)		365	365	270	Engl.-skilled	Other	Semi-skilled	Unskilled	- Proportion of motors occupied: 80% on 1st shift, 60% on 2nd shift and 30% on 3rd shift.	
Annual total manhours (000)		(1,050)	(794)	(585)	TOTAL	2	29	1,171		
a. Saw section		40	40	-	Management	3	11	-	- Technological features:	
b. Veneer section		55	55	4	Direct Production Skilled	-	11	9		
c. Assembly section		100	100	100	Semi-skilled	-	-	-	b) Wood is sawn into planks and then ripped into strips which are used as the core for flush doors and black boards.	
d. Finishing section		40	40	40	Unskilled	-	-	982		
e. Dispatch		30	30	-	Auxiliary Activities Skilled	-	-	-	c) Solid wood logs are heated and then cut into thin veneers by slicing or rotary peeling.	
f. Particle board section		100	100	90	Semi-skilled	7	-	-		
2. Auxiliary activities (all male)		159	28	16	Unskilled	-	-	-	d) Wood, after seasoning, is assembled into plywood, block board, flush doors, etc. The different layers are glued together using phenol formaldehyde, synthetic resins and adhesives under high temperature and pressure.	
a. Supervisors and managerial		142	12	-	-	-	-	180		
b. Non-union staff		17	16	16					- Mechanisation is generally excellent. Automation is excellent in (b) and (c), fair in (d).	
										- Skilled workers in direct production are carpenters, fitters, mechanics, machine operators and electricians.

**IV. ANNUAL PRODUCTION (1965)**

TOTAL VALUE OF PRODUCTION (Rs. million)		7.09	
Product	Unit	Quantity	Unit Value (000 Rs)
a. Plywood	000 sq.m.	78.8	7.0
b. Black board and flush doors	"	154.6	30.4
c. Insulation - acoustic board and wood particle boards *	"	132.6	13.5
d. Veneer particle board	"	23.6	27.4

\* Particle board was introduced in the production line in 1958 with an investment of Rs. 0.6 million

**CAPACITY OUTPUT:**

15% higher than the 1965 actual production level without additional manhours and given sufficient demand for the products as well as sufficient supply of raw and intermediate materials. Product mix is flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- All products partly exported.
- Phenol formaldehyde is directly imported and delivered by railroad and sea with 10% freight rate. The rest are all of domestic origins and delivered by railroad.

**VI. VALUE ADDED TOTAL 1965 (Rs. million)** 3.76

1. Wages & salaries (before income tax)	
- Employees in direct production	1.20
- Other employees	.45
2. Other expenditures for employees	.22
3. Annual depreciation allowance	.15
4. Rental paid	-
5. Sales & other indirect taxes (less subsidies) (not included in total)	[-.54]
6. Other gross business income (before income tax)	1.74

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
<b>1. Past Expansion</b>		
From 1963 to 1965		
a. Total investment (Rs. million)	.71	
- Land	-	
- Land improvements	-	
- Buildings	.25	
- Other construction work	-	
- Machinery & equipment	.33	
- Tools & instruments	-	
- Vehicles	.13	
- Office furniture & fixtures	-	
b. Corresponding increase:	From 1963 to 1965	873 to 1,205
In no. of employees		
In annual gross production		+20%

**V. INTERMEDIATE INPUTS (1965)**

TOTAL VALUE OF CONSUMPTION (Rs. million)		4.23	
1. Energy & water: total	Quantity	Unit	Unit value (Rs)
(Water is drawn from own tube-well)			
- Electricity	000 KWH	1,500	90
- Coal	Ton	590.0	320
- Petroleum	000 Litre	42.0	830
- Other fuel oils	"	28.2	800
2. Direct production materials: total			2.97
a. Timber, Teak	cu.m.	456.0	596
b. Timber, Kanju	"	9,362	126
c. Timber, Mango	"	3,196	167
d. Timber, others	000 Re	400	..
e. Phenol formaldehyde	Ton	329.7	1,750
f. Others (synthetic resins, adhesives, etc.)	000 Re	23	
3. Indirect materials: total			.01
Metal products other than cane			
4. Work performed by sub-contractors ( )			-
5. Repairs & maintenance (materials & services purchased)			.33
6. Material losses for auxiliary activities			.22
Consumable stores and power generation			
7. Non-factor service losses: total			.08
Of which transportation, insurance and storage (purchased separately) Rs. 70,000			

REPLACEMENT COSTS	
- Mech., equip., instruments & tools/per employee in direct production on 1st shift: Rs. 4,340	in 1965 replacement value
- Value added per employee: Rs. 3,120	
- Annual wage per employee in direct production: Rs. 1,200	
- Variable input costs/gross production ratio: * 42.5%	
- Gross profit/gross production ratio: 22.6%	
(at full capacity: 27.1%)	
- Level of production at break-even point is approximately 60 % of the 1964 actual level.	
* Variable costs exclude wages and salaries	

**2. Future Plan (not yet finalized)**

a. Investment proposed for the period 1967 to 1970	
Total value ( )	
Of which: - Mech. & equipment	\$
- Land improv. & bldg.	
- Land	
- Others	
b. Net increase in no. of employees envisaged for the same period:	
- Direct production:	
- Auxiliary:	
c. Purpose: Introduction of low priced doors made of particle board, special overlay work and some defence items.	

**VIII. SUPPLEMENT****Structure of liquid assets and short term liabilities (end of 1965; Rs. million)**

Cash on hand and in bank	0.5	Taxes payable	.62
Accounts receivable	.89	Accounts payable	2.60
		Short term borrowings	.44

**MAJOR PRODUCTS:** Plywood and panels: capable of producing annually 1,500 cu.m. plywood and 1,500 cu.m. panels on three-shift operation.

**EMPLOYING UNIT:** A large-scale investment enterprise with total assets 1.4 million and employees 107 as of 1964.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (1964)	3,281	1,762
1. Land		
2. Land improvements		
3. Buildings	1,057	60
4. Other construction works		
5. Machinery & equipment	1,167	69
6. Tools & instruments		
7. Vehicles		
8. Office furniture & fixtures		

**DETAIL OF I.S. (No.)**

- 1. **Sawing dept.:** saw (18,000; 3 yrs.); band saw (8,700; 3 yrs.);
- 2. **Sanding dept.:** saw (8,000; 3 yrs.); band saw (5,000; 3 yrs.);
- 3. **Grinding dept.:** grinding machines (84,000; 3 yrs.);
- 4. **Drying dept.:** drying machines (81,000; 3 yrs.);
- 5. **Striping dept.:** striping machines (8,000; 3 yrs.);
- 6. **Glue manufacturing plant:** (160,000; 3 yrs.);
- 7. **Glue spreader:** (140,000/81,500/81,500; 2 yrs./1yr./1yr.)
- 8. **Planing dept.:** saw (8,000; 3 yrs.); wood sticking machine (81,000; 3 yrs.);
- 9. **Finishing dept.:** saw (81,000; 3 yrs.);
- 10. **Truck:** (14,000; 3 yrs.);
- 11. **Fork lift:** (16,000; 3 yrs.);

**II. INVENTORY**

	Actual	Normal
<b>TOTAL VALUE</b> (end of 1964)	1,416	1,000
1. Direct production materials		
2. Other input materials		
3. Work in process		
4. Finished products		
- Normal inventories of finished products	% of annual gross production	
- Seasonal variations:	..	

Capacity of electr. motors: IV

**Total load, capacity of trucks:** t  
Drying rooms, circular saw, and one of glue spreaders were internally made; steam boilers, glue manufacturing plant and fork lifts were domestically produced; the rest were imported. The value of the plant is original purchase value, from which the 1964 replacement value is not very different. Operating condition is generally excellent. Annually being depreciated at 15%.

**GENERAL CONDITIONS:** transportation, public utilities and community facilities.

**III. LABOUR (196 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	30	30	12
1. <b>Direct production</b> (196)	20	56	10
2. <b>Auxiliary activities</b> (196)	30	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	Total
1	1	28	30
<b>Management</b>			
<b>Direct Production</b>			
<b>Skilled</b>			
<b>Semi-skilled</b>			
<b>Unskilled</b>			
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
<b>Semi-skilled</b>			
<b>Unskilled</b>			

- Average work by hours per annum per direct production workers: 2,000 h.

- Proportion of motors installed: 90% on 1st shift, 60% on 2nd shift and 40% on 3rd shift.

- Conventional processes are employed in all shops. Mechanization is generally fair except in (a) which is rated poor. There is no automation.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( '000 IL ) 3,510

Product	Unit	Quantity	Unit Price	Value
1. Plywood	sq.m.	2,000	1,200	2,400
2. Panels	sq.m.	1,000	150	150
3. Sawdust	ton	1,500	10	15

\* Export price (in U.S. \$) plus subsidy, applicable to the exported plywood only.

**CAPACITY OUTPUT:** 50% higher than the 1964 actual level of production given sufficient demand and additional manhours of 2,000 each in the 1st and 2nd shifts. (The factory is not yet completely out of the initial organizational problems.)

Unit value of product: market value f.o.b. before sales tax  
Unit value of material: market price c.i.f.

— About half of plywood is exported. Occome and mahogany are directly imported and delivered by sea with freight rates per cu.m. \$26 and \$30 of c.i.f. values, respectively. Phenol is also directly imported and delivered by sea.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( '000 IL ) 3,941

Item	Unit	Quantity	Unit Price	Value
<b>1. Energy &amp; water: total</b> <u>147</u>				
- Electricity	'000 kwh	900	40	36,000
- Heavy liquid fuel	Ton	1,800	55	99,000
- Water	'000 cu.m.	24	200	4,800
<b>2. Direct production materials: total</b> <u>3,197</u>				
1. Logs; Occome	cu.m.	16,000	10	160,000
2. Logs; Mahogany	cu.m.	10,000	7	70,000
3. Phenol	Ton	200	160	32,000
4. Formalin	cu.m.	150	145	21,750
5. Caustic soda	cu.m.	50	220	11,000
6. Coconut powder	cu.m.	100	10	1,000
<b>3. Packaging materials: total</b> <u>14</u>				
- 200 cu.m. of packaging sheets				
<b>4. Work performed by sub-contractors ( )</b> <u>-</u>				
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> <u>132</u>				
<b>6. Material inputs for auxiliary activities</b> <u>11</u>				
<b>7. Non-factor service inputs: total</b> <u>420</u>				
Of which transport, insurance and storage (purchased separately) IL 15,000.				

**VI. VALUE ADDED TOTAL 1964 ( '000 IL ) 1,569**

1. Wages & salaries (before income tax)	
- Employees in direct production	1,210
- Other employees	
2. Other expenditures for employees	26
3. Annual depreciation allowance	212
4. Rental paid (land)	1
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	120

**ADDITIONAL COMMENTS:**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: IL 12,685
- Value added per employee: IL 9,350
- Annual wage per employee in direct production: IL 7,250
- Variable input costs/gross production ratio: 75.5% <sup>1/</sup>
- Gross profit/gross production ratio: 2.8% (at full capacity: 12.1%)
- Level of production at break-even point is approximately 41% of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

Item	1964	1965
<b>1. Recent Expansion</b>		
From 1964 to 1965		
a. Total Investment ( '000 IL )	100	
- Land	25	
- Land improvements	-	
- Buildings	70	
- Other construction work	-	
- Machinery & equipment	150	
- Tools & instruments	-	
- Vehicles	55	
- Office furniture & fixtures	-	
b. Corresponding increase:		
In no. of employees (direct prod. only)	65	147
In annual gross production		+ 104%

- 2. Future Plan:** None
- a. Investment proposed for the period 1966 to 1967
- Total value ( '000 IL ) \_\_\_\_\_
- Of which: - Mach. & equipment \_\_\_\_\_ \$
- Land improv. & bldg. \_\_\_\_\_
- Land \_\_\_\_\_
- Others \_\_\_\_\_
- b. Net increase in no. of employees envisaged for the same period:
- Direct production: \_\_\_\_\_
- Auxiliary: \_\_\_\_\_
- c. Purpose: \_\_\_\_\_

**VIII. SUPPLEMENT**

1/ Two-thirds of wages and salaries regarded as variable cost.  
2/ "Other gross business income" or "gross profit" in the context of this profile data includes interest charges; the conventional financial statement actually gave zero entry here.

**MAJOR PRODUCTS** Plywood, compressed chip board and panels (also makes boxes and furniture parts). Installed annual capacity is 44,000 cu.m. of plywood, compressed chip sheets and panels, 6 million of boxes and some 15,000 worth of furniture parts.

**REPORTING UNIT** An independent one-establishment enterprise with total assets of 18 million and employees 507 as of 1964. Founded in 1951.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE (in 1000)</b>	<b>11,536</b>	<b>7,070</b>
1. Land (175,000 sq.m.)	65	65
2. Land improvements	-	-
3. Buildings (total floor space: 22,000 sq.m.)	3,062	2,328
4. Other construction works	-	-
5. Machinery & equipment	7,825	4,280
6. Tools & instruments	31	20
7. Vehicles	326	203
8. Office furniture & fixtures	227	163

**DETAIL OF I.5 (No.)**

	Total bk. value (1000 I£)	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace. value (1000 I£)
<b>I. Plywood dept:</b>					
a. Peeling machine (1)	..	13	A	30	..
b. Peeling machines (2)	349	1,6	"	"	450
c. Drying machine (1)	500	1	"	"	500
d. Drying machines (3)	227	2,7,13	"	"	440
e. Drying machines (3)	87	0,10,13	"	"	193
f. Cutting machines (6)	..	1-13	"	"	900
g. Sticking machines (3)	33	6,15	"	"	..
h. Sticking machine (1)	50	2	"	"	60
i. Presses (3)	..	6,8,13	"	"	200
j. Saws (..)	40	2	"	"	45
k. Polishing machines (2)	100	1,2	"	"	100
<b>II. Compressed chip sheet dept.</b>					
l. Compressed chip sheets equipment	700	2	"	"	800
m. Drying machines (2)	..	2,8	"	"	60
<b>III. Panel Dept.</b>					
n. Sticking machine (1)	30	4	"	"	..
<b>IV. Box Dept.</b>					
o. Sawing machines	385	4,6,7	"	"	230

**II. INVENTORY (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE (in 1000)</b>	<b>3,850</b>	<b>-</b>
1. Direct production materials	1,850	-
2. Other input materials	-	-
3. Work in process	-	-
4. Finished products	2,000	-
- Normal inventories of finished products	4.4 % of annual gross production	
- Seasonal variations:	None	

Capacity of electr. motors: 2,200 KW

Total load, capacity of railway: 44 t

Machines itemized were all imported mostly from F.R. Germany.

Average age of machinery (32% of total) is 4 years.

**GENERAL CONDITIONS:** Transport, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 507	<b>423</b>	<b>71</b>	<b>13</b>
1. Direct production (all male)	370	71	13
Annual total manhours (1000)	(812)	(156)	(29)
a. Plywood	112	30	-
b. Boxes	81	-	-
c. Compressed chip sheets and panels	75	17	8
d. Furniture parts	25	17	4
e. Maintenance	77	1	1
2. Auxiliary activities (m. 100 f. 32)	53	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Educational Level	Univ. or higher		Sr. High sch. or equiv.	
	Engl.	Other	Engl.	Other
<b>TOTAL</b>	4	1	66	430
<b>Management</b>	2	1	-	-
<b>Direct Production</b>	-	-	-	-
<b>Skilled</b>	-	-	-	-
<b>Semi-skilled</b>	-	-	25	-
<b>Unskilled</b>	-	-	25	401
<b>Auxiliary Activities</b>	-	-	-	-
<b>Skilled</b>	-	-	-	-
<b>Semi-skilled</b>	-	-	5	-
<b>Unskilled</b>	-	-	10	35

- Actual hours worked per annum per direct production worker: 2,200 hours.

- Proportion of motors occupied: 90% on 1st shift, 50% on 2nd shift and 10% on 3rd shift.

- Conventional processes are employed except in (d) which uses a rather primitive process.

- Mechanisation is excellent in (b), fair in (a) and (c), and poor in (d). Automation is excellent in (b), poor in (a) and (c) and outdated in (d).

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( I£ 000 )			
21,500			
Product	Unit	Quantity	Unit Value ( I£ )
a. Plywood	cu.m.	18,398	140 (\$16 + I£240)*
b. Compressed chip sheets	"	8,311	400
c. Panels	cu.m.	943	700
d. Wooden boxes	000 pos	3,721	1,140
e. Furniture parts	I£ 000	30	..
f. Peels **	cu.m.	(1,100)	(70)
g. Saw dust **	"	(6,800)	(34)

\* Export price plus export subsidy.  
 \*\* Internally used and not counted in value of production. Prices given are intrafirm prices.

**CAPACITY CHANGE:** 60% higher than the 1964 actual production level with additional manhours 154,000 on 2nd shift and 220,000 on 3rd shift. Product-mix is not flexible.

Unit value of product: Market value f.o.b. before sales tax  
 Unit value of material: Market price c.i.f.

- Plywood is mostly for export, whereas panels and compressed chip sheets are only partly exported.
- Logs, peeled logs and impregnated paper (type A and B) are directly imported and delivered by sea. Freight rates are I£ 5/cu.m. for logs, I£ 75/cu.m. for peeled logs and negligible for impregnated paper.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( I£ 000 )			
14,462			
299			
1. Energy & water: total	Quantity	Unit	Unit value ( I£ )
- Electricity	000 Kwh	3,600	30
- Heavy liquid fuel	ton	3,000	62
- Water	000 cu.m.	65	70
2. Direct production materials: total			12,221
a. Logs	cu.m.	28,329	186
b. Peeled logs	"	6,482	435
c. Phenol	ton	400	649
d. Formaldehyde	"	1,400	345
e. Uree	"	400	331
f. Impregnated paper, type A	000 sq.m.	24	4,200
g. Impregnated paper, type B	ton	6.2	3,500
h. Others	I£ 000	3,315	..
3. Packaging materials: total			100
4. Work performed by sub-contractors ( )			-
5. Repairs & maintenance (materials & services purchased)			560
6. Material inputs for auxiliary activities			40
7. Non-factor service inputs: total			1,242
Of which transportation, insurance and storage (purchased separately) I£ 242,000.			

**VI. VALUE ADDED TOTAL 1964 ( I£ 000 )**

1. Wages & salaries (before income tax)		
- Employees in direct production	}	4,290
- Other employees		
2. Other expenditures for employees		100
3. Annual depreciation allowances (inc. royalties)		1,138
4. Rental paid (land)	I£ 138,000	10
5. Subsidies		1
(not included in total)		[-1,500]
6. Other gross business income (before income tax)		1,500

**RELATIVE CONTRIBUTIONS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: I£ 26,812
- Value added per employee: I£ 13,882
- Annual wage per employee in direct production: I£ 8,470
- Variable input costs/gross production ratio: 72.7% 2/
- Gross profit/gross production ratio: 7.0% (at full capacity: 14.9%)
- Level of production at break-even point is approximately 73 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion		Gross equi-
From 19 62 to 1964		ment
a. Total investment ( I£ 000 )		2,000
- Land		40
- Land improvements		-
- Buildings		240
- Other construction work		-
- Machinery & equipment		1,500
- Tools & instruments	}	220
- Vehicles		
- Office furniture & fixtures		
b. Corresponding increase:	From 19 62 to 1964	
In no. of employees	500	507
In annual gross production ( I£ million)	14.0	21.5

2. Future Plan: None
- a. Investment proposed for the period 19 to 19  
 Total value ( )  
 Of which: - Mach. & equipment \$  
 - Land improv. & bldg.  
 - Land  
 - Others
- b. Net increase in no. of employees envisaged for the same period:  
 - Direct production:  
 - Auxiliary:
- c. Purpose:

**VIII. SUPPLEMENT**

- Total export subsidies. Since the export price plus subsidy was used to calculate the total value of production, the value of subsidy was excluded from total value added. With the subsidy, the export price was maintained lower than the average domestic price.
- I£ 3 million of wages and salaries regarded as variable cost.

**MAJOR PRODUCTS:** Plywood and compressed chip-sheet (also has a pencil manufacturing shop). Capable of producing annually about 22,000 cu.m. plywood and about 12,000 cu.m. compressed-chip-sheet on partial three-shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets of 15 million and employees 436 as of 1964. Founded in 1961.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE ( I£ 000 )</b>	<b>9,573</b>	<b>8,047</b>
1. Land (73,000 sq.m.)	36	36
2. Land improvements	95	95
3. Buildings	1,972	1,757
4. Other construction works	-	-
5. Machinery & equipment	7,080	5,866
6. Tools & instruments	-	-
7. Vehicles	308	233
8. Office furniture & fixtures	82	60

**DETAIL OF I.5 (No.)**

	Total bk. value (000)	Avg. Age (Yr.)	Oper. Cond.	Deprec. rate (%)	1964 replace. value (000)
a. Boiling pools (3)	I£ 220	4	A	10	I£ 270
b. Craze (1)	I£ 250	"	"	"	I£ 290
c. Peeling and cutting machines (2)	US\$ 330	"	"	"	\$ 330
d. Driving machines (2)	\$ 166	"	"	"	\$ 180
e. Frayer (1)	\$ 50	"	"	"	\$ 55
f. Sticking machines (2)	\$ 183	"	"	"	\$ 205
g. Glue rolls (1 set)	\$ 83	"	"	"	\$ 90
h. hydraulic presses (2)	\$ 250	"	"	"	\$ 270
i. Polishing machine (1)	\$ 16.5	"	"	"	\$ 18
j. Saws (2)	\$ 903	2 and 4	"	"	\$ 975

**II. INVENTORY (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE ( I£ 000 )</b>	<b>2,945</b>	<b>-4</b>
1. Direct production materials	1,218	-
2. Other input materials	-	-
3. Work in process	724	-15
4. Finished products	1,003	-

- Normal inventories of finished products 8.0 % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 2,500 KW

Total load, capacity of trucks: - t

Total length of railway tracks: 0.2 KM.

(a) and (b) were domestically produced; the others were imported (mostly from F.R. Germany) Average age of machinery is 3.2 years)

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 436	<b>345</b>	<b>64</b>	<b>27</b>
1. Direct production ( n. 334 f. 15 )	258	64	27
Annual total manhours (000)	(507)	(155)	(71)
a. Logs boiling dept.	7	-	-
b. Peeling	22	8	-
c. Drying	8	8	8
d. Frayer	5	5	-
e. Sticking machines	11	11	11
f. Glue spraying and compressing	18	12	8
g. Sawing and polishing	8	5	-
h. Compressed chip-sheet plant	15	15	-
i. Miscellaneous (including pencil shop) 164	-	-	-
2. Auxiliary activities ( n. 84 f. 3 )	87	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

	Univ. or higher		Sr. High sch. or eqv.	
	Engl.-speak	Other	Engl.-speak	Other
<b>TOTAL</b>	1	1	35	399
Management	-	-	6	15
Direct Production	-	-	-	-
Skilled	-	-	-	-
Semi-skilled	-	-	15	-
Unskilled	-	-	-	334
Auxiliary Activities	-	-	-	-
Skilled	-	-	-	-
Semi-skilled	1	1	-	-
Unskilled	-	-	14	50

- Actual hours worked per annum per direct production worker: 2,100 hours.

- Proportion of motors occupied: 100% on the 1st and 2nd shifts and 60% on the 3rd shift.

- Conventional processes are employed in all the shops. Mechanization is excellent. Automation, fair to outdated.

**IV. ANNUAL PRODUCTION (1964)**TOTAL VALUE OF PRODUCTION ( IE 000 ) 12,491

Product	Unit	Quantity Produced	Unit Value ( IE )
a. Plywood	cu.m.	12,284	722*
b. Thick pl. wood	"	1,248	616
c. Compressed-chip sheet	"	5,833	303
d. Coated compressed-chip sheet	"	1,879	424
e. Pencils	"	1,218**	148
f. Peels	"	120	655
g. Scrap	"	138	377

\* Export at a lower price and compensated by subsidies.

\*\* Includes 145 cu.m. internally used and not counted in value of production.

**CAPACITY OUTPUT:** 60% higher than the 1964 actual production level given sufficient demand and additional manhours of 10% on 2nd shift and 20% on 3rd shift.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Plywood is mostly for exports.

- Logs, phenolic glue and uree glue are directly imported and delivered by sea with freight rates \$ 17/cu.m., \$ 18/ton and \$25.30/ton, respectively. Packaging materials are also directly imported and delivered by sea.

**V. INTERMEDIATE INPUTS (1964)**TOTAL VALUE OF CONSUMPTION ( IE 000 ) 9,204

1. Energy & water: total	Quantity consumed	Unit value ( IE )
- Electricity	000 Kwh 3,800	30
- Crude Oil	Ton 1,800	60
- Water	000 cu.m. 50	160
<b>2. Direct production materials: total</b>		<b>7,204</b>
a. Logs	cu.m. 27,950	160
b. Phenolic glue	ton 1,167	373
c. Urea glue	" 892	332
d. Coating glue	" 196	327
e. Others	IE 000 1,937	..

3. Packaging materials: total	Quantity consumed	Unit value ( IE )
238 tons of steel bands (IE 731/ton); 300 cu.m. of white wood (IE 154/cu.m.)		-
4. Repairs & maintenance (materials & services purchased)		300

6. Material inputs for auxiliary activities	Quantity consumed	Unit value ( IE )
		200

7. Non-factor service inputs: total	Quantity consumed	Unit value ( IE )
Of which transportation, insurance and storage (purchased separately) IE 250,000.		1,050

**VI. VALUE ADDED TOTAL 1964 ( IE 000 ) 3,287**

1. Wages & salaries (before income tax)	
- Employees in direct production	1,653
- Other employees	858
2. Other expenditures for employees	30
3. Annual depreciation allowance	696
4. Rental paid	-
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	50

**KEY-WORD COMMENTARY**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: IE 27,442
- Value added per employee: IE 7,550
- Annual wage per employee in direct production: IE 4,730
- Variable input costs/gross production ratio: 74.5%
- Gross profit/gross production ratio: 0.4% (at full capacity: 9.3%)
- Level of production at break-even point is approximately 98 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition
From 1962 to 1964	3,040
a. Total Investment ( IE 000 )	
- Land	460
- Land improvements	-
- Buildings	-
- Other construction work	-
- Machinery & equipment	2,500
- Tools & instruments	-
- Vehicles	80
- Office furniture & fixtures	-
b. Corresponding increase:	From 1961 to 1964
In no. of employees (direct prod. only)	240 349
In annual gross production	+ 77%

**2. Future Plan : None**

- a. Investment proposed for the period 19 to 19  
Total value ( ) \$  
Of which: - Mach. & equipment  
- Land improv. & bldg.  
- Land  
- Others
- b. Net increase in no. of employees envisaged for the same period: - Direct production:  
- Auxiliary:

**c. Purpose:****VIII. SUPPLEMENT**



Japan : 251 - ( 1 )

**MAJOR PRODUCTS:** Plywood and veneer: With an investment of ¥ 30 million, on dryers and boilers, which presently form bottlenecks, annual capacity output would be 7.5 million m<sup>2</sup> of plywood and 70,000 m<sup>2</sup> of veneer on partial 2 shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets ¥ 600 million (net worth ¥ 57 million) and 181 employees as of 1966. Founded in 1955.

I. FIXED CAPITAL ASSETS (end of 1966)		Before deprec.	After deprec.	II. INVENTORIES (end of 1966)	
TOTAL BOOK VALUE ( ¥ million )		294.8	141.3	TOTAL VALUE ( ¥ million )	Actual Normal
1. Land (7,100 m <sup>2</sup> )		6.4	6.4	1. Direct production materials	49.0 +14
2. Land improvements		3.8	2.2	2. Other input materials	- -
3. Buildings (total floor space 5,060 m <sup>2</sup> )		104.7	68.7	3. Work in process	6.6 -15
4. Other construction works		8.8	5.2	4. Finished products	4.3 +32
5. Machinery & equipment		161.1	56.6	- Normal inventories of finished products	
6. Tools & instruments		2.4	.5	8 % of annual gross production	
7. Vehicles		3.0	1.0	- Seasonal variations:	
8. Office furniture & fixtures		4.5	.8	(1) (3) (4)	
				High +100% Aug. +10% Jan-Feb. +50% Sep.	
				Low - 20% Apr. -10% Mar-Dec. -10% Jan.	
<b>DETAIL OF I.5 (No.)</b>		Total Bk value bef. deprec.	Avr. Age (Yr.)	Depr. rate Oper. Cond. (%)	1966 replace. value
a. Rotary lathes, 8 ft.		1.92	10	C	18.9 30.0
b. Rotary lathes, 8 ft.		29.96	4	B	" 30.0
c. Rotary lathes, 5 ft.		8.31	7	"	" 10.0
d. Drier No. 1		10.38	10	"	" 10.5
e. Drier No. 2		16.63	6	"	" 16.0
f. Spreader No. 1		2.55	4	"	" 2.5
g. Spreader No. 2		.53	12	"	" 1.0
h. Spreader No. 3		.90	10	C	" 2.5
i. Hot press No. 1		4.61	11	B	" 8.0
j. Hot press No. 2		8.55	6	B	" 8.5
k. Hot press No. 3-5		6.00	0	C	" 15.0
l. Wide sander		6.77	4	B	" 6.7
m. Other equipment		63.8	..	..	.. ..

Capacity of electr. motors: 539 KW

Total load, capacity of trucks: - t

Machines itemised are all domestic makes. Average age (60% of total) is 6 years.

**GENERAL CONDITIONS:**

Transportation, electricity, water and community facilities, excellent. Gas, poor.

III. LABOUR (1966 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
TOTAL EMPLOYED	181	157	24	--	Univ. or higher	Sr. High sch or equiv.	Other	Others
1. Direct production ( m. 102 f. 57 )		135	24	--	Managers			
Annual total manhours (000)		(379)	(65)	( )	TOTAL	1	2	35
a. Log cutting		6	-		Management	1	2	2
b. Rotary		27	-		Direct Production			
c. Clipper		31	-		Skilled			
d. Boiler		7	6		Semi-skilled		22	78
e. Drier		8	8		Unskilled		6	26
f. Quality inspection		19	-		Auxiliary Activities		4	23
g. Jointing		19	-		Skilled			
h. Hot press		10	10		Semi-skilled			4
i. Finishing		8	-		Unskilled			3
							1	7
2. Auxiliary activities ( m. 9 f. 13 )		22	-					

- Average working hours per direct production worker in 1966 : 2,786 hours.

- Proportion of motors occupied: 90% on 1st. shift and 24% on 2nd shift.

- Mechanisation is excellent in (d), fair in (a),(e) and (h), and poor in (f) and (g).

Automation is fair in (b), (e) and (i).

- Skilled workers in direct production are those engaged in rotary operations in single-plate section, spreader operation, sander - finishing and dr or seasoning operation.

IV. ANNUAL PRODUCTION (1966)				V. INTERMEDIATE INPUTS (1966)			
TOTAL VALUE OF PRODUCTION ( ¥ million )				TOTAL VALUE OF CONSUMPTION ( ¥ million )			
678.1				466.8			
	Product	Unit	Quantity Pre- Annul ( ¥ )		Quantity Unit annul ( ¥ )		Unit annul ( ¥ )
a.	2.7 e.m. 3-ply plywood	3.3 e <sup>2</sup>	1,756,000	365-380			
b.	5.5 e.m. 3-ply veneer	"	15,200	810			
c.	Ripped off heartwood	2.8 m <sup>3</sup>	1,970	700			
d.	Fragmentary piece	"	4,800	1,200			
<p><b>CAPACITY OUTPUT:</b> 15% higher than the 1966 actual production level with additional man-hours of 6,000 on 1st. shift and 7,200 on 2nd. shift. This output is constrained by the installed capacity of the dryer and boiler section which would need ¥ 30 million investment to bring production to a level 30% higher than that of 1966. The production of 5.5 mm veneer may be increased by more than 100% at the sacrifice of 2.7 mm plywood.</p>				<p><b>1. Energy &amp; water: total</b> 2.0</p> <p>- Electricity KWH 1,264</p> <p>- Coal ton 355 5,500</p> <p>- Water m<sup>3</sup> 14,610 4.5</p> <p><b>2. Direct production materials: total</b> 422.3</p> <p>a. Luan timber 2.8 m<sup>3</sup> 104,113 3,400</p> <p>b. Urea resin Kg. 244,361 35</p> <p>c. Wheat flour Bag 24,421 740</p> <p><b>3. Packaging materials: total</b> ---</p> <p><b>4. Work performed by sub-contractors ( )</b> ---</p> <p><b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> 27.2</p> <p>Repair expenses ¥ 18.6 million</p> <p>Purchased service ¥ 8.6 million</p> <p><b>6. Material inputs for auxiliary activities</b> .3</p> <p>Office consumption goods</p> <p><b>7. Non-factor service inputs: total</b> 15.0</p>			
<p>Unit value of product: Market value f.o.b. before sales tax</p> <p>Unit value of material: Market price c.i.f.</p> <p>- Plywood is partly exported.</p> <p>- Luan timber is directly imported and delivered seaborne with freight rate 30% of c.i.f. value.</p> <p>- Urea resin and wheat flour are both domestically produced but the former has significant import contents. Delivery is by road and freight rates are 2% and 5%, respectively.</p>							
<b>VI. VALUE ADDED TOTAL 1966 ( ¥ million )</b> 211.3				<b>SELECTED COEFFICIENTS</b>			
<p>1. Wages &amp; salaries (before income tax)</p> <p>- Employees in direct production 51.4</p> <p>- Other employees 19.9</p> <p>2. Other expenditures for employees 17.6</p> <p>3. Annual depreciation allowances 58.0</p> <p>4. Rental paid (land) .01</p> <p>5. &amp; other indirect taxes (less subsidies) (business tax) 2.6</p> <p>6. Other gross business income (before income tax) 61.8</p>				<p>- Mach., equip., instruments &amp; tools per employee in direct production on 1st shift: ¥ 1,211,000 (¥ 1,750,000 <sup>1</sup>)</p> <p>- Value added per employee: ¥ 1,167,000</p> <p>- Annual wage per employee in direct production: ¥ 323,000</p> <p>- Variable input costs/gross production ratio: 70.2%</p> <p>- Gross profit/gross production ratio: 9.1%</p> <p>- ( at full capacity : 11.8%)</p> <p>- Level of production at break-even point is approximately 70 % of the 1966 actual level.</p>			
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
<p>1. <b>Recent Expansion</b></p> <p>From 1964 to 1966</p> <p>a. Total Investment ( ¥ million )</p> <p>- Land 37.4 1.6</p> <p>- Land improvements 2.0 -</p> <p>- Buildings 6.9 -</p> <p>- Other construction work - -</p> <p>- Machinery &amp; equipment 24.5 -</p> <p>- Tools &amp; instruments .6 -</p> <p>- Vehicles 2.6 1.6</p> <p>- Office furniture &amp; fixtures .8 -</p> <p>b. Corresponding increase:</p> <p>In no. of employees From 1964 to 1966 179 181</p> <p>In annual gross production ( ¥ million ) 478.0 678.1</p>				<p>2. <b>Future Plan :</b></p> <p>a. Investment proposed for the period 1968 to 1969</p> <p>Total value ( ¥ million ) 40</p> <p>Of which: - Mach. &amp; equipment 7.5</p> <p>- Land improv. &amp; bldg. 25</p> <p>- Land -</p> <p>- Others -</p> <p>b. Net increase in no. of employees envisaged for the same period: - Direct production: 18</p> <p>- Auxiliary: -</p> <p>c. <b>Purpose:</b> Selective expansion of existing capacity concentrating on boilers and hot presses.</p>			
<b>VIII. SUPPLEMENT</b>							
Structure of liquid assets & current liabilities, (end of 1966; ¥ million)							
Cash on hand and in bank 114.4		Marketable securities and bonds 3.0		Accounts payable 204.5		Short-term debt 26.7	
Accounts receivable 248.9		Suspense payments 19.3		Suspense receipts 2.3		Allowance for bonus 2.3	
Loans 2.5							
<p><sup>1/</sup> Using the 1966 replacement value.</p>							

**MAJOR PRODUCTS** Plywood, printed & non-printed & particle board. Annual capacity output of about 44,700,000 ft.<sup>3</sup> of plywood, 6,400 tons of particle board & 400,000 m<sup>2</sup> of printed plywood (or \$ 80 million incl. scrap) on partial two shift operation (printing shop operates only one shift).  
**REPORTING UNIT** An independent one-establishment enterprise with total assets about \$ 900 million and employees 275 as of 1964. Founded in 1934.

I. FIXED CAPITAL ASSETS (end of year)	1963		1964	
	After	depreciation	After	depreciation
TOTAL BOOK VALUE (\$ million)	251.2		253.3	
1. Land	7.7		7.7	
2. Land improvements	-		-	
3. Buildings	81.1		74.7	
4. Other construction works	-		-	
5. Machinery & equipment	183.8		158.1	
6. Tools & instruments	4.8		3.5	
7. Vehicles	13.8		9.3	
8. Office furniture & fixtures	-		-	

DETAIL OF 1.5 (No.)	Total bk value After depr.	Avg. Age (Yr.)	Oper. Cond.	Depn. rate (%)	1964 replace. value
<b>Plywood section</b>					
a. Rotary lather (1)	57.5	1-10	A-C	18.9	148.0
b. Veneer jet dryer (1)		1	A		
c. Drvers (2)		1	B		
d. Hot press (1)		10	C		
e. Cold press (1)		10	C		
f. Blue mixer (1)		5	B		
g. Pointer (1)		5	B		
h. Double-auto saw (1)		7	B		
i. Sanding machine (1)		5	B		
<b>Particle board section</b>					
k. Tipper (1)	66.8	5	B	16.2	170.0
l. Rotary dryer (1)		3	A		
m. Blue-coating machine (1)		5	B		
n. Forming machine (1)		5	A		
o. Press (1)		10	B		
p. Double cut saw (1)		5	B		
q. Sanding machine (1)	5	A			
<b>Printing section</b>					
r. Printing machine (1)	20.0	2	A	18.9	20.0
s. Drver (1)		2	A		
t. Others	39.5	5-10	B-C	16.2	

II. INVENTORY (end of 1964)	Actual	Normal
TOTAL VALUE (\$ million)	105.0	-
1. Direct production materials	42.0	-
2. Other input materials	2.1	-
3. Work in process	21.5	-
4. Finished products	39.4	-
- Normal inventories of finished products 4.7 % of annual gross production		
- Seasonal variations: Seasonal high and low for direct production materials are + 10% in December and -10% in June, respectively, of the normal level.		

Capacity of electr. motors: 105 KW  
 All but one (b, imported) were domestically produced.  
 Average age of machinery is 5.6 years. About 40% of them were installed during the latest expansion period (1962-64).

**GENERAL COMMENTS:** Public utilities, long distance transportation and educational facilities, excellent. Local transportation, residential, health and recreational facilities fair.

III. LABOUR (1964 average)	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED	275		
1. Direct production ( % )	196	31	
Annual total manhours (000)	592	826	
a. Plywood	139	16	
b. Particle board	35	15	
c. Printing	12	-	
2. Auxiliary activities ( % )	51	7	
	58	-	

EDUCATIONAL BACKGROUND (No. of employees)			
Univ. or High	Sr. High	Other	
		Elem. or other	Unskilled
TOTAL	5	139	127
<b>Direct Production</b>			
Skilled	3	3	
Semi-skilled	90	57	
Unskilled	20	30	
<b>Auxiliary Activities</b>			
Skilled		20	
Semi-skilled	5	23	12
Unskilled	3	5	

- Actual hours worked per annum per direct production worker : 3,248 hours.

- Proportion of meters occupied : 90% on both shifts.

- **Technological features:**  
 e) Uses jet dryers.

- Mechanization: (a), excellent; (b) (c), fair.

- Automation: fair in all shops.

- Skilled workers in direct production are manned for selection of materials, operation of machines & inspection of finished goods. Those in auxiliary activities are engaged in accounting and other general affairs.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( ¥ million ) 847.1

Product	Unit	Quantity	Unit Value ( ¥ 1000 )
a. Plywood	000 ft. <sup>2</sup>	42,300	10.3
b. Particle board	ton	5,823	39.0
c. Printed plywood	000 m <sup>2</sup>	367	174.0
d. Scrapped lumber	¥ mil.	120	..

**CAPACITY OUTPUT:** 10% higher than the 1964 actual production level; with no addition to manhours. Constrained by the capacity of a hot press, which could be raised to nullify the gap by an investment of ¥ 17 million. Partly responsible for underutilization is insufficient demand year round. Product-mix can preferably be changed to 60% for plywood, 2% for particle board & 1% for printed plywood from the present 60 : 31 : 9 composition.

Unit value of product: Market value f.o.b. before sales tax  
 Unit value of material: Market price c.i.f.

- IV. a. is partly exported.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( ¥ million ) 624.9

1. **Energy & water: total** 23.4

	Unit	Quantity	Unit value ( ¥ 1000 )
- Electricity	000 KWH	438	6.5
- Heavy oil	m <sup>3</sup>	2,885	6.5
- Water	000 m <sup>3</sup>	79	23.0

2. **Direct production materials: total** 528.8

Detail of direct production materials not available.

3. **Business materials: total** .8

Paper and paper products

4. **Work performed by sub-contractors ( )** 5.4

5. **Repairs & maintenance (materials & services purchased)** 14.6

- Parts and materials ¥ 7.5 million  
 - Services purchased ¥ 7.1 million

6. **Material inputs for auxiliary activities** -

7. **Non-factor service inputs: total** 51.9

- Transportation, insurance and storage (purchased separately) ¥ 33.1 million.

**VI. VALUE ADDED TOTAL 1964 ( ¥ million )** 222.2

1. Wages & salaries (before income tax)	
- Employees in direct production	80.5
- Other employees	28.2
2. Other expenditures for employees	17.5
3. Annual depreciation allowance	42.1
4. Rental paid	-
5. Indirect taxes (less subsidies)	5.6
6. Other gross business income (before income tax)	48.3

**SELECTED CHARACTERISTICS**

- Mach., equip., instruments & tools per employee in direct production on lot shift: ¥ 1,014,000
- Value added per employee: ¥ 808,000
- Annual wage per employee in direct production: ¥ 371,000
- Variable input costs/gross production ratio: 66% <sup>1/</sup>
- Gross profit/gross production ratio: 5.7%
- ( at full capacity : 9.7% )
- Level of production at break-even point is approximately 83 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
1. <b>Recent Expansion</b>		
From 19 62 to 19 64		
a. Total Investment ( ¥ million )	<u>92.4</u>	
- Land	-	
- Land improvements	-	
- Buildings	22.0	
- Other construction work	-	
- Machinery & equipment	70.4	
- Tools & instruments	-	
- Vehicles	-	
- Office furniture & fixtures	-	
b. Corresponding increase:	<u>From 19 62</u>	<u>to 19 64</u>
In no. of employees	266	275
In annual gross production ( ¥ million )	730	847

2. **Future Plan :**

a. Investment proposed for the period 19 64 to 19 67

Total value ( ¥ million ) 480

Of which: - Mach. & equipment .. ¥  
 - Land improv. & bldg. ..  
 - Land ..  
 - Others ..

b. Net increase in no. of employees envisaged for the same period: - Direct production: -  
 - Auxiliary: -

c. **Purpose:** Selective expansion of the plywood section at the same site and balanced expansion of the existing capacity in a new locality.

**VIII. SUPPLEMENT**

<sup>1/</sup> Excluding wages and salaries from variable cost.

An enterprise specialized in the manufacture of veneer and plywood. Founded in 1958. Annual capacity output is about 6,000 m<sup>3</sup> on partial three-shifts operation. 98 % of the raw materials are of domestic origin; however, 65 % of the output are directly exported.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)		
TOTAL (Drs. million)		813	1,057	Gross expenditures	1961-65 105	
Buildings & land improvements		362	471	Retirements	89	
Machinery & equipment		400	520	Calculated average age of fixed assets: 4.5 years		
Other capital assets		51	66	<b>Electric motors:</b>		
<b>Major machinery crucial for determining the overall production capacity:</b>				Total installed capacity: 550 KW		
<b>Veneer:</b> veneer cutters (2 shifts);				Of which actually operated in 1965:		
<b>Plywood boards from steamed beech:</b> press (3 shifts).				1st shift 100 %; 2nd shift 60 %; 3rd shift 58 %		
(One fourth of the machinery and equipment were imported.)				<b>Technological features:</b> Conventional methods of chain production of veneer and plywood boards from steamed beech veneer. Relatively high degree of mechanisation (80 %) and automation (70 %). Though more than half of the products are being exported, the relatively great distance from the border is responsible for high export costs.		
II. LABOUR (1965)		TOTAL no. of employees: 358			Educational background of workers:	
		1st shift	2nd shift	3rd shift	Techn. Sch.	Low Others Total
1. Factory workers:						
Total 304 persons		155	97	52	Univ. or higher	- - 1 3 4
( 675 thous. manhrs. )		( 344 )	( 213 )	( 118 )	Tech. Higher sch.	- - 2 - 2
- Plywood		93	75	43	Secondary sch.	13 1 - 1 15
- Veneer		21	12	4	Primary school	- - - 317 317
- Packaging materials		41	10	-	IV. INTERMEDIATE INPUTS	
2. Non-factory workers: 54 persons					Quantity Value (Drs. Million)	
( 125 thous. manhours )					TOTAL actual consumption 1965 417	
III. ANNUAL PRODUCTION & CAPACITY		Quantity		Value (Drs. Million)	1. Energy inputs: total 45	
TOTAL actual revenue output 1965*				756	- Electricity 366 MWh 76	
- Enriched veneer 609 m <sup>3</sup>				146	- Brown coal 6,416 t 26	
- Plywood board** 4,416 m <sup>3</sup>				469	- Liquid fuel 20 t 3	
- Wooden cases 573 m <sup>3</sup>				56	2. Major production materials: total 271	
- Barrels and containers 92 m <sup>3</sup>				9	- Veneer-peeled 10,949 m <sup>3</sup> 190	
- Raw beech veneer 207 t				14	- Logs for veneer 1,632 m <sup>3</sup> 81	
- Others -				124	3. Repairs & maintenance: total 12	
* Including turnover tax on sold products.					4. Other material & non-factor service inputs 89	
** Of which Drs. 62 million are internally used and not included in the total value.					V. VALUE ADDED (1965) (Drs. Million)	
<b>Capacity output:</b>		Rate of utilisation		TOTAL (except turnover tax) 315		
Veneer (enriched) 800 m <sup>3</sup>		87 %		- Wages of factory workers 103		
Plywood boards 4,800 m <sup>3</sup>				- Salaries of non-factory workers 48		
Optimal number of factory workers on the first shift for full utilisation is estimated to be 170.				- Depreciation 33		
				- Interests paid 64		
				- Other accumulation 87		
				( Turnover tax ) 4		
VI. SUPPLEMENT Future plans:				SELECTED CONVECTICES		
a) To double the existing capacities;				- Mach. & equip. per factory worker on 1st shift: Drs. 3,354,000		
b) To raise the degree of mechanisation up to the world level (especially that of internal transport).				- Value added per employee: Drs. 935,000		
				- Annual wage per factory worker: Drs. 338,000		
				- Variable input cost/gross production ratio: 55.7 %		
				- Gross accumulation/gross production ratio: 2/ 20.0 %		
				(at full capacity) 23.2 %		
				- Level of production at break-even point: 55 % of the 1965 actual level.		
1/ Drs. 54 million are funds belonging to the enterprises.						
2/ Gross accumulation includes 'interests paid'.						

An enterprise producing panel boards, lesonite and veneers. Founded in 1954. Annual capacity output is 12,000 m<sup>3</sup> of panel boards, 12,000 t of lesonite and about 2,000 m<sup>3</sup> of veneers and other products on partial three shifts operation. Besides some logs for veneer, 99% of the materials are of domestic origins. 19% of the output are directly exported.

I. FIXED CAPITAL (end of 1965)	Original purchase value	1965 re- placement value
	TOTAL (Drs. million)	3,413
Buildings & land improvements	1,349	1,754
Machinery & equipment	2,060	2,221
Other capital assets	4	6

Major machinery crucial for determining the overall production capacity:

Panel boards: Presses (3 shifts);  
 lesonite : Presses (3 shifts);  
 veneers : Horizontal knives (3 shifts)

65% of machinery and equipment were imported.

Capital expenditures in the past years: (Drs. million)	1953-54	1955-57	1958-60	1961-63
	Gross expenditures	-	735	235
Retirements	53	203	257	326

Calculated average age of fixed assets: 7.4 years

Electric motors:

Total installed capacity: 3,928 KW

Of which actually operated in 1965:

1st shift 100%; 2nd shift 98%; 3rd shift 95%

Technological features: Panel boards - conventional process of cutting "damp" veneers; lesonite - damp process with "defibrator"; drying is artificial (infra-red). Well mechanised. Located far from the source of raw materials and exporting ports (45 to 150 Km), but communication lines are good.

II. LABOUR (1965)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:	421	319	172
Total 912 persons	(874)	(699)	(360)
(1893 thous. manhrs.)	(874)	(699)	(360)
- Panel boards	199	141	78
- lesonite	52	39	34
- veneers	35	21	7
- Packaging materials	29	19	-
- transport	4	-	-
- other services	102	99	53
2. Non-factory workers:	160 persons		
(417 thous. manhours)			

Educational background of workers:

	Techn. Univ.	High. sch.	Low. sch.	Others	Total
Univ. or higher	-	2	1	12	15
Tech. Higher sch.	-	-	2	1	3
Secondary sch.	7	8	-	24	39
Primary school	-	-	-	1,015	1,015

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. million)
	TOTAL actual consumption 1965	
1. Energy inputs: total		215
- Electricity	6,907 Mwh	103
- Coal	21,367 t	112

2. Major production materials: total	Quantity	Value (Drs. million)
	823	
- Logs for sawing	26,138 m <sup>3</sup>	457
- Logs for veneering	2,312 m <sup>3</sup>	140
- Fuel wood and waste	38,990 m <sup>3</sup>	126
- Other materials	..	100
3. Repairs & maintenance: total		41
4. Other material & non-factor service inputs		45

V. VALUE ADDED (1965)	(Drs. million)
TOTAL (except turnover tax)	697
- Wages of factory workers	281
- Salaries of non-factory workers	86
- Depreciation	115
- Interests paid	115
- Other accumulation (Turnover tax)	95 1/2

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. million)
	TOTAL actual revenue output 1965 *	
- Panel boards **	10,066 m <sup>3</sup>	946
- lesonite **	10,960 t	822
- Veneers **	1,015 m <sup>3</sup>	280
- Improved (polished) lesonite sheets	103 m <sup>3</sup>	17
- Packaging materials	917 m <sup>3</sup>	54
- Services	..	190
- Others	..	150

\* Including turnover tax on sold products.  
 \*\* of which Drs. 632 million internally used, and not included in the total.

Capacity output:

Panel boards	12,000 m <sup>3</sup>	} Overall rate of utilization is 87%.
lesonite	12,000 t	
Veneers	1,100 m <sup>3</sup>	
Improved lesonite sheets	250 m <sup>3</sup>	
Packaging materials	1,100 m <sup>3</sup>	

About 400 workers would be sufficient on the 1st shift for full utilisation of the existing capacity.

VI. SUPPLEMENT	Future Plans:
a)	To raise the degree of mechanisation to the modern level.
b)	Introduction of a new production line for lesonite.
1/	Of which Drs. 58 million are funds belonging to the enterprise.
2/	Wages and salaries are considered as fixed costs.
3/	Gross accumulation includes interests paid.

SELECTED CONCLUSIONS

- Mech. & equip. per factory worker on 1st shift: Drs. 5,275,000	
- Value added per employee: Drs. 690,000	
- Annual wage per factory worker: Drs. 308,000	
- Variable input cost/gross production ratio: 2/	57%
- Gross accumulation/gross production ratio: 3/	11.7%
(at full capacity)	15.8%
- Level of production at break-even point: 73% of the 1965 actual level.	

An enterprise producing sawn timber, plywood, deck boards, doors and other wooden products. Founded in 1945. Annual capacity output is 65,000 m<sup>3</sup> of sawn timber, 13,000 m<sup>3</sup> of boards and plywood, and 12,000 m<sup>3</sup> of other products on partial three shifts operation. All the raw materials are of domestic origins; 39% of the output are directly exported.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 re- placement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)		985	1,350	73	182	70	358			
Buildings & land improvements		440	650	47	72	70	108			
Machinery & equipment		522	550							
Other capital assets		23	150							
<b>Major machinery crucial for determining the overall production capacity:</b>										
Sawn timber: vertical log frames (2 shifts);										
Panel boards and doors: hydraulic press (2 shifts).										
38% of the existing machinery and equipment are of foreign origins.										
				Calculated average age of fixed assets: 7.2 years						
				Electric motors: 1,030 kW						
				Total installed capacity: _____ kW						
				Of which actually operated in 1965:						
				1st shift 100 %; 2nd shift 33 %; 3rd shift 7 %						
				<b>Technological features:</b> Logs are sawn to specific proportions on vertical log frames. Plywood is formed in three plies with more than 22mm thickness. Doors are made from juniper and pine timber plied with plywood panelling. Medium mechanisation and automation. With good access to domestic and foreign markets. Product-mix is too large from the standpoint of technological efficiency.						
II. LABOUR (1965)		TOTAL no. of employees: 763			Educational background of workers:					
		1st shift	2nd shift	3rd shift	Tech. sch.	Elem.	Low	Others	Total	
1. Factory workers:										
Total	637 persons	463	148	26	-	1	-	7	8	
	(1368 thous. manhrs.)	(996)	(312)	(60)	-	-	-	-	-	
- Saw mill		251	41	2	15	14	-	-	29	
- Plywood and panel boards		107	48	12	-	-	-	-	-	
- Deck boards		9	6	-	-	-	-	-	-	
- Cases		17	-	-	-	-	-	726	726	
- Doors		46	37	2	Primary school					
- Joints and other products		33	16	10	IV. INTERMEDIATE INPUTS					
2. Non-factory workers:		126 persons			Quantity		Value (Drs. Million)			
		(266 thous. manhours)			TOTAL actual consumption 1965		1,983			
					1. Energy inputs: total		21			
					- Electricity		2,295 Mwh			
					- Liquid fuel		22,700 Kg			
					2. Major production materials: total		1,787			
					- Hard-wood logs		171 m <sup>3</sup>			
					- Soft-wood logs		84,284 m <sup>3</sup>			
					- Peeled soft logs		1,050 m <sup>3</sup>			
					- Soft-wood sawn timber		17,471 m <sup>3</sup>			
					- Veneer (purchased)		178 m <sup>3</sup>			
					3. Repairs & maintenance: total		70			
					4. Other material & non-factor service inputs		105			
III. ANNUAL PRODUCTION & CAPACITY		Quantity		Value (Drs. Million)		V. VALUE ADDED (1965)		Value (Drs. Million)		
TOTAL actual revenue output 1965 *		3,254				TOTAL (except turnover tax)		1,136		
- Sawn timber **	56,215 m <sup>3</sup>	1,905		- Wages of factory workers		447				
- Plywood	5,360 m <sup>3</sup>	541		- Salaries of non-factory workers		76				
- Beams for panel boards	1,419 m <sup>3</sup>	78		- Depreciation		48				
- Panel boards	435 m <sup>3</sup>	43		- Interests paid		89				
- Deck boards	3,029 m <sup>3</sup>	167		- Other accumulation (Turnover tax)		476		1/		
- Cases and parts	1,783 m <sup>3</sup>	75				135				
- Doors	2,991 m <sup>3</sup>	306								
- Wood shavings **	489 t	23								
- Saw dust	392 t	15								
- Other sawn products **	3,114 m <sup>3</sup>	41								
- Other products	-	60								
* Including turnover tax on sold products.										
** The value of production does not include the internally used products.										
Capacity output:										
Sawn timber	65,000 m <sup>3</sup>	Overall rate of utilisation is 89%.								
Plywood and beams	6,200 m <sup>3</sup>									
Deck boards and panel boards	6,700 m <sup>3</sup>									
Cases and parts	3,000 m <sup>3</sup>									
Doors	3,000 m <sup>3</sup>									
Wood shavings and saw dust	1,000 m <sup>3</sup>									
Other wood products	5,000 m <sup>3</sup>									
Optimum number of workers required on the 1st shift for full utilisation is 500.										
VI. SUPPLEMENT		Future Plans:		SELECTED COEFFICIENTS						
a) To narrow the range of product-mix, which calls for reduction of the existing seven departments to four;				- Mach. & equip. per factory worker on 1st shift: Drs: 1,187,000						
b) To raise the degree of mechanisation and automation up to the world standard.				- Value added per employee: Drs. 1,488,000						
				- Annual wage per factory worker: Drs. 701,000						
				- Variable input cost/gross production ratio: 72.5 %						
				- Gross accumulation/gross production ratio: 2/ 18 %						
				(at full capacity 21.8 %)						
				- Level of production at break-even point: 35 % of the 1965 actual level.						
1/ Of which Drs. 276 million are funds belonging to the enterprise.										
2/ Gross accumulation includes interests paid.										

An enterprise producing sawn timber, boxes, furniture and other final products; founded in 1950. Annual capacity output is about 90,000 m<sup>3</sup> of sawn timber; 80,000 m<sup>3</sup> of panel sheets, boxes, prefabricated building materials, furniture and other products on full three shifts operation. Only 2% of the material expenditures (wood boards of a certain kind) are imported, but almost half of the output is directly exported.

I. FIXED CAPITAL (end of 1965)	Original	1965 re-
	purchase	placement
	value	value
TOTAL (Drs. million):	1,563	2,111
Buildings & land improvements	902	1,450
Machinery & equipment	661	661
Other capital assets	-	-

**Major machinery crucial for determining the overall production capacity:**

Sawn timber: frame sawing machines and band saws (two to three shifts); Joinery: grinding machines, compass planes and milling machines (two shifts); Boxes: compass planes (two shifts); Furniture and other final products: presses, grinding machines, compass planes, milling machines and band saws.

(14% of machinery and equipment were imported.)

Capital expenditures in the past years: (Drs. million)

	1951-54	1955-57	1958-60	1961-63
Gross expenditures	143	242	310	908
Retirements	170	246	228	149

Calculated average age of fixed assets: 5.8 years

**Electric motors:**

Total installed capacity: 1,439 KW  
Of which actually operated in 1965:

1st shift 100%; 2nd shift 100%; 3rd shift 100%

**Technological features:** Employs the conventional system of saw mill. Large-scale production of boxes and small-scale production of furniture. Medium mechanisation and automation (rated at 50% and 40%, respectively). Production of skis is an obsolete process. Located about 20 km from the harbour and frontiers.

II. LABOUR (1965)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:	432	339	143
Total 914 persons	(2,230	(1,055)	(827)
(2,230 thous. manhrs.)	(1,055)	(827)	(348)
- Saw mill	177	150	68
- Other wood products	255	189	75
2. Non-factory workers:	373		
(850 thous. manhours)			

**Educational background of workers:**

	Techn. High.	Low	Others	Total
Univ. or higher	-	1	7	8
Tech. Higher sch.	-	-	3	3
Secondary sch.	5	2	9	16
Primary school	-	-	1,260	1,260

**IV. INTERMEDIATE INPUTS**

	Quantity	Value (Drs. Million)
TOTAL actual consumption 1965		1,512
1. Energy inputs: total		35
- Electricity	1,755 kWh	35
2. Major production materials: total		1,063
- Round wood	90,401 m <sup>3</sup>	920
- Ash timber	831 m <sup>3</sup>	36
- Others	1,413 m <sup>3</sup>	107
3. Repairs & maintenance: total		35
4. Other material & non-factor service inputs		379

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
	TOTAL actual revenue output 1965*	
- Sawn conifer timber**	52,884 m <sup>3</sup>	1,568
- Sawn beech timber**	4,150 m <sup>3</sup>	115
- Other sawn timber	106 m <sup>3</sup>	3
- Sleepers	854 m <sup>3</sup>	26
- Panel sheets	407 m <sup>3</sup>	27
- Boxes	5,845 m <sup>3</sup>	282
- Office furniture	1,082 pos.	2
- Small pieces furniture	48,421 pos.	280
- Joinery	12,763 m <sup>3</sup>	162
- Prefabricated materials for bldgs.	589 m <sup>3</sup>	120
- Skis and other wood products*	..	626

\* Including turnover tax on sold products

\*\* Internally used Drs. 529 million.

**Capacity output:**

Saw mill products	90,000 m <sup>3</sup>	Overall rate of utilisation is 72%.
Panel sheets, boxes and building materials	23,060 m <sup>3</sup>	
Furniture and other final products	55,600 m <sup>3</sup>	

Underutilisation due to insufficient demand, to insufficient supply of raw materials and to some bottlenecks in production processes.

**V. VALUE ADDED (1965) (Drs. Million)**

TOTAL (except turnover tax)	1,082
- Wages of factory workers	526
- Salaries of non-factory workers	214
- Depreciation	60
- Interests paid	130
- Other accumulation (Turnover tax)	152

**VI. SUPPLEMENT**

**Future plans:**

- Introduction of panel boards production;
- To install new machines and to modernise internal transport, which is expected to raise labour productivity by some 30%.
- Expansion of the existing capacities for joinery, piece furniture and skis.

1/ Of which Drs. 60 million are funds belonging to the enterprise.

2/ Gross accumulation includes interests paid.

**SELECTED INDICATORS**

- Mech. & equip. per factory worker on 1st shift: Drs. 1,530,000
- Value added per employee: Drs. 840,000
- Annual wage per factory worker: Drs. 575,000
- Variable input cost/gross production ratio: 62.6%
- Gross accumulation/gross production ratio: 10.8% (at full capacity)
- Level of production at break-even point: 71% of the 1965 actual level.



An enterprise producing sawn timber, veneers, panel boards, chip boards and furniture. Founded in 1951. Annual capacity output is around 74,000 m<sup>3</sup> of parquet, 15,000 m<sup>3</sup> of sawn timber, around 10,000 m<sup>3</sup> of chip boards and other wood products and furniture on partial two shifts operation (chip board shop works with three shifts). 97% of material expenditures, except logs for veneer, are of domestic origins, 37% of the output are directly exported.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 re- placement value	Capital expenditures in the past years: (Drs. million)						
TOTAL (Drs. million)		2,485	2,803	1953-54	1955-57	1958-60	1961-63			
Buildings & land improvements		916	1,191	Gross expenditures	32	219	199	709		
Machinery & equipment		1,557	1,604	Retirements	53	89	147	214		
Other capital assets		12	12	Calculated average age of fixed assets: <u>7.9</u> years						
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Electric motors:</b>						
Sawn timber: primary machines (2 shifts); Veneers: outters (2 shifts); Panel boards: presses (2 shifts); Chip boards: press (3 shifts); Parquet: capacities of two constituent production lines (2 shifts).				Total installed capacity: <u>1,900</u> KW						
23 of machinery and equipment were imported.				Of which actually operated in 1965:						
				1st shift <u>79</u> %; 2nd shift <u>57</u> %; 3rd shift <u>25</u> %						
				<b>Technological features:</b> Veneers: Natural drawing of veneers by vertical outters. Panel boards: outting of damp veneers, pressing and drying in oval kilns. Chip boards: three-ply system "Belg". Furniture: serial production with sufficient mechanisation and automation which are rated at 70% and 90%, respectively. Located at 4 Km from the source of raw materials.						
II. LABOUR (1965)		TOTAL no. of employees: 1,862			Educational background of workers:					
1. Factory workers:		1st shift	2nd shift	3rd shift	Techn. High.	Low	Others	Total		
Total	1,384 persons	704	433	47	Univ. or higher	-	1	-	17	18
	(3,192 thous. manhrs.)	(2,088)	(996)	(108)	Tech. Higher sch.	-	2	-	-	2
					Secondary sch.	21	6	-	4	31
					Primary school	-	-	-	1811	1811
					IV. INTERMEDIATE INPUTS					
					Quantity		Value (Drs. Million)			
					TOTAL actual consumption 1965					
					1. Energy inputs: total		1,739			
					- Electricity		2,903 kWh	102		
					-ignite		7,589 t	69		
								33		
					2. Major production materials: total		1,435			
					- Oak logs for sawing		25,675 m <sup>3</sup>	334		
					- Other logs for sawing		8,798 m <sup>3</sup>	110		
					- Logs for veneers		5,695 m <sup>3</sup>	427		
					- Logs for barking		14,007 m <sup>3</sup>	256		
					- Sawn oak timber *		3,567 m <sup>3</sup>	238		
					- Other sawn timber *		3,202 m <sup>3</sup>	111		
					- Veneers *		156 m <sup>3</sup>	66		
					- Ply and panel boards*		575 m <sup>3</sup>	53		
					- Artificial boards *		125 m <sup>3</sup>	3		
					- Synthetic glues		489 t	64		
					* Drs. 235 million are internally supplied and not counted in the total.					
					3. Repairs & maintenance: total		72			
					4. Other material & non-factor service inputs		130			
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	V. VALUE ADDED (1965)		(Drs. Million)				
TOTAL actual revenue output 1965			2,922	TOTAL (except turnover tax)		1,218				
- Sawn oak timber **	7,005 m <sup>3</sup>	423		- Wages of factory workers	561					
- Other sawn timber **	4,616 m <sup>3</sup>	160		- Salaries of non-factory workers	213					
- Oak veneers **	4,201 m <sup>3</sup>	127		- Depreciation	96					
- Panel boards **	883 m <sup>3</sup>	285		- Interests paid	158					
- Chip boards **	5,459 t	534		- Other accumulation (Turnover tax)	190 1/2					
- Oak parquet	2,858 t	171			35					
- Bedroom sets	58,194 m <sup>2</sup>	250								
- Furniture sets	4,799 sets	316								
- Furniture pieces	4.9 sets	131								
- Other veneers **	14,172 pcs.	66								
- Other products	977 m <sup>3</sup>	306								
	**	329								
* Including turnover tax on sold products.				VI. SUPPLEMENT						
** of which Drs. 1.6 million are internally used, and not counted in the total.				Future Plans						
Capacity output:				a) Introduction of new processes for the production of panel boards and furniture; together with an overhauling of sawmill and veneer shops which will result in an overall balance in the plant structure.						
Sawn timber	15,000 m <sup>3</sup>	} overall rate of utilisation is 76.5%	b) To raise the degree of mechanization to the world level.							
Veneers	2,420 m <sup>3</sup>		1 of which Drs. 145 million are funds belonging to the enterprise.							
Panel boards	5,930 m <sup>2</sup>		2 Wages and salaries are considered as fixed costs.							
Chip boards	9,530 m <sup>3</sup>									
Parquet	73,700 m <sup>2</sup>									
Bed-room and other furniture sets	8,000 sets									
Underutilization due to imbalance between capacities of various processes; engineering deficiencies. Optimum number of workers on the 1st shift for full utilisation is estimated to be 900.				SELECTED COEFFICIENTS						
				- Mach. & equip. per factory worker on 1st shift: Drs. 1,770,000						
				- Value added per employee: Drs. 654,000						
				- Annual wage per factory worker: Drs. 405,000						
				- Variable input cost/gross production ratio: 2/ 51.9%						
				- Gross accumulation/gross production ratio: 2/ 11.7%						
				(at full capacity) 2/ 20.5%						
				- Level of production at break-even point: 75 % of the 1965 actual level.						
				2/ the 1965 actual level.						
				3/ Gross accumulation includes interests paid.						

A large enterprise producing sawn timber, parquet, chip boards, furniture and prefabricated wooden houses. Annual capacity output is over 92,000 m<sup>3</sup> of sawn timber, 160,000 m<sup>2</sup> of parquet, over 4,000 m<sup>3</sup> of veneers, around 20,000 m<sup>3</sup> of boards and cases, 146,000 pieces of furniture and 23,000 m<sup>3</sup> of prefabricated houses on partial three shifts operation. 4% of material expenditures (dyes, glues and ferrous products) are imported; one-third of the output is directly exported. The enterprise was founded in 1888.

I. FIXED CAPITAL (end of 1965)	Original	1965 re-
	purchase value	placement value
TOTAL (Drs. million)	3,431	4,004
Buildings & land improvements	1,654	2,154
Machinery & equipment	1,753	1,800
Other capital assets	24	50

Major machinery crucial for determining the overall production capacity:

Sawn timber: vertical log frames (2 shifts);  
 Peeler veneers: peelers (2 shifts);  
 Veneers: cutting knives (2 shifts);  
 Chip boards: presses (2 shifts);  
 Parquet: parquet machines (2 shifts).

(No less than 80% of machinery & equipment are foreign makes.)

Capital expenditures in the past years: (Drs. million)

	1951-54	1955-57	1958-60	1961-63
Gross expenditures	421	464	1,210	856
Retirements	475	613	601	477

Calculated average age of fixed assets: 7.5 years

Electric motors:

Total installed capacity: 4,428 KW  
 Of which actually operated in 1965:

1st shift 100%; 2nd shift 40%; 3rd shift 5%

Technological features:

Large scale production of various wood products. Uses various kinds of foreign-made machines. The house department uses the Swedish system. Medium mechanisation and automation rated at 75% and 55%, respectively. A little unfavourable location with respect to export markets.

II. LABOUR (1965)	TOTAL no. of employees: 3,482		
	1st shift	2nd shift	3rd shift
1. Factory workers:			
Total 3,200 persons	1,728	1,258	159
(7,121 thous. manhrs.)	(3,901)	(2,846)	(372)
- Log yard and saw mill	579	417	-
- Veneer	101	90	-
- Chip boards	65	60	-
- Wooden houses	127	100	50
- Furniture	200	180	91
- Other products	348	297	-
- Auxiliary shops and services	308	114	18
2. Non-factory workers: 282 persons			
(640 thous. manhours)			

Educational background of workers:

	Techn. High.	Low	Others	Total
Univ. or higher	1	2	12	17
Techn. Higher sch.	-	1	2	4
Secondary sch.	47	10	-	57
Primary school	-	-	-	3,410

IV. INTERMEDIATE INPUTS

	Quantity	Value (Drs. Million)
TOTAL actual consumption 1965		4,588
1. Energy inputs: total		140
- Electricity	5,250 Mwh	89
- Waste wood & saw dust	24,255 t	34
- Hard coal	3,134 t	17
2. Major production materials: total		3,495
- Logs for sawing	73,917 m <sup>3</sup>	1,637
- Logs for veneer	10,582 m <sup>3</sup>	260
- Sawn timber	36,383 m <sup>3</sup>	1,201
- Chip boards of conifer	2,338 m <sup>3</sup>	7
- Ply and panel boards	163 m <sup>3</sup>	15
- Synthetic glues	874 t	280
- Rolled non-ferrous metal products	619 t	62
- Dross non-ferrous metal products	95 t	10
- Cast ferrous products	42 t	18
- Cast non-ferrous metal products	5 t	5
3. Repairs & maintenance: total		108
4. Other material & non-factor service inputs		951

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1965*		7,459
- Various sawn timber**	81,491 m <sup>3</sup>	2,579
- Veneer**	4,463 m <sup>3</sup>	342
- Chip boards**	12,015 m <sup>3</sup>	712
- Panel boards and deck boards**	1,618 m <sup>3</sup>	136
- Parquet**	154,239 m <sup>3</sup>	191
- Cases	5,455 m <sup>3</sup>	270
- Furniture	140,492 pos	585
- Wooden houses	20,990 m <sup>3</sup>	3,417
- Building materials	1,090 m <sup>3</sup>	169
- Artificial boards	42,980 m <sup>3</sup>	43
- Beech frieses	526 m <sup>3</sup>	15
- Equipment for wood industry	..	386
- Others	..	255

\* Including turnover tax on sold products.

\*\* Of which Drs. 1,641 million for internal use and not included in the total value of production.

Capacity output:

Sawn timber	92,000 m <sup>3</sup>	Overall rate of utilisation is 90%.
Parquet	160,000 m <sup>2</sup>	
Veneers	4,460 m <sup>3</sup>	
Chip boards	12,260 m <sup>3</sup>	
Cases	7,000 m <sup>3</sup>	
Furniture	146,350 pos	
Prefabricated houses	23,000 m <sup>3</sup>	

Optimum number of workers required on the 1st shift for full utilisation is 1,600, i.e. 7% less, but more skilled manpower than the actual 1965 level.

V. VALUE ADDED (1965)

	(Drs. Million)
TOTAL (except turnover tax)	2,610
- Wages of factory workers	1,320
- Salaries of non-factory workers	190
- Depreciation	127
- Interests paid	360
- Other accumulation (Turnover tax)	613
	(161)

VI. SUPPLEMENT

Future plans:

- Expansion of the shop for prefabricated houses.
- Full mechanisation and improvement of the existing production processes.

1/ Of which Drs. 406 million are funds belonging to the enterprise.

2/ Wages and salaries are considered as fixed costs.

3/ Gross accumulation includes interest paid.

RELEVANT COEFFICIENTS

- Mach. & equip. per factory worker on 1st shift:	Drs. 1,041,000
- Value added per employee:	Drs. 748,000
- Annual wage per factory worker:	Drs. 412,000
- Variable input cost/gross production ratio:	50%
- Gross accumulation/gross production ratio:	13.3%
(at full capacity)	17.0%
- Level of production at break-even point:	74% of the 1965 actual level

An enterprise producing sawn timber, panel boards and furniture. Founded in 1947. Annual capacity output is 43,000 m<sup>3</sup> of sawn timber, 10,000 m<sup>3</sup> of panel boards and Drs. 3,000 million of furniture and other wood products on full two shifts operation (panel boards shop works on three shifts). Veneers, glues and frames are imported; 43% of the output is directly exported.

I. FIXED CAPITAL (end of 1965)	Original purchase value	1965 replacement value
	TOTAL (Drs. million)	1,747
Buildings & land improvements	662	861
Machinery & equipment	1,078	1,078
Other capital assets	7	8

Major machinery crucial for determining the overall production capacity:

Panel boards: Hempelkamp - three ply system (3 shifts);

Piece furniture: machine sets for production of parts (3 shifts);

11 of machinery and equipment were imported.

Capital expenditures in the past years: (Drs. million)	1953-54	1955-57	1958-60	1961-63
	Gross expenditures	107	147	426
Retirements	39	77	67	120

Calculated average age of fixed assets: 7.2 years

Electric motors:

2,784

Total installed capacity:

KW

Of which actually operated in 1965:

1st shift 100%; 2nd shift 40%; 3rd shift 30%

Technological features: Automatic production of panel boards and semi-automatic production of household furniture. Electricity partly supplied internally. Relatively highly mechanized and automated (rated as 80% and 70% respectively). Favourably located with respect to the source of raw materials and domestic and foreign markets.

II. LABOUR (1965)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:			
Total 1,159 persons	640	497	23
(2,604 thous. manhrs.)	(1,440)	(1,116)	(48)
- Sawn timber	109	65	-
- Panel boards	23	21	23
- Ship flooring	6	6	-
- Boxes	15	15	-
- Large piece furniture	319	248	-
- Small piece furniture	163	137	-
- Electricity generation	5	5	-
2. Non-factory workers:	224 persons		
(547 thous. manhours)			

Educational background of workers:

	Techn.	Econ.	Law	Others	Total
Univ. or higher	2	1	-	-	3
Tech. Higher sch.	-	-	-	3	3
Secondary sch.	14	17	1	-	32
Primary school	-	-	-	1,345	1,345

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
	TOTAL actual revenue output 1965 *	
- Sawn hardwood timber **	8,887 m <sup>3</sup>	231
- Sawn conifer timber **	26,354 m <sup>3</sup>	678
- Panel sheets **	314 m <sup>3</sup>	23
- Panel boards **	9,769 m <sup>3</sup>	616
- Ship flooring	5,161 m <sup>3</sup>	258
- Boxes	1,671 m <sup>3</sup>	45
- Large piece furniture	..	937
- Small piece furniture	..	467
- Office furniture	..	374
- Various final products	..	194
- Commission on sawing	517 m <sup>3</sup>	2
- Electricity	1,251 Mwh	16
- Others	-	564

\* Including turnover tax on sold products.

\*\*Drs. 933 million are internally used and not counted in the total.

Capacity output:

Sawn timber	42,977 m <sup>3</sup>	Overall rate of utilization is 81%.
Panel boards	10,000 m <sup>3</sup>	
Ship flooring	6,294 m <sup>3</sup>	
Boxes	2,038 m <sup>3</sup>	
Furniture and others	Drs. mill. 2,615	

Two thirds of underutilization due to unbalance between capacities of various processes and the rest to the insufficient supply of raw materials. No additional workers are required on the 1st shift for full utilization of the existing capacity.

VI. SUPPLEMENT

- Introduction of printed sand boards is being planned.

1 of which Drs. 98 million are funds belonging to the enterprises.

2 wages and salaries are considered as fixed costs in the vicinity of current operation scale.

3 Gross accumulation includes interest paid.

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. Million)
	TOTAL actual consumption 1965	

1. Energy inputs: total		77
- Electricity	3,727 Mwh	48
- Brown coal	4,583 t	23
- Liquid fuel	56 t	6

2. Major production materials: total		2,000
- Conifer logs	39,346 m <sup>3</sup>	531
- Other logs	12,356 m <sup>3</sup>	131
- Technical wood	18,277 m <sup>3</sup>	154
- Sawn conifer timber*	9,255 m <sup>3</sup>	305
- Other sawn timber*	9,872 m <sup>3</sup>	296
- Veneers	619 m <sup>3</sup>	265
- Panel sheets and boards*	545 m <sup>3</sup>	71
- Artificial boards*	221,000 m <sup>3</sup>	243
- Synthetic glues	1,144 Kg	1
- Commission on logging	797 m <sup>3</sup>	3

\* Partly internally supplied and not included in value of consumption.

3. Repairs & maintenance: total		42
4. Other material & non-factor service inputs		192

V. VALUE ADDED (1965)	(Drs. Million)
TOTAL (except turnover tax)	1,118
- Wages of factory workers	627
- Salaries of non-factory workers	132
- Depreciation	54
- Interests paid	115
- Other accumulation (Turnover tax)	190
	(43)

SELECTED COEFFICIENTS

- Mech. & equip. per factory worker on 1st shift:	Drs: 1,684,000
- Value added per employee:	Drs. 808,000
- Annual wage per factory worker:	Drs. 541,000
- Variable input cost/gross production ratio:	2/ 60.6 %
- Gross accumulation/gross production ratio:	3/ 8.9 %
(at full capacity)	14.6 %
- Level of production at break-even point:	77 % of the 1965 actual level.

An enterprise manufacturing sawn timber continuously and wood boards seasonally. Annual capacity output is 70,000 m<sup>3</sup> of sawn timber and 29,000 m<sup>3</sup> of deck boards on partial three-shift operation. 23% of the output is directly exported. The enterprise was founded in 1921.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)		795	958	50	63	99	213			
Buildings & land improvements		368	478	38	49	61	93			
Machinery & equipment		427	480							
Other capital assets		-	-							
<p>Calculated average age of fixed assets: <u>7.9</u> years</p> <p><b>Electric motors:</b></p> <p>Total installed capacity: <u>1,365</u> KW</p> <p>Of which actually operated in 1965: _____</p> <p>1st shift <u>100</u> %; 2nd shift <u>38</u> %; 3rd shift <u>9</u> %</p> <p><b>Technological features:</b></p> <p>A conventional system for the production of sawn timber, building materials and other wood products. With low degree of mechanization (especially internal transport of logs and timber which are manually operated). Labour input required to produce 1 m<sup>3</sup> of conifer timber is 11 hours as against the European standard of 4 hours.</p>										
<p><b>Major machinery crucial for determining the overall production capacity:</b></p> <p>Sawn timber: frame sawing machine ( 2 shifts ).</p> <p>17% of machinery and equipment are of foreign origins.</p>										
II. LABOUR (1965)		TOTAL no. of employees: 745			Educational background of workers:					
		1st shift	2nd shift	3rd shift	Techn.	Eccon.	Low	Others	Total	
1. Factory workers:										
Total	665 persons	335	228	102				2	2	
	( 1,476 thous. manhrs. )	( 744 )	( 504 )	( 228 )				2	2	
- Saw mill	144	125	77					4	11	
- Panel boards	80	75	13					730	730	
- Cases	10	8	-							
- Barrels	6	5	-							
- Building materials	75	11	12							
- Semi-finished furniture	20	4	-							
2. Non-factory workers:		80 persons								
		( 190 thous. manhours )								
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	IV. INTERMEDIATE INPUTS						
TOTAL actual revenue output 1965 *			2,595	Quantity		Value (Drs. Million)				
- Sawn timber **		61,375 m <sup>3</sup>	1,920	TOTAL actual consumption 1965		1,489				
- Deck boards		5,499 "	282	1. Energy inputs: total		24				
- Panel boards		3,761 "	357	- Electricity		1,490 MWH		24		
- Packing cases		1,054 "	58	2. Major production materials: total		1,375				
- Barrels		531 "	16	- Coniferous logs		93,322 m <sup>3</sup>		1,213		
- Joinery		920 "	47	- Hard-wood logs		38 m <sup>3</sup>		1		
- Semi-finished furniture		5,962 pce.	97	- Veneer		2,234 m <sup>3</sup>		128		
- Others		..	55	- Chip and panel boards		327 m <sup>3</sup>		33		
* Including turnover tax on sold products.				3. Repairs & maintenance: total		55				
** Drs. 237 million are internally used and not counted in the total.				4. Other material & non-factor service inputs		35				
Capacity output:				V. VALUE ADDED (1965)		(Drs. Million)				
- Sawn timber	70,000 m <sup>3</sup>	} Rate of utilisation is 60%.			TOTAL (except turnover tax)		962			
- Deck boards	29,000 m <sup>3</sup>				- Wages of factory workers		443			
Under utilization due to seasonal variation of deck-board production. Optimum number of factory workers required on the 1st. shift for full utilisation is 316, i.e. 6% less than the actual 1963 level.				- Salaries of non-factory workers		52				
Product assortment is considered as too large from the technological standpoint but even too small from the standpoint of sales efficiency.				- Depreciation		38				
				- Interests paid		81				
				- Other accumulation (Turnover tax)		144				
VI. SUPPLEMENT		Future plans: Construction of a new saw - mill where internal transport will be mechanised with forked carriers, elevators, etc. (Currently 63% of workers engage in internal transport).		SELECTED COEFFICIENTS						
- Also efforts will be made to increase labour productivity in saw mill to 4 hours/m <sup>3</sup> .				- Mach. & equip. per factory worker on 1st shift: Drs. 1,433,000						
1/ Wages and salaries are considered as fixed costs on the vicinity of current operation scale.				- Value added per employee: Drs. 1,291,000						
2/ Gross accumulation includes interests paid.				- Annual wage per factory worker: Drs. 667,000						
				- Variable input cost/gross production ratio: 1/ 75.2 %						
				- Gross accumulation/gross production ratio: 2/ 17.5 %						
				- Level of production at break-even point: 30 % of the 1963 actual level.						

An enterprise producing wooden furniture and upholstery. Founded in 1948. Annual capacity is over 15,000 sets of bedroom furniture, around 70,000 units of large and small piece furniture and over 35,000 pieces of mattresses on three shifts operation (veneer shop works only two shifts). Upholstery materials and polishes (18% of the materials) are of foreign origins; 37% are directly exported.

I. FIXED CAPITAL (end of 1963)	Original purchase value	1963 re- placement value
	TOTAL (Drs. million)	1,840
Buildings & land improvements	815	1,060
Machinery & equipment	913	950
Other capital assets	112	145

**Major machinery crucial for determining the overall production capacity:**

**Sawn timber:** frame sawing machines "WURSTER & DIETZ" and band saws "CANALLI" (2 shifts); **Panel board:** Ludwig Pallman (2 shifts); **Furniture:** motor-powered saws, automatic circular saws, hydraulic cutting machines and others from West Germany and Italy (2 shifts); **Veneers:** veneering knives "CARL RUCKLE" (2 shifts).

Over half of machinery and equipment were imported.

**Capital expenditures in the past years: (Drs. million)**

	1953-54	1955-57	1958-60	1961-63
Gross expenditures	143	143	64	988
Retirements	63	74	69	148

Calculated average age of fixed assets: 5.9 years

**Electric motors:**

Total installed capacity: 1,770 KW

Of which actually operated in 1963:

1st shift 100%; 2nd shift 38%; 3rd shift 2%

**Technological features:**

Mechanical departments are interconnected by conveyor belts; between main departments there are storage places for intermediate products. The system of machines (saws, hydraulic cutters, etc.) is of German and of Italian origins, with satisfactory mechanization devices (Mechanisation & automation rated at 85% and 80%, respectively.) Located about 50-100km from the source of basic raw materials.

II. LABOUR (1963)	TOTAL no. of employees: 1,006		
	1st shift	2nd shift	3rd shift
1. <b>Factory workers:</b>			
Total 832 persons	594	228	10
(1,740 thous. manhrs.)	(1,248)	(468)	(24)
- Timber sawing	36	15	4
- Veneers	57	23	-
- Panel boards	25	12	1
- Furniture	400	156	4
- Upholstery	76	22	1
2. <b>Non-factory workers:</b>	171 persons		
	(300 thous. manhours)		

**Educational background of workers:**

	Techn.	Elem.	Low	Others	Total
Univ. or higher	1	3	-	3	7
Tech. Higher sch.	3	1	1	-	5
Secondary sch.	11	11	-	4	26
Primary school	-	-	-	968	968

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1963 *		3,665
- Bedroom furniture	15,527 sets	1,165
- Large piece furniture	24,813 pcs	992
- Small piece furniture	43,239 "	457
- Yogi mattresses	35,401 "	673
- Sawn conifer timber **	2,609 m <sup>3</sup>	73
- Sawn hard wood timber **	1,282 m <sup>3</sup>	40
- Improved veneers **	15 "	4
- Blind veneers	635 "	54
- Panel boards **	748 "	41
- Others	-	166
* Including turnover tax on sold products.		
** Drs. 158 million internally used and not included in the production value.		
<b>Capacity output:</b>		
- Bedroom furniture	16,000 sets	Overall rate of utilization is 59%.
- Large piece furniture	53,600 pcs	
- Small piece furniture	90,000 "	
- Yogi mattresses	70,000 pcs	
- Sawn timber	5,440 m <sup>3</sup>	
- Veneers	900 m <sup>3</sup>	
- Panel boards	1,750 m <sup>3</sup>	

The new sections of the plant are still on trial production in 1963, with the overall capacities unbalanced. The supply of raw materials is also lagged. Optimal number of workers on the 1st. shift is estimated to be 430, i.e. 28% less than the actual 1963 level.

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. Million)
TOTAL actual consumption 1963		2,535
1. <b>Energy inputs:</b> total		50
- Electricity	2,981 MWH	45
- Lignite	996 t	4
- Liquid fuel	4 t	1
2. <b>Major production materials:</b> total		2,317
- Sawn timber	7,619 m <sup>3</sup>	209
- Veneers	1,488,000 m <sup>2</sup>	356
- Panel sheets and boards	272,000 "	229
- Round wood	18,461 "	286
- Chemicals	-	345
- Metal products	-	230
- Textiles	-	485
- Others	-	177
3. <b>Repairs &amp; maintenance:</b> total		57
4. <b>Other material &amp; non-factor service inputs</b>		111

V. VALUE ADDED (1963)	(Drs. Million)
TOTAL (except turnover tax)	1,089
- Wages of factory workers	669
- Salaries of non-factory workers	100
- Depreciation	109
- Interests paid	99
- Other accumulation	112 1/2
(Turnover tax)	41

- VI. SUPPLEMENT
- Future plans: a) To reduce the assortment of products and increase the production of specialized products.
- b) To fully utilize the reconstructed capacities.
- 1/ Of which Drs. 39 million are funds belonging to the enterprise.
- 2/ Wages and salaries are considered as fixed costs in the vicinity of current operation scale.
- 3/ Gross accumulation includes "interest paid" and "other accumulation".

**SELECTED COEFFICIENTS**

- Mach. & equip. per factory worker on 1st shift: Drs. 1,599,000
- Value added per employee: Drs. 1,082,00
- Annual wage per factory worker: Drs. 804,00
- Variable input cost/gross production ratio: 2/ 65.3 %
- Gross accumulation/gross production ratio: 3/ 5.8 %
- (at full capacity: 17.6 %)
- Level of production at break-even point: 2/ 83 % of the 1963 actual level.

An enterprise manufacturing various kinds of wooden furniture. Founded in 1951. Annual capacity output is 100,000 m<sup>3</sup> of sawn timber and 110,000 units of furniture on full two-shift operation. Except a small quantity of veneers, glue and other auxiliary production materials, most of the material expenditures are of domestic origins; 2% of the output are directly exported.

## I. FIXED CAPITAL (end of 1963)

	Original purchase value	1963 replacement value
TOTAL (Drs. million)	1,477	1,600
Buildings & land improvements	615	738
Machinery & equipment	839	839
Other capital assets	23	23

Major machinery crucial for determining the overall production capacity:

- Sawn timber: frame sawing machine ( 2 shifts);
- Veneered furniture: presses, cabinet making machines, veneering knives and drying plant ( 2 shifts ).
- 21 % of machinery and equipment were imported.

Capital expenditures in the past years: (Drs. million)

	1953-54	1955-57	1958-60	1961-63
Gross expenditures	-	90	382	309
Retirements	-	76	117	175

Calculated average age of fixed assets: 7.7 yearsElectric motors:Total installed capacity: 1,914 KW

Of which actually operated in 1963:

1st shift 100 %; 2nd shift 60 %; 3rd shift - %

Technological features: Originally specialized in furniture, but the 1959 - 60 expansion added a saw-mill. Sawing by the Swedish "diagonal" system. Furniture production with a large scale assembly line. The surface treatment of wood and the drying use the German "Eiseman" system. Mechanization is rated at 80% in saw-mill, and 70% in furniture department; about 50% automation in the furniture production.

## II. LABOUR (1963)

	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:	750	591	-
Total	1,341 persons		
( 2,800 thous. manhrs. )	( 1,568 )	( 1,232 )	( - )
- Roundwood & sawn timber storage	106	74	
- Sawmill	113	96	
- Veneered furniture	202	200	
- Kitchen furniture	145	126	
- Upholstery	32	-	
- Cases & prefabricated houses	62	61	
- Ancillary shops	332	90	34
2. Non-factory workers:	332	90	34
	( 710 thous. manhours )		

Educational background of workers:

	Techn. High.	Low	Others	Total
Univ. or higher	10	-	-	13
Tech. Higher sch.	-	2	-	4
Secondary sch.	9	12	27	48
Primary school	-	-	1,608	1,608

## IV. INTERMEDIATE INPUTS

	Quantity	Value (Drs. Million)
TOTAL actual consumption 1963		2,929

1. Energy inputs: total		42
- Electricity	2,712 MWH	42

## 2. Major production materials: total 1,928

- Conifer sawlogs	82,072 m <sup>3</sup>	1,190
- Hardwood sawlogs	5,352 "	80
- Sawn conifer timber *	( 16,830 " )	(..)
- Sawn hardwood timber	2,930 "	107
- Veneers	327,672 m <sup>2</sup>	92
- Plywood	395,715 "	119
- Melaminated panel boards	94,121 "	71
- Lesonite	93,042 "	30
- Nitro-lac	81,644 Kg.	49
- Glues	110,859 "	81
- Cotton fabrics	18,336 m <sup>2</sup>	46
- Leather	1,657 "	5
- Others	120,048 Kg.	58

\* The enterprise consumes its own timber.

3. Repairs & maintenance: total	40
4. Other material & non-factor service inputs	919

## V. VALUE ADDED (1963) (Drs. Million)

TOTAL (except turnover tax)	1,632
- Wages of factory workers	782
- Salaries of non-factory workers	320
- Depreciation	69
- Interests paid	140
- Other accumulation (turnover tax)	321 1/2
	( 125 )

## III. ANNUAL PRODUCTION &amp; CAPACITY

	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1963*		4,686
- Sawn conifer timber **	71,336 m <sup>3</sup>	2,686
- Veneered furniture	59,605 pce.	1,064
- Kitchen furniture	20,937 sets	1,214

\* Including turnover tax on sold products.

\*\* Partly internally used and not included in the value.

Capacity output:

Sawn timber	100,000 m <sup>3</sup>	} Rate of utilization is 71 %.
Veneered furniture	30,000 pce.	
Kitchen furniture	30,000 sets	

Underutilization due to unbalance between capacities of various processes; to insufficient supply of raw materials. Optimum number of factory workers on 1st shift for full utilization is estimated to be for saw-mill 600 and for furniture mill 550; i.e. 27 % higher than the actual 1963 level.

## VI. SUPPLEMENT

Future plans:

- Construction of a shop for the production of chipboards from own waste.
- Installation of an additional furniture department (1965) raising the capacity by nearly 50%.
- To raise the extent of mechanisation and automation by 20 - 50 %.

1/ Of which Drs. 216 million are funds belonging to the enterprise.

SELECTED CONCLUSIONS

- Mech. & equip. per factory worker on 1st shift: Drs. 1,119,000
  - Value added per employee: Drs. 975,000
  - Annual wage per factory worker: Drs. 583,000
  - Variable input cost/gross production ratio: 60.3 %
  - Gross accumulation/gross production ratio: 10.1 2/ % (at full capacity: 18.5 %)
  - Level of production at break-even point: 74 % of the 1963 actual level.
- 2/ Gross accumulation includes interest paid.

France (1964)

**MAJOR PRODUCTS:** Cardboard and synthetic leather. Annual capacity output (with serial three shift operation) is about 3,200 tons of cardboard (including fibre for valises, etc.) and 1,200 tons of synthetic leather.

**REPORTING UNIT:** A branch of a four-establishment enterprise with capital stock Frs. two million and employees 378 as of 1964. The establishment was founded in 1946. The other establishments are also engaged in producing cardboard and manufactured articles for shoes.

**I. FIXED CAPITAL ASSETS (end of 1964)**

TOTAL BOOK VALUE (Frs. thousand)	Before deprec.	After deprec.
	8,588	1,755
1. Land	164	159
2. Land improvements	-	-
3. Buildings	73	53
4. Other construction works	2,229	303
5. Machinery & equipment	5,226	693
6. Tools & instruments	131	1
7. Vehicles	103	36

**DETAIL OF 1,5 (No.)**

(Unit value: Frs. 000.)	Total Bk. value	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)
a. Rolling machines for cardboard (Enrouleuses à carton)	8.8	30,65	C	-
b. Embossing calender	49.0	16	A	-
c. Varnishing mill	14.9	35	B	-
d. Rolling mill	17.2	1	A	25
e. Presses	69.4	10	B	25
f. Machine for synthetic leather	29.6	7	B	25
g. Driers	23.6	16	B	-
h. Polishing mill ("meuletons")	46.2	20	A	-
i. Rolling machine "Neyret"	7.4	21	A	-
j. Batteries	173.1	17,13	B	-

All of the machines and equipment are already completely amortized.

**II. INVENTORY**

(end of 1964)	Actual	Normal
TOTAL VALUE (Frs. thousand) and	1,073	-
1. Direct production materials	252	-
2. Other input materials	170	-
3. Work in process	38	-
4. Finished products	613	-

- Actual inventories of finished products = 1.1 % of annual gross production

- Seasonal variations: ..

**Capacity of electr. motors:** 1,450 KW  
 Electric furnaces and similar 32 KW  
 Installed capacity of thermal electricity generation: 320 KW.  
 Actual production in 1964: 838,000 Kwh. (70% was internally made; ( ) to (e) imported; the rest of domestic origin.  
 Average age of machinery is almost 20 yrs. A substantial expansion renovation took place in 1959 raising the level of output as well as employment by some 20%.

**GENERAL CONDITIONS:** Long distance transportation and electricity facilities excellent; local transportation and residential facilities, fair; water, gas, health, recreation and education facilities, poor.

**III. LABOUR (1964 average)**

	1st shift			2nd shift			3rd shift			EDUCATIONAL BACKGROUND (No. of employees)				Actual hours worked per annum per direct production worker: 2,180 hours.
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	Univ. or higher	Sr. High sch. or eqv.	Other	Others	
<b>TOTAL EMPLOYED</b>	96	37	33	96	37	33	96	37	33	2	1	4	159	Proportion of motors occupied: 94% and 88% for 1st and 2nd shift, respectively.
<b>1. Direct production (No. emp.)</b>	96	37	33	96	37	33	96	37	33	2	1	4	159	
Annual total manhours (000)	107.5	81.3	42.1	107.5	81.3	42.1	107.5	81.3	42.1	2	1	4	159	Technological features: a) Trituration, refining and polishing. b) Rolling cardboard on round form, drying with gas or coal, calendering, clipping, varnishing and pressing. c) Dry pulverising, rolling on flat table, fabrication into the form, drying, calendering and clipping.
Production of cardboard	31	-	-	31	-	-	31	-	-	2	1	3	2	
Production of synthetic leather	-	37	-	-	37	-	-	37	-	-	-	-	20	
Production and finishing of synthetic leather	-	-	-	-	-	-	-	-	-	-	-	-	30	
Production of auxiliary employees.	-	-	-	-	-	-	-	-	-	-	-	-	73	
<b>2. Auxiliary activities ( m. 37 f. 6 )</b>	-	-	43	-	-	43	-	-	43	-	1	8	15	- Degree of mechanisation and automation, generally poor. Mechanisation and automation of the forming and drying of synthetic leather, outdated. Automation of drying process for cardboard, fair. - Skilled workers in direct production are operators of machines for manufacturing cardboard and synthetic leather, preparators of synthetic leather and varnishers. Those in auxiliary activities are electricians, mechanics, joiners, masons, etc.
Attendance	-	-	26	-	-	26	-	-	26	-	-	-	-	
Laboratory	-	-	1	-	-	1	-	-	1	-	-	-	-	
Administration	-	-	16	-	-	16	-	-	16	-	-	-	-	

**IV. ANNUAL PRODUCTION (1964)**

<b>TOTAL VALUE OF PRODUCTION (Fr.s. thousand)</b>		6,220	
including unspecified products amounting to some 10% in value terms)			
Product	Unit	Quantity	Unit Value (Fr.s.)
a. Ordinary cardboard for valises and others	tons	1,943*	970
b. Cardboard for cars	"	769	1,040
c. Fibre for valises and others	"	173*	2,400
d. Ordinary synthetic leather (synderme) for shoes	"	686*	2,040
e. Special synthetic leather (synderme) for shoes	"	429*	2,220

\* 16t of (a), 16t of (c), 144t of (d) and 26t of (e) transferred to other establishments of the company and valued at intrafirm accounting prices which are 10 to 30% lower than market prices.

**CAPACITY OUTPUT:** 10% higher than the 1964 actual production level with about 36,000 additional manhours. The present capacity is constrained by the relatively slow speed of synthetic leather rolling, sheet cutting, large-form pressing and drying processes. With an additional investment of Frs. 176 thousand the full-capacity production level would be raised by 8.5% over the 1964 capacity. However, orders are irregular and affect the production in a negative way. Product-mix is not flexible.

Unit value of product: Market value f.o.b. before sales tax  
 Unit value of material: Market price c.i.f.  
 - All goods are only partly exported.  
 - Agglutinants are directly imported by road and sea with freight rate of 3% of c.i.f. value. Other materials are all made domestically.

**V. INTERMEDIATE INPUTS (1964)**

<b>TOTAL VALUE OF CONSUMPTION (Fr.s. thousand)</b>		3,551	
<b>1. Energy &amp; water: total</b>			
		Quantity	Unit value (Fr.s.)
		Unit	summed
- Electricity	000 Kwh	2,949*	..
- Coal	ton	1,604	120
* Of which 833,000 Kwh internally supplied.			
<b>2. Direct production materials: total</b>		2,247	
a. Waste paper	ton	3,107*	230
b. Chemicals	"	440	350
c. Leather shreds	"	1,359	270
d. Agglutinants	"	242	2,300
e. Varnish	"	104	3,000
f. Felt	"	20	420
g. Linen	"	6	230

\* Of which 71 ton supplied internally.

<b>3. Finishing materials: total (wooden materials)</b>		22	
<b>4. Work performed by sub-contractors ( )</b>		-	
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>		106	
Repairs and maintenance of equipment		140	
Repairs and maintenance of buildings		26	
<b>6. Material inputs for auxiliary activities</b>		322	
<b>7. Non-factor service inputs: total</b>		433	
Of which transportation, insurance and storage purchased separately			
		346	

**VI. VALUE ADDED TOTAL 1964 (Fr.s. thousand)**

<b>1. Wages &amp; salaries (before income tax)</b>		2,669	
- Employees in direct production		2,151	1/
- Other employees		169	
<b>2. Other expenditures for employees</b>		38	
<b>3. Annual depreciation allowance</b>		191	
<b>4. Rental paid (incl. royalties 0.3)</b>		7.3	
<b>5. Sales &amp; other indirect taxes (less subsidies) (not included in total)</b>		[ 871 ]	
<b>6. Other gross business income (before income tax)</b>		113	

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on let shift: Frs. 60,830
- Value added per employee: Frs. 16,100
- Annual wage per employee in direct production: Frs. 13,600 1/
- Variable input costs/gross production ratio: 77.
- Gross profit/gross production ratio: 1.8 (at full capacity: 3.8.)
- Level of production at break-even point is approximately 93 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

<b>1. Recent Expansion</b>		<b>Gross acquisition</b>	<b>Scrapped or sold</b>
From 19 61 to 19 65			
a. Total Investment ( Frs. thous. )		2,201	69
- Land		0.5	-
- Land improvements		-	-
- Buildings		369	2/
- Other construction work		371	2/
- Machinery & equipment		1,375	2/
- Tools & instruments		-	54
- Vehicles		18	13
- Office furniture & fixtures		67	0.8
b. Corresponding increase:		From 19 61	to 19 65
In no. of employees (excl. management)		156	154
In annual gross production ( Tons )		4,000	4,500

<b>2. Future Plan</b>	
a. Investment proposed for the period 19 67 to 19 68	
Total value (Fr.s. thous. )	1,569
Of which:	
- Mach. & equipment	86 %
- Land improv. & bldg.	14
- Land	-
- Others	-
b. Net increase in no. of employees envisaged for the same period:	
- Direct production:	6
- Auxiliary:	1
c. Purposes: Introduction of new products and processes; expansion of the capacity of fabrication of carton-leaf, drying and varnishing processes, by use of steam and electric energy.	

**VIII. SUPPLEMENT**

- 1/ Includes employees in auxiliary activities except for management.
- 2/ Of which Frs. 103,000 of buildings, Frs. 140,000 of other construction work and Frs. 299,000 of machinery and equipment were internally supplied; Frs. 6,000 of machinery and equipment were transferred from other establishments of the company. 8% of buildings, 40% of other construction work and 10% of machinery and equipment were for simple repair and maintenance.



**MAJOR PRODUCTS:** Straw board: With an investment of Rs. 100,000 on the drying process, annual installed capacity would be 5,000 tons of straw board on three-shift operation.

**REPORTING UNIT:** A one-establishment enterprise with total assets of Rs. 4.5 million (net worth Rs. 1.5 million) and 69 employees as of 1965. Founded in 1954.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (000 Rs.)	4,738	2,766
1. Land	40	40
2. Land improvements	-	-
3. Buildings	1,300	1,746
4. Other construction works	100	114
5. Machinery & equipment	1,007	801
6. Tools & instruments	-	-
7. Vehicles	145	44
8. Office furniture & fixtures	50	11
<b>Total Bk. value</b>		
<b>Avg. Age</b> (Yr.)		
<b>Oper. rate</b> (%)		
<b>Depr. rate</b> (%)		
<b>1965 replace. value</b>		

**DETAIL OF I.5 (No.)**

a. Babcock & Wilcox water tube boilers (2)	800	10	A	10	1,200
b. Rotary Spherical Digestore (3)		8	A		
c. Beaters (6)		3	A		
d. Chain conveyor (1)		6	B		
e. Train wires (2)		7	A		
f. Foundry board machine (1)		8	B		
g. Rollers (50)		8	A		
h. Drying cylinders (9)		9	B		
i. Mill iron calender rolls (5)		6	B		
j. Lathe machines (3)		6	B		
k. Hacksaw machine (1)	7	B			
l. Napola cap; 1 ton (1)	6	B			

**II. INVENTORY**

	Actual	Normal
<b>TOTAL VALUE</b> (000 Rs.)	1,156	+ 31
1. Direct production materials	823	- 2
2. Other input materials		
3. Work in process	98	-
4. Finished products	235	+ 200

- Normal inventories of finished products 20.5 % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 450 KW

Total load, capacity of trucks: 14 t

- (a), (i) and some parts of (d) were imported; (g), (h), (k) and (l) were domestic makes and the remaining were internally produced. Average age of itemized machinery (40 % of total) is 8 years.

**GENERAL CONDITIONS:** Long distances transport, electricity, health, recreational and educational facilities, excellent. Local transport, water and residential facilities, poor.

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED:</b> 267 (m. 173, f. 15)	170	54	45
1. Direct production (Annual total manhours (000))	94 (335)	5 (108)	43 (90)
a. Machine hall	31	20	15
b. Pulp section	39	15	15
c. Boiler section	20	17	13
2. Auxiliary operative units (all male)	51	2	2
a. Electrical shop	5	2	2
b. Workshop	15	-	-
c. Carpentry shop	9	-	-
d. Boring and fire engine	1	-	-
e. Water	1	-	-
f. Godown	7	-	-
g. Loading and unloading	5	-	-
h. Grass treating	5	-	-
i. Pasture	3	-	-
3. Management and administration (all male)	25	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
3	7	34	225
<b>Management (incl. staff)</b>			
3	7	15	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	44
<b>Semi-skilled</b>			
-	-	-	53
<b>Unskilled</b>			
-	-	-	92
<b>Auxiliary Operatives</b>			
<b>Skilled</b>			
-	-	19	12
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	-	24

- Actual hours worked in 1965 per direct production worker: 2,820 hours.

- Proportion of motore occupied: 85 % on the first shift and 80 % on the second and third shifts.

**Technological features:**

- a) Calendering  
b) Making pulp from grass by chemical treatment

- Mechanization and automation are generally rated as fair.

- Skilled workers in direct production and auxiliary operative units are: paper makers, fitters, beaters, boiler attendants, electricians, carpenters, moulders, turners, welders, etc.

**IV. ANNUAL PRODUCTION (1965)**TOTAL VALUE OF PRODUCTION ( 000 Rs. ) 2,657

Product	Quantity Unit	Unit Pre- Value (Rs.)
Straw board	ton	4,654 571

**CAPACITY OUTPUT:**

10 % higher than the 1965 actual production level with an investment of Rs. 0.1 million in drying process; no additional manhours would be required.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Hydrochloric acid is domestically produced but has a significant amount of import contents; freight rate is 4 % and delivery is by road and railroad. The other production materials are all of domestic origin and delivery is by road and railroad. Freight rates applied to c.i.f. values are 1 % for grass, 2 % for lime and negligible for straw.

**V. INTERMEDIATE INPUTS (1965)**TOTAL VALUE OF CONSUMPTION ( 000 Rs. ) 1,084

1. Energy & water: total	Quantity	Unit	Unit con- sum- value (Rs.)
- Coal	ton	2,190	58
- Electricity	000 kWh	1,171	100
- Lubricating oil	litre	2,050	1.1
- Others	000 Rs.	4	..
<b>2. Direct production materials: total</b>			<b>682</b>
a. Grass (industrial bagasse)	ton	3,566	95.6
b. Straw	"	3,284	81.0
c. Hydrochloric acid	"	19	316.9
d. Lime	"	621	111.6
<b>3. Packaging materials: total</b>			<b>10</b>
3,328 metres gunny cloth (Rs. 0.51/metre)			
2.5 tons steel scrapings and seals (Rs. 1,000/ton)			
1,905 pos. baling wood (Rs. 2/pc.)			
6,445 kg juts (Rs. 0.15/kg)			
1.5 tons red coars (Rs. 450/ton)			
<b>4. Work performed by sub-contractors ( )</b>			<b>—</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>			<b>90</b>
Materials Rs. 82,000			
Services Rs. 8,000			
<b>6. Material inputs for auxiliary activities</b>			<b>34</b>
Stationery & printing Rs. 4,000			
Administrative charges Rs. 30,000			
<b>7. Non-factor service inputs: total</b>			<b>18</b>
(All communications, advertising, etc.)			

**VI. VALUE ADDED**TOTAL 1965 ( 000 Rs. ) 1,573

1. Wages & salaries (before income tax)	
- Employees in direct production (III 1 & 2)	339
- Other employees (III 3)	121
2. Other expenditures for employees	317
3. Annual depreciation allowance	324
4. Rental paid (capital assets other than land)	3
5. Sales & other indirect taxes & building (less subsidies) (not included in total)	[54]
6. Other gross business income (before income tax)	471

**SELECTED COEFFICIENTS**

- Mech., equip., instruments & tools per employee in direct production on 1st shift:	Rs. 21,287 <sup>1/</sup>
- Value added per employee:	Rs. 5,848
- Annual wage per employee in direct production:	Rs. 1,381
- Variable input costs/gross production ratio:	35.4 % <sup>2/</sup>
- Gross profit/gross production ratio:	17.7 %
(at full capacity):	25.6 %
- Level of production at break-even point is approximately	72 % of the 1965 actual level.

**VII. EXPANSION: HISTORY & PLAN****1. Recent Expansion**

From 1963 to 1965

a. Total Investment ( 000 Rs. )	Gross acquisition	% of 400 single repair
- Land	10	-
- Land improvements	-	-
- Buildings	165	3
- Other construction work	-	-
- Machinery & equipment	199	5
- Tools & instruments	-	-
- Vehicles	23	1
- Office furniture & fixtures	3	-
c. Corresponding increase:	From 1963	to 1965
In no. of employees	206	269
In annual gross production ( 000 Rs. )	2,460	2,657

**2. Future Plan: None**

a. Investment proposed for the period 19 to 19

Total value ( )	
Of which: - Mech. & equipment	
- Land improv. & bldg.	
- Land	
- Others	

b. Net increase in no. of employees envisaged for the same period:

- Direct production:

- Auxiliary:

c. Purposes:

**VIII. SUPPLEMENT****Structure of liquid assets and short-term liabilities (end of 1965; Rs. 000)**

Cash on hand and in bank	65	Taxes payable	34
Accounts receivable	455	Accounts payable	423
Unsecured loans & advances	132		

<sup>1/</sup> About 50 % higher if the replacement value of machines is used.<sup>2/</sup> Wages and salaries excluded from variable cost.

France : 291 - ( 1 )

**MAJOR PRODUCTS:** Leather tannery for footwear uppers and morocco leather. Capable of processing slightly less than 10,000 tons of bovine and calf raw hides on one shift.

**REPORTING UNIT:** A one-establishment enterprises with capital stock Fr. 4.5 million and employees 645 as of 1964. Founded in 1921.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Fr. 000 )	<u>44,278</u>	<u>6,012</u>
1. Land	645	645
2. Land improvements	-	-
3. Buildings	13,824	3,135
4. Other construction works	-	-
5. Machinery & equipment	17,102	1,488
6. Tools & instruments	-	-
7. Vehicles	929	221
8. Office furniture & fixtures	11,778	523
	<b>Avr.</b>	<b>1964</b>
	<b>Age Oper.</b>	<b>replace</b>
	<b>(Yr.) Cond.</b>	<b>value</b>

**DETAIL OF I.5 (No.)**

a. Sewing machines	2 - 5	A	45
b. Fullers ("foulons")	5 - 10	A, B	100
c. Grooving machines ("dérayousse")	10	B	110
d. Apparatus for plating ("plaquer")	5	A	140
e. Drying apparatus	3	A	120
f. Pulverizers ("appareil à pistolet")	2	A	160

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Fr. 000 )	<u>8,267</u>	<u>..</u>
1. Direct production materials	2,108	
2. Packing materials	5	
3. Work in process	2,787	
4. Finished products	3,367	
- Actual inventories of finished products 8.2 % of annual gross production		
- Seasonal variations: ..		

Capacity of electr. motore: 6,500 KW

Total load, capacity of trucks: — t  
(a), (b) and (f) were domestically made. The rest was imported.  
Average age of machinery is estimated as 5 years. The factory is being extensively renovated during the current investment program, but output has remained practically at the same level in the last 3 or 4 years.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	<u>645</u>	<u>—</u>	<u>—</u>
1. Direct production ( m. 410 f. 85 )	<u>495</u>	<u>—</u>	<u>—</u>
Annual total manhours (000)	(1,200)	( )	( )
a. Raw hide stocking	15		
b. Hide wetting ("rivièrè")	28		
c. Tanning	12		
d. Grooving ("rayage")	36		
e. Dyeing	14		
f. Flating	32		
g. Bleaching / Fraying " ( ) "	29		
h. Polishing	18		
i. Finishing, bovine	33		
j. Finishing, calf	25		
k. Varnish	55		
l. Végétal	38		
m. Sorting	21		
n. Commission and dispatch	15		
o. Other operatives for miscellaneous work	124		
2. Auxiliary activities ( m. 100 f. 50 )	<u>150</u>	<u>—</u>	<u>—</u>
a. Maintenance	52		
b. Yard and waste water	18		
c. Heating	6		
d. Miscellaneous attendants	27		
e. Laboratory and research	12		
f. Managerial and professional	35		

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
<b>TOTAL</b>	<b>5</b>	<b>5</b>	<b>20</b>
<b>Management</b>	5	5	20
<b>Direct Production</b>			
Skilled	-	-	45
Semi-skilled	-	-	208
Unskilled	-	-	242
<b>Auxiliary Activities</b>			
Skilled	-	-	90
Semi-skilled	-	-	13
Unskilled	-	-	12

- Actual hours worked per annum per direct production worker: 2,424 hours.

**Technological features:**

d): Equalizes thickness.  
f): Drying.  
g): Makes leather flexible; drawing.  
h): Surface pouncing.  
i) to l): Final surface treating.

- No automation is involved in any shop.  
Mechanization is excellent in (d), (h) and (k), fair in (b), (g), (i) and (j) and poor in (f) and (l).  
No mechanization is employed in (a), (c) and (s).

- **Skilled workers** in direct production are engaged in preparation of chemicals, sorting, orientation of products, and regulation of machines.  
Those in auxiliary activities are mechanics, carpenters, electricians and boiler attendants.

**IV. ANNUAL PRODUCTION (1964)**TOTAL VALUE OF PRODUCTION ( Fr. 000 ) 40,992

Product	Unit	Quantity	Unit Price (Fr.000)	Value (Fr.000)
a. Bovine upper leather	000 m <sup>2</sup>	960	24.0	
b. Calf upper leather	"	420	30.5	
c. Crust	"	288	15.5	
d. Scrap	000 Fr.	266	..	
e. Other revenues arising from productive activities	"	412	..	

**CAPACITY OUTPUT:**

25% higher than the 1964 actual production level with additional man-hours 30,000 on the 1st shift; constrained by bottlenecks at fulling and drying shop which could be alleviated by an investment of Fr. one million.  
Given steady demand (no fluctuation), calf leather could preferably be increased about 40%, while bovine leather 20%.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Most of calf leather and part of bovine leather and crust are exported.

**V. INTERMEDIATE INPUTS (1964)**TOTAL VALUE OF CONSUMPTION ( Fr. 000 ) 29,449

1. Energy & water: total	Quantity	Unit	Value
	Unit	used	( Fr. )
- Electricity	000 KWH	2,320	80
- Coal	000 Fr.	18	..
<b>2. Direct production materials: total</b>			<b>17,580</b>
a. Bovine hides	ton *	6,125	1,757
b. Calf hides	ton *	1,593	4,280
* 1 ton of bovine hide makes about 160 m <sup>2</sup> of leather; 1 ton of calf skin, 260 m <sup>2</sup> .			
<b>3. Packaging materials: total</b>			<b>140</b>
Of which paper, cloth and wooden materials			Fr. 132,898
<b>4. Work performed by sub-contractors ( .. )</b>			<b>13</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>			<b>772</b>
<b>6. Material inputs for auxiliary activities (including chemicals and other secondary materials used in direct production)</b>			<b>7,170</b>
<b>7. Non-factor services inputs: total</b>			<b>3,570</b>
Of which transportation, insurance and storage services purchased separately Fr. 1,247,000.			

**VI. VALUE ADDED TOTAL 1964 ( Fr. 000 ) 11,543**

1. Wages & salaries (before income tax)		
- Employees in direct production	3,614	
- Other employees	2,397	
2. Other expenditures for employees	3,802	
3. Annual depreciation allowance	1,533	
4. Rental paid	34	
5. Sales & other indirect taxes (less subsidies) (not included in total)	5,976	
6. Other gross business income (before income tax)	163	

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Fr. 34,550 (fr. 31,300 1/)
- Value added per employee: Fr. 19,460
- Annual wage per employee in direct production: Fr. 7,300
- Variable input costs/gross production ratio: 52.6%
- Gross profit/gross production ratio: 3.4% 2/ (at full capacity : 9.8%)
- Level of production at break-even point is approximately 99% of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
<b>1. Recent Expansion</b>		
From 1962 to 1966		
a. Total Investment ( 000 Fr. )	9,300	—
- Land	—	—
- Land improvements	—	—
- Buildings	930	—
- Other construction work	—	—
- Machinery & equipment	8,370	—
- Tools & instruments	—	—
- Vehicles	—	—
- Office furniture & fixtures	—	—
b. Corresponding increase:		
In no. of employees (excl. management)	813	600
In annual gross production ( 000 m <sup>2</sup> )	1,656	1,836

**2. Future Plan**

- a. Investment proposed annually.  
Total value ( Fr. million ) 2.5
- Of which:
  - Mach. & equipment 60 %
  - Land improv. & bldg. 35
  - Land —
  - Others 5
- b. Net increase in no. of employees envisaged for the same period:
  - Direct production: —
  - Auxiliary: —
- c. Purposes: Overhauling part of the existing shops.

**VIII. SUPPLEMENT**

1/ The denominator includes maintenance crew.

2/ The production declined from 2,364,000 m<sup>2</sup> in 1963 to 1,668,000 m<sup>2</sup> in 1964. The market price of calf leather was also down from Fr. 35.7/ m<sup>2</sup> to Fr. 30.5/ m<sup>2</sup>. On the other hand the total cost of raw hides increased from Fr. 15.9 million to Fr. 17.6 million. As a result, the establishment suffered from a drastic decline in the profit ratio from the respectable level of some 4% in 1963.

**MAJOR PRODUCTS:** Leather tanneries (with a shoe and other leather goods producing factory). Annual capacity output is 1. million pairs of leather shoes plus various types of leather and leather goods on partial three shifts. The leather tanning capacity is estimated to be some 600,000 pieces of raw hides on continuous three shifts.

**REPORTING UNIT:** Branch of a large 4-establishment enterprise with total assets Rs. 135 million (net worth Rs. 70 million) and employees 12,000 as of 1964. This establishment, founded in 1881, has more than 3,500 employees as of 1964. (See VIII for the activities of other establishments).

I. FIXED CAPITAL ASSETS		End of 1963		End of 1964	
		After deprec.	After deprec.	After deprec.	After deprec.
<b>TOTAL BOOK VALUE</b>	(Rs. million)	3.41		3.09	
1. Land		.05		.05	
2. Land improvements		-		-	
3. Buildings		.51		.49	
4. Other construction works		-		-	
5. Machinery & equipment		2.53		2.29	
6. Tools & instruments		.15		.12	
7. Vehicles		.17		.14	
8. Office furniture & fixtures					

DETAIL OF I.5 (No.)		End of 1963			1964
		Total Bk. value After deprec.	Avg. Age (Yr.)	Oper. Cond.	1964 replace. value (\$)
<b>Bark Tannery</b>					
a. Planning machines (1)		10	A	15	.09
b. Scouring machines (2)		35	B	15	.06
c. Setting machines (1)		20	B	15	.07
d. Rolling machines (5)		30	B	15	.13
<b>Chrome Tannery</b>					
e. Planning machines (9)		30	B	15	.27
f. Splitting machines (5)		20	B	15	.18
g. Shaving machines (4)		20	A	15	.23
h. Setting machines (1)		30	C	15	.09
i. Staking machines (3)		25	B	15	.05
j. Milling machines (5)		35	B	15	.03
k. Seasoning machines (2)		10	A	15	.05
l. Scrapping machine (1)		10	A	15	.05
m. Dressing machines (6)		30	C	15	.48
n. Measuring machines (4)		35	B	15	.06
o. Sampling machines (4)		35	B	15	.08
p. Drum setting machines (2)		35	C	15	.02
q. Blasting machines (4)		30	A	15	.02
r. Miscellaneous machinery		35	B	15	.70

II. INVENTORY		Actual	Normal
(End of 1964)			
<b>TOTAL VALUE (Rs. million)</b>		17.12	- 7.6
1. Direct production materials		3.89	+ 20
2. Other input materials			
3. Work in process		3.30	-
4. Finished products		9.93	- 20

- Normal inventories of finished products 25.2 % of annual gross production

- Seasonal variations: Seasonal high and low for finished goods are + 20 % of the normal level, and take place in November - January and June - August, respectively.

Capacity of electr. motors: 2,132 KW  
 Capacity of other prime movers: 450 HP  
 Total load, capacity of trucks: 40 t  
 Total load, capacity of railway: 50 t  
 Total length of railway tracks: .3 km

- Machinery was all imported. Its average age is 25 years. The "replacement value" represents, in this case, the "resale" value rather than the value of "new functional equivalents".

**GENERAL CONDITIONS:**  
 Transportation, public utilities and community facilities, all excellent.

III. LABOUR (1964 average)		1st shift	2nd * shift	3rd * shift	EDUCATIONAL BACKGROUND (No. of employees)			
<b>TOTAL EMPLOYED</b>	3,524	3,327	130	67	Univ. or higher	Sr. High sch. or equiv.	Other	
1. Direct production (all male)		3,076	130	67	Engl- Mgmt	Other		
Annual total manhours (000)		(2,335)	(364)	(188)	TOTAL			
a. Bark tannery		86	-	-	4	50	141	3,329
[Bark tannery]								
b. Bark tannery		230	27	16	4	30	66	10
c. Bark shoe		14	8	-				
d. Bark selection		17	-	-				
[Chrome tannery]								
e. Chrome tannery		142	10	6				
f. Chrome finishing		89	14	-				
g. Chrome selection		16	-	-				
[Leather goods & other shops]								
h. Leather warehouse		51	-	-				
i. Goods & other leather goods factory		1,284	28	29				
j. Maintenance department		305	16	8				
k. Binpaton		56	-	-				
l. Technical control and supervision		658	27	8				
2. Auxiliary activities (all male)		451	-	-				
a. Laboratory		27	-	-				
b. Management and administration		224	-	-				

- Actual hours worked per annum per direct production workers: 3,021 hours.

- Proportion of motors occupied: 95 % on all three shifts.

- **Technological features:**  
 Bark tanning: tanning of leather with an infusion of natural tanning materials of the vegetable line, e. g. bark, nuts leaves, etc.  
 Chrome tanning: tanning of leather with chemicals mainly with chrome salts.

Both bark and chrome tannery employ continuous processes; only check-up by skelton staff is needed on 2nd and 3rd shifts.

- Skilled workers in direct production are: leather checkers, leather sorters, polish makers, colour makers, hangers, drum men, sammying machine men, butt strikers, rolling machine men, trimmers, rounders, etc.

**IV. ANNUAL PRODUCTION (1964)**TOTAL VALUE OF PRODUCTION (Rs. million) 31.45

Product	Unit	Quantity	Unit Value (Rs.000)
a. Shoes	000 prs.	964.5	12.06
b. Leather goods	Rs.mill.	.26	..
c. Industrial leather	ton	115.3	12.06
d. Tanning extract	ton	221.6	.79
e. Bark leather	ton	2,689.9*	4.17
f. Chrome leather	000 sq.m.	569.7*	1.34
g. Rubber soles for shoes	000 prs.	184.7*	1.41
h. Leather boards	000 Noe.	197.4	3.57
i. Shoe finishing	Rs.mill.	.45*	..
j. Leather outting	ton	259.7	.29

\* Includes 1,061.6 tons of (e), 335,128 square metres of (f), 166,198 pairs of (g), and Rs. 410,000 worth of (i) internally used and not counted in the value of production.

**CAPACITY OUTPUT:**

20 % higher than the 1964 production level with additional 240,000 manhours on the first shift. The underutilization of capacity was due to insufficient demand for the product and shortage of natural tanning materials (wattle extract).

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- IV a) is partly exported; (e) and (f) are to be used for production of exports.
- V (c) and (e) are directly imported and delivered by railroad and sea; freight rate 10 % of c.i.f. value.
- f) is mostly domestically produced but has a significant import content; freight costs (by railroad and road) 10 %. The rest are of domestic origins; freight rate is 5 % for (a) and negligible for others.

VI. VALUE ADDED TOTAL 1964 (Rs. million) 9.42

1. Wages & salaries (before income tax)	
- Employees in direct production	6.56
- Other employees	1.46
2. Other expenditures for employees	-
3. Annual depreciation allowance	.32
4. Rental paid	-
5. Sales & other indirect taxes (less subsidies)(not included in total)	[.65]
6. Other gross business income (before income tax)	1.08 <sup>2/</sup>

**V. INTERMEDIATE INPUTS (1964)**TOTAL VALUE OF CONSUMPTION (Rs. million) 2.03

1. Energy & water: total (includes 43 tons coals (Rs. 163/ton), 38,876 litres petroleum (Rs.0.88/l), 7,619 litres other fuel oils (Rs. 0.30/litres).	Quantity	Unit	Value (Rs.)
- Electricity	000 kWh	3,028	110
- Coal	ton	4,140	52.3
- Lubricating oil	000 l.	366	960
- Water	000 kl	88	110
2. Direct production materials: total			16.84
a. Latex	ton	7.1	3,110
b. Canvas and cloth	000 m	57.6	1,870
c. Fibre board	ton	7.5	3,000
d. Raw hides	000 Nos.	492.7	27,600
e. Bark extract	ton	1,242	994
f. Other chemicals* and grindery	Rs.mill.	3.56	..

\* Alumina sulphate, ammonia sulphate, acetone, sulphuric acid, hydrochloric acid, oxalic acid, amyl alcohol, butyl acetate, borax, chalk, casein, camphor, calcium silicates, oil (castor, turkey red, turpentine, linseed, etc.), dyestuff, etc.

3. Packaging materials: total		.42
530,228 nos. paper products (Rs. 0.35 each);	Others:	
16,944 nos. wooden materials (Rs. 0.13 each);	Rs.130,000.	
4. Work performed by sub-contractors		-
5. Repairs & maintenance (materials & services purchased)		.83
6. Material inputs for auxiliary activities (mostly stationery)		.02
7. Non-factor service inputs: total		.96

**REPLACEMENT COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 822 <sup>1/</sup>
- Value added per employee: Rs. 2,673
- Annual wage per employee in direct production: Rs. 2,004
- Variable input costs/gross production ratio: 85.0 %
- Gross profit/gross production ratio: 3.4 % <sup>2/</sup>
- (at full capacity: 5.5 %)
- Level of production at break-even point is approximately 79 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition	% of
From 1959 to 1964		REPAIR
a. Total Investment (Rs. million)	1.14	
- Land	-	-
- Land improvements	-	-
- Buildings	.25	40
- Other construction work	-	-
- Machinery & equipment	.67	20
- Tools & instruments	-	-
- Vehicles	.16	-
- Office furniture & fixtures	.06	-
b. Corresponding increase:	From 1959	to 1964
In no. of employees	2,520	3,524
In annual gross production (Rs. million)	19.93	31.45

**2. Future Plan**

- a. Investment proposed for the period 1966 to 1970  
Total value (Rs. million) 2.5  
Of which: - Mach. & equipment 95 %  
- Land improv. & bldg. -  
- Land -  
- Others 5
- b. Net increase in no. of employees envisaged for the same period: - Direct production: 700  
- Auxiliary: 50
- c. Purpose: Introduction of new types of shoes and leather goods; introduction of direct vulcanizing process; largely balanced expansion of existing capacity in the same location.

**VIII. SUPPLEMENT**

Other branches of the parent enterprise:

There are two establishments producing woollen yarn and cloth (with 8,000 employees in total) and a corporate headquarters with about 480 employees. The annual operating costs of the corporate headquarters are Rs. 4.2 million, of which Rs. 3.2 million is wages and salaries. These other establishments are more or less equally old, and the enterprises' Balance Sheet shows, as per 1964, only Rs. 13.8 million fixed capital assets, as against the net worth of Rs. 70 million.

<sup>1/</sup> Sunk capital. The 1964 replacement value, which is in total only 5 % higher than the book value, represents rather the "resale" value.

<sup>2/</sup> Unadjusted for expenses of the central office. In 1963, when the production was 16 % higher than in 1964 (due to a large special order from the Government), the gross profit/Gross production-ratio was no higher than 3.2 %.

**MAJOR PRODUCTS:** Upper leather. Capable of producing 1.6 million sq.ft. of finished leather on one shift operation. (4 million sq.ft. if operated with full three shifts).

**EMPLOYING UNIT:** An independent one-establishment enterprise with total assets of 1.2 million and employees 60 as of 1964. Founded in 1941.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE (IL 000)</b>	<u>800</u>	<u>510</u>
1. Land (rented)	-	-
2. Land improvements	-	-
3. Buildings (rented)	-	-
4. Other construction works	-	-
5. Machinery & equipment	700	450
6. Tools & instruments	-	-
7. Vehicles	100	60
8. Office furniture & fixtures	-	-

DETAIL OF 1.5 (No.)	Total Bk. value IL. den.	Avg. Age (Yr.)	Oper. rate (Hrs.)	Deprec. rate (%)	196 replace. value
a. Drums (13)	..	10-15	A	10	65
b. Puddles (8)	..	"	A	10	24
c. Leather processing pits (8)	..	"	"	"	16
d. Automatic steam boilers (2)	..	"	B	"	10
e. Pumps (7)	..	"	"	"	14
f. Drying rooms (2)	..	"	A	"	6
g. Refrigerating rooms (2)	..	"	"	"	20
h. Splitting machine (1)	..	10	"	"	10
i. Splitting machine (1)	45	1	"	"	45
j. Cutting machine (1)	..	10	"	"	10
k. Spraying machine (1)	60	1	"	"	60
l. Presses (2)	..	10,15	"	"	40
m. Presses (2)	..	9	B	"	30
n. Measuring machine (1)	..	9	A	"	4
o. Vacuum machines (2)	65	1	"	"	65
p. Staking machines (3)	..	9	"	"	12
q. Stressing machine (1)	..	9	B	"	20
r. Buffing machines (2)	..	10	A	"	20
s. Shaving machine (1)	45	1	"	"	45

**II. INVENTORY (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE (IL 000)</b>	<u>359</u>	<u>-</u>
1. Direct production materials	70	-
2. Other input materials	96	-
3. Work in process	114	-
4. Finished products	79	-

- Normal inventories of finished products 3.0 % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 260 KW  
 Capacity of electr. furnaces: 100 KW  
 Total load, capacity of trucks: - t  
 (a) to (g) were domestically produced; the others were imported; (i), (o) and (s) from Italy, (m) and (n) from England and the remaining from Germany. Average age of machinery itemised is 7 years.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	60	-	-
1. Direct production (all male)	50	-	-
Annual total manhours (000)	(110)	( )	( )
a. Storage and refrigeration	1	-	-
b. Line	6	-	-
c. Drum shop	4	-	-
d. Tanning shop	16	-	-
e. Finishing	4	-	-
f. Miscellaneous	19	-	-
2. Auxiliary activities (m. 5 f. 5)	10	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	
		Unskilled	Skilled
TOTAL	8	51	-
Management	1	-	-
Direct Production	-	-	-
Skilled	-	-	-
Semi-skilled	-	-	-
Unskilled	5	-	-
Auxiliary Activities	-	-	45
Skilled	-	-	-
Semi-skilled	-	-	-
Unskilled	-	-	-
	3	6	-

- Actual hours worked per annum per direct production worker: 2,200 hours.

- Proportion of motors occupied: 100% on 1st shift.

- Conventional processes are generally employed except in (b) which still use a quite primitive process. Mechanisation is outdated in (a) and fair in (d) and (e). There is no automation.

IV. ANNUAL PRODUCTION (1964)			
TOTAL VALUE OF PRODUCTION ( I£ 000 )		2,602	
Product	Unit	Quantity Produced	Unit Value ( I£ )
Upper Leather	000 sq.ft.	1,577	1,650

**CAPACITY OUTPUT:** 150% higher than the 1964 actual level of production given sufficient demand for the product and additional 55,000 manhours each on the 2nd and 3rd shifts.

Unit value of product: Market value f.o.b. before sales tax  
 Unit value of material: Market price o.i.f.  
 - Hides are directly imported and delivered by sea with freight rates of 3.03/lb.

V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF CONSUMPTION ( I£ 000 )		1,715	
<b>1. Energy &amp; water: total</b> <span style="float:right">28</span>			
		Quantity consumed	Unit value ( I£ )
- Electricity	000 Kwh	120	45
- Solar and crude oil	I£ 000	15	..
- Water	000 cu.m.	72	100
<b>2. Direct production materials: total</b> <span style="float:right">1,487</span>			
a. Hides	000 lbs	2,500	\$100-170
b. Chemicals, dyes and fats	I£ 000	350	..
<b>3. Packaging materials: total</b> <span style="float:right">1</span>			
<b>4. Work performed by sub-contractors ( )</b> <span style="float:right">-</span>			
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> <span style="float:right">55</span>			
<b>6. Material inputs for auxiliary activities</b> <span style="float:right">17</span>			
<b>7. Non-factor service inputs: total</b> <span style="float:right">127</span>			
Of which transportation, insurance and storage (purchased separately) I£ 13,000.			

VI. VALUE ADDED		TOTAL 1964 ( I£ 000 )	887
<b>1. Wages &amp; salaries (before income tax)</b>			
- Employees in direct production		551	
- Other employees		75	
2. Other expenditures for employees		31	
3. Annual depreciation allowance		23	
4. Rental paid (land and buildings)		7	
5. Sales & other indirect taxes (less subsidies)		-	
6. Other gross business income (before income tax)		200	

**EMPLOYEE EFFICIENCY**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: I£ 14,000
- Value added per employee: I£ 14,783
- Annual wage per employee in direct production: I£ 11,020
- Variable input costs/gross production ratio: 79.4%
- Gross profit/gross production ratio: 7.7% (full 3 shift operation: 15.4%)
- Level of production at break-even point is approximately 62% of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN			
<b>1. Recent Expansion</b>		Gross acquisition	
From 1962 to 1964			
a. Total Investment ( I£ 000 )		400	
- Land		-	
- Land improvements		-	
- Buildings		30	
- Other construction work		-	
- Machinery & equipment		330	
- Tools & instruments		-	
- Vehicles		40	
- Office furniture & fixtures		-	
b. Corresponding increase:		From 1962	to 1964
In no. of employees (direct prod. only)		35	50
In annual gross production ( I£ million )		1.8	2.6

**2. Future Plan:** None

a. Investment proposed for the period 19 to 19  
 Total value ( )  
 Of which: - Mach. & equipment \$  
 - Land improv. & bldg.  
 - Land  
 - Others

b. Net increase in no. of employees envisaged for the same period:  
 - Direct production:  
 - Auxiliary:

c. Purposes:

**VIII. SUPPLEMENT**



An enterprise engaging in chrome tanning of upper hides. Capable of producing 205,000 m<sup>2</sup> of upper hide leather on one-shift operation. About 9 % of material expenditures were imported in 1963. The establishment was founded in 1947. No exports.

I. FIXED CAPITAL		(end of 1963)	Original purchase value	1963 re- placement value	Capital expenditures in the past years: (Drs. million)															
TOTAL (Drs. million)					<table border="1"> <thead> <tr> <th></th> <th>1953-54</th> <th>1955-57</th> <th>1958-60</th> <th>1961-63</th> </tr> </thead> <tbody> <tr> <td>Gross expenditures</td> <td>5</td> <td>30</td> <td>43</td> <td>16</td> </tr> <tr> <td>Retirements</td> <td>21</td> <td>25</td> <td>22</td> <td>31</td> </tr> </tbody> </table>		1953-54	1955-57	1958-60	1961-63	Gross expenditures	5	30	43	16	Retirements	21	25	22	31
	1953-54	1955-57	1958-60	1961-63																
Gross expenditures	5	30	43	16																
Retirements	21	25	22	31																
Buildings & land improvements	123	155	Calculated average age of fixed assets: 9.6 years																	
Machinery & equipment	186	220	<b>Electric motors:</b>																	
Other capital assets	-	-	Total installed capacity: 450 KW																	
<b>Major machinery crucial for determining the overall production capacity:</b>					Of which actually operated in 1963:															
Upper hide leather: mechanical barrals and special processing machines (1 shift);					1st shift 100%; 2nd shift -%; 3rd shift -%															
Lining from hides: machines for scraping (1 shift);					<b>Technological features:</b>															
Upper leather waste: hydraulic presses and spraying equipment (1 shift).					The rate of mechanisation is relatively low. The 1963 production (recorded herewith) was 20 % lower than the 1962 level, while there was a 10 % increase in labour hours during these years. Located 200 km from the source of raw materials (though with good communication lines) and close to a shoe factory.															
(Almost one-third of machine & equipment was imported)																				
II. LABOUR		(1963)	TOTAL no. of employees: 122		Educational background of workers:															
1. Factory workers:			1st shift	2nd shift	3rd shift	Tech. Econ. Low Others Total														
Total	96 persons	96	-	-	-	Univ. or higher 1 - - - 1														
( 202 thous. manhrs. )		( 202 )	( - )	( - )	( - )	Tech. Higher sch. 2 - 1 - 3														
Production department	77	-	-	-	-	Secondary sch. 1 2 - 2 5														
Locksmith	3	-	-	-	-	Primary school - - - 113 113														
Furnace	3	-	-	-	-															
Electric shop and carpenter shop	2	-	-	-	-															
Warehousing of raw materials and chemicals	6	-	-	-	-															
Chemicals	5	-	-	-	-															
2. Non-factory workers: 26 persons																				
( 52 thous. manhours )																				
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	IV. INTERMEDIATE INPUTS																
TOTAL actual revenue output 1963*			652	Quantity		Value (Drs. Million)														
- Upper hide leather	185,365 m <sup>2</sup>	640	TOTAL actual consumption 1963 518																	
- Hide lining	4,236 m <sup>2</sup>	7	1. Energy inputs: total 16																	
- Upper leather waste	7,425 m <sup>2</sup>	5	- Electricity 314 MWh 6																	
			- Brown Coal 1,444 tons 10																	
* Includes turnover tax on sold products.			2. Major production materials: total 401																	
<b>Capacity output:</b>			- Raw hide 1,003 tone 401																	
Upper hide leather	205,000 m <sup>2</sup>	Overall rate of utilization is 90 %.	3. Repairs & maintenance: total 6																	
Lining from hides	7,000 m <sup>2</sup>		4. Other material & non-factor service inputs 95																	
Upper leather waste	9,000 m <sup>2</sup>																			
For full utilization of the existing capacity 100 workers are needed on the first shift. The capacity output is represented approximately by the actual 1962 production levels.			V. VALUE ADDED (1963) (Drs. Million)																	
			TOTAL (except turnover tax) 122																	
			- Wages of factory workers 55																	
			- Salaries of non-factory workers 14																	
			- Depreciation 12																	
			- Interests paid 34																	
			- Other accumulation (Turnover tax) 7 ( 12 )																	
VI. SUPPLEMENT		SELECTED COEFFICIENTS																		
- The 1964 expansion programme is expected to result in an improvement in the tanning process, though it is one of the regular overhauling programmes.		- Mach. & equip. per factory worker on 1st shift: Drs. 2,291,000																		
		- Value added per employee: Drs. 1,000,000																		
		- Annual wage per factory worker: Drs. 572,000																		
		- Variable input cost/gross production ratio: 73.7 %																		
		- Gross accumulation/gross production ratio: 6.4 %																		
		(at full capacity 8.3 %)																		
		- Level of production at break-even point: 75 % of the 1963 actual level.																		
1. Gross accumulation includes 'interests paid'.																				

An old enterprise, founded in 1918, engaging in chrome tanning of leather. Annual capacity output is about 27,000 m<sup>2</sup> of tanned leather on partial three-shift operation (only leather tanning shop works on three shifts). Not less than 72% of material expenditures (raw skin and hides and chemicals) are imported, but also 40% of the output is directly exported.

I. FIXED CAPITAL (end of 1963)	Original purchase value	1963 re- placement value
	TOTAL (Drs. million)	334
Buildings & land improvements	124	210
Machinery & equipment	210	250
Other capital assets	-	-

Major machinery crucial for determining the overall production capacity:

All products: mechanical barrels (3 shifts); special machines, scraping machines, spraying machines, flattening machines and fur cutting machines. (1 shift).

Capital expenditures in the past years: (Drs. million)			
	1953-54	1955-57	1958-60
Gross expenditures	7	49	50
Retirements	14	24	31
Calculated average age of fixed assets:	8.4 years		

Electric motors: 888 KW  
Total installed capacity: 888 KW  
Of which actually operated in 1963:

1st shift 100 %; 2nd shift 14 %; 3rd shift 2 %

Technological features: Satisfactory degree of mechanisation for the Yugoslav standard (rated as to 80% and 60% respectively of the advanced European level). Half of the production is export-oriented whereas the dependence on imported raw materials is high. Favourable railroad communications with both domestic and foreign markets.

II. LABOUR (1963)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:	112	31	24
Total 167 persons (392 thous. manhrs.)	(262)	(71)	(59)
- Leather tanning	67	30	23
- Ancillary shop	10	-	-
- Transport	4	-	-
- Warehousing	8	-	-
- Other services	23	1	1
2. Non-factory workers:	41 persons (95 thous. manhours)	-	-

Educational background of workers:

	Techn. High.	Low	Others	Total
Univ. or higher	2	-	-	2
Tech. Higher sch.	1	-	-	1
Secondary sch.	1	4	-	7
Primary school	-	-	198	198

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. million)
	TOTAL actual revenue output 1963	
- Cow hides for soles	8 t	4
- Upper cow hides	63,943 m <sup>2</sup>	237
- Upper small skins	35,609 m <sup>2</sup>	160
- Lining from small skins	31,292 m <sup>2</sup>	75
- Special lining	2,446 m <sup>2</sup>	2
- Leather for clothing	97,265 m <sup>2</sup>	419
- Technical leather	12 t	16
- Technical wool	70 t	44
- Sheep and lamb skins with fur	20,288 t	71
- Leather glue	18 t	5
- Others	..	10

\* Including turnover tax on sold products.

Capacity output

Upper cow hides	80,000 m <sup>2</sup>	Overall rate of utilisation is 76%.
Upper small skins	60,000 m <sup>2</sup>	
Lining from small skins	30,000 m <sup>2</sup>	
Leather for clothing	100,000 m <sup>2</sup>	
Sheep and lamb skins with fur	40,000 m <sup>2</sup>	

Underutilization due to unbalance among capacities of various processes; insufficient supply of materials. Optimum number of workers required on the 1st shift for full utilization of the existing capacity is 156.

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. million)
	TOTAL actual consumption 1963	
1. Energy inputs: total		11
- Electricity	40 Mwh	1
- Brown coal	1,609 t	10
2. Major production materials: total		698
- Large raw skins	433 t	132
- Small raw skins	338 t	456
- Chemicals	434 t	85
- Dyse	13 t	23
3. Repairs & maintenance: total		7
4. Other material & non-factor service inputs		28

V. VALUE ADDED (1963)	(Drs. million)
TOTAL (except turnover tax)	228
- Wages of factory workers	93
- Salaries of non-factory workers	26
- Depreciation	14
- Interests paid	35
- Other accumulation (TURNOVER TAX)	60 1/2 (71)

VI. SUPPLEMENT	Future Plans
a)	To improve the degree of mechanization and automation;
b)	To introduce semi-processed leather into production line;
c)	To double the existing capacities.
1)	(Of which Drs. 26 million are funds belonging to the enterprise.
2)	Gross accumulation includes 'interests paid'.

SELECTED COEFFICIENTS

- Mach. & equip. per factory worker on 1st shift:	Drs. 2,232,000
- Value added per employee:	Drs. 1,096,000
- Annual wage per factory worker:	Drs. 556,000
- Variable input cost/gross production ratio:	82.5 %
- Gross accumulation/gross production ratio:	9.7 %
(at full capacity)	11.5 %
- Level of production at break-even point:	44 % of the 1963 actual level.

An enterprise producing leather and furs. Founded in 1951. Annual capacity output is 360,000 eq. m. of leather and 160,000 eq. m. of furs on two-shift operation (except warehousing and transport). One-fourth of the material expenditures (raw hides and skins) were imported; 20 % of the output sold on foreign markets.

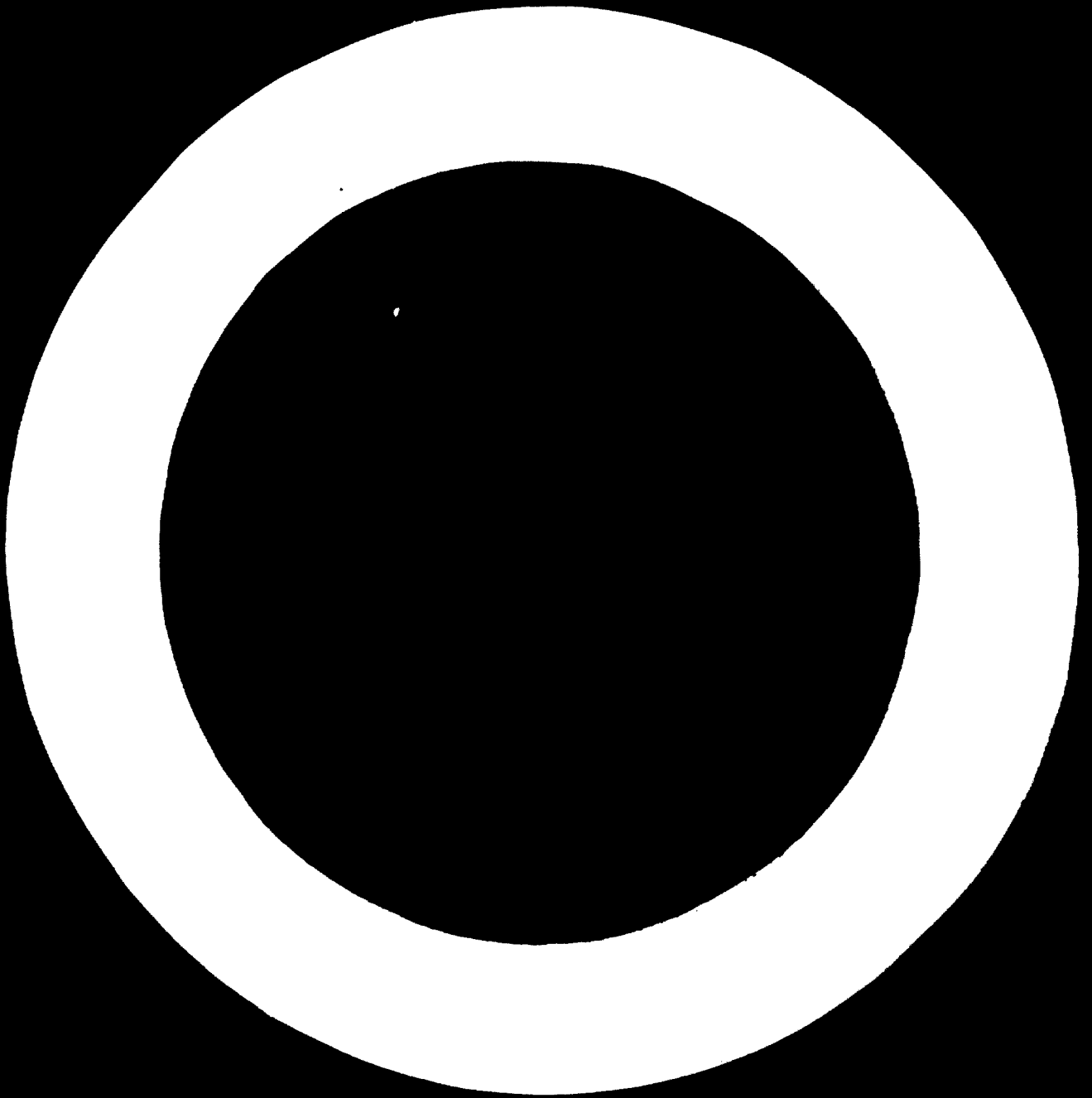
I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)		848	1,020	Gross expenditure	442	84	95	10		
Buildings & land improvements		512	670	Retirements	19	45	65	61		
Machinery & equipment		336	350	Calculated average age of fixed assets: <u>93</u> years						
Other capital assets		-	-	<b>Electric motors:</b>						
				Total installed capacity: <u>841</u> KW						
				Of which actually operated in 1965:						
				1st shift <u>100</u> %; 2nd shift <u>7</u> %; 3rd shift <u>-</u> %						
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Technological features:</b> Conventional method of leather tanning. Mechanization is insufficient*but close to the Yugoslav standard. Located in an area rich in livestock production.						
Upper small skins: mechanical barrels and semi-barrels (2 shifts); Clothing leather and lining: special processing machine, scraping machine, hydraulic press, spraying equipment and fur cleaning machine (1 shift).				* Rated between 55 - 70 % of the world advanced standard.						
(Only 2 % of machinery & equipment were imported.)										
II. LABOUR (1965)		TOTAL no. of employees:			Educational background of workers:					
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Low	Others	Total	
1. Factory workers:					Univ. or higher	2	3	1	-	6
Total <u>262</u> persons		210	52	-	Tech. Higher sch.	3	-	-	-	3
( <u>790</u> thous. manhrs. ) ( <u>600</u> ) ( <u>190</u> ) ( <u>-</u> )					Secondary sch.	5	30	-	-	35
- Leather shop		103	32	-	Primary school	-	-	-	285	285
- Fur shop		50	14	-	IV. INTERMEDIATE INPUTS					
- Auxiliary shop		23	6	-	Quantity		Value (Drs. Million)			
- Warehousing and transport		25	-	-	TOTAL actual consumption 1965					
							1,372			
2. Non-factory workers: <u>57</u> persons					1. Energy inputs: total		49			
( <u>156</u> thous. manhours )					- Electricity		1,240 MWh			
					- Brown coal		4,771 t			
					- Liquid fuel		17 t			
					2. Major production materials: total		1,272			
					- Raw small skins		1,149 t			
					- Chemicals		110			
					3. Repairs & maintenance: total		17			
					4. Other material & non-factor service inputs		34			
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1965)		Value (Drs. Million)			
TOTAL actual revenue output 1965			2,003		TOTAL (except turnover tax)		440			
- Upper skins		286,660 m <sup>2</sup>	803		- Wages of factory workers		168			
- Clothing leather		37,983 m <sup>2</sup>	143		- Salaries of non-factory workers		43			
- Lining from small skins		11,354 m <sup>2</sup>	18		- Depreciation		21			
- Technical wool		278 t	272		- Interests paid		118			
- Sheep and lamb skins with fur		120,476 m <sup>2</sup>	482		- Other accumulation		90			
- Others		..	285		(Turnover tax)		( 191 )			
* Including turnover tax on sold products.										
<b>Capacity output</b>										
Leather		360,000 m <sup>2</sup>	Rate of							
Furs		160,000 m <sup>2</sup>	utilization is							
Technical wool		300 t	87 %.							
Underutilization due to insufficient supply of materials. Optimum number of workers required on the first shift for full utilization of the existing capacity is 260.										
VI. SUPPLEMENT				SELECTED COEFFICIENTS						
- The enterprise is planning the installation of new modern equipment.				- Mech. & equip. per factory worker on 1st shift: Drs. 2,173,000 <sup>1</sup>						
				- Value added per employee: Drs. 1,337,000						
				- Annual wage per factory worker: Drs. 641,000						
				- Variable input cost/gross production ratio: 82.1 %						
				- Gross accumulation/gross production ratio: 11.5 %						
				(at full capacity 12.3 %)						
				- Level of production at break-even point: 35 % of the 1965 actual level.						
1/ The denominator = 161 (i.e. excludes the workers in "auxiliary shop" & "ware-housing and transport").										
2/ Gross accumulation includes 'interest paid'.										

A very old enterprise producing leather and footwear from various kinds of skins. Annual capacity output is around 200,000 sq.m. of upper leather and 145,000 pairs of ladies' footwear on one-shift operation (leather tanning works two shifts). Only 5% of the materials (raw hides and skins) are imported; 16% of the output were directly exported. The enterprise was founded in 1865.

I. FIXED CAPITAL		(end of 1965)	Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)					
					1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)					409	490				
Buildings & land improvements					201	270				
Machinery & equipment					208	220				
Other capital assets					-	-				
<b>Major machinery crucial for determining the overall production capacity:</b>					Gross expenditures 152 72 40 105					
Upper leather hides: mechanical barrels, special machines, scraping machines, hydraulic press, spraying equipment and machines for production of leather strips (2 shifts).					Retirements 14 31 33 43					
Ladies' footwear: machines for modelling, sewing, stitching & shaping (1 shift).					Calculated average age of fixed assets: 7.5 years					
(30% of machinery & equipment were imported.)					<b>Electric motors:</b>					
					Total installed capacity: 442 KW					
					Of which actually operated in 1965:					
					1st shift 100%; 2nd shift 21%; 3rd shift --%					
					<b>Technological features:</b>					
					Chrome tanning of upper leather. Degree of mechanisation and automation falls short by about 15% and 35%, respectively. Located within a source of raw hides and connected with a shoe factory through railroad and roads.					
II. LABOUR		(1965)	TOTAL no. of employees: 227			Educational background of workers:				
			1st shift	2nd shift	3rd shift	Techn.	Non.	Low	Others	Total
1. Factory workers:			185	16	-	-	-	-	-	-
Total		201 persons	(432)	(48)	(-)	-	-	-	-	-
		(480 thous. manhrs.)				-	-	-	-	-
- Leather tannery		103	16	-	-	3	5	-	-	8
- Footwear and other shop		82	-	-	-	-	-	-	219	219
2. Non-factory workers:		26 persons				Primary school				
		(62 thous. manhours)				- - - - - 219 219				
III. ANNUAL PRODUCTION & CAPACITY		Quantity			Value (Drs. Million)	IV. INTERMEDIATE INPUTS				
						Quantity		Value (Drs. Million)		
TOTAL actual revenue output 1965*					1,115	TOTAL actual consumption 1965				
- Upper leather from hides		199,248 m <sup>2</sup>			893	1. Energy inputs: total				
- Ladies' footwear		48,000 prs			222	- Electricity 250 Mwh 4				
						- Lignite 1,443 t 4				
* Including turnover tax on sold products.						2. Major production materials: total 587				
<b>Capacity output:</b>						- Cow hides 23 t 8				
Upper leather from hides		200,000 m <sup>2</sup>				- Raw kip skins 178 t 95				
Ladies' footwear		145,000 pre.				- Raw calf skins 562 t 439				
						- Imported kip skins 76 t 41				
Underutilisation due to insufficient supply of materials; the capacity of footwear production has only recently been established.						- Imported, semi-finished products 2 t 4				
Optimum number of workers required on the first shift for full utilisation of the existing capacity: 190 workers.						3. Repairs & maintenance: total 14				
						4. Other material & non-factor service inputs 109				
VI. SUPPLEMENT		Future plans:			V. VALUE ADDED (1965) (Drs. Million)					
a) Introduction of technical leather which calls for the establishment of new capacity.					TOTAL (except turnover tax) 298					
b) Regular overhauling of the existing shops.					- Wages of factory workers 105					
1/ Of which Drs. 46 million are funds belonging to the enterprise.					- Salaries of non-factory workers 21					
2/ Gross accumulation includes 'interests paid'.					- Depreciation 14					
					- Interests paid 50					
					- Other accumulation 108 1/					
					(Turnover tax) 99					
					<b>SELECTED COEFFICIENTS</b>					
					- Mech. & equip. per factory worker on 1st shift: Drs. 1,189,000					
					- Value added per employee: Drs. 1,312,000					
					- Annual wage per factory worker: Drs. 522,000					
					- Variable input cost/gross production ratio: 69%					
					- Gross accumulation/gross production ratio: 15.5% (at full capacity)					
					- Level of production at break-even point: 50% of the 1965 actual level.					

An enterprise tanning leather and manufacturing gloves and technical wool. Founded in 1953. Annual capacity output is around 1.4 million sq.m. of upper leather, 50,000 pairs of gloves and 350t of technical wool on partial two-shift operation (gloves shop work on one shift only). 40% of production material (raw skins and chemicals) were imported; 20% of the output was directly exported in 1963.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		387	503	Gross expenditures	2	42	47	65	
Buildings & land improvements		179	233	Retirements	5	17	29	36	
Machinery & equipment		208	270	Calculated average age of fixed assets: 8.6 years					
Other capital assets		-	-	<b>Electric motors:</b>					
				Total installed capacity: 445 KW					
				Of which actually operated in 1963:					
				1st shift 100 %; 2nd shift 3 %; 3rd shift - %					
				<b>Technological features:</b> Chrome tanning of upper small skins. Production of 12 different articles seems to be too large from the standpoint of technological efficiency. Mechanization is moderate. Located near an urban shopping area but the source of about 60% of raw materials is located at 15 Km from the establishment.					
<b>Major machinery crucial for determining the overall production capacity:</b>									
Small upper leather: mechanical barrels, tanning machines, scraping machine, hydraulic presses and spraying equipment (2 shifts);									
Gloves: sewing machines (1 shift).									
70% of machinery and equipment were imported.									
II. LABOUR (1963)		TOTAL no. of employees: 274			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn.	Elem.	Low	Others	Total
1. Factory workers:		205	23	-	Univ. or higher	2	2	-	4
Total 225 persons		(487)	(49)	(-)	Tech. Higher sch.	1	-	-	1
(536 thous. manhrs.)					Secondary sch.	4	8	4	16
					Primary school	-	-	253	253
- Upper small leather		170	21	-	IV. INTERMEDIATE INPUTS				
- Wool		10	2	-	Quantity		Value (Drs. Million)		
- Gloves		25	-	-	TOTAL actual consumption 1963 741				
2. Non-factory workers:		46 persons			1. Energy inputs: total 20				
(108 thous. manhours)					- Electricity 623 Mwh 7				
					- Brown coal 1,539 t 13				
					2. Major production materials: total 692				
					- Raw small upper skins 846 t 606				
					- Dyes and chemicals 86				
					3. Repairs & maintenances: total 7				
					4. Other material & non-factor service inputs 22				
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	V. VALUE ADDED (1963) (Drs. Million)					
TOTAL actual revenue output 1963 *			1,176	TOTAL (except turnover tax) 338					
- Upper small skins		323,946 m <sup>2</sup>	800	- Wages of factory workers 143					
- Leather gloves		35,000 prs	70	- Salaries of non-factory workers 40					
- Technical wool		317 t	250	- Depreciation 13					
- Others		..	56	- Interests paid 60					
				- Other accumulation 82 1/2					
				(Turnover tax) 97					
* Including turnover tax on sold products.									
Capacity output:									
Upper leather from small skins		350,000 m <sup>2</sup>	} Overall rate of utilization is 90%.						
Leather gloves		50,000 prs							
Technical wool		350 t							
Underutilization due to insufficient supply of materials.									
Minimum number of workers required on the first shift									
for full utilization of the existing capacity: 228 persons.									
VI. SUPPLEMENT		Future Plans		SELECTED COEFFICIENTS					
- Balanced expansion of the existing capacities;				- Mach. & equip. per factory worker on 1st shift: Drs. 1,317,000					
- Also raising the degree of mechanization by 10% of the existing level.				- Value added per employee: Drs. 1,233,000					
				- Annual wage per factory worker: Drs. 627,000					
				- Variable input cost/gross production ratio: 79.2 %					
				- Gross accumulation/gross production ratio: 2/ 13.1 %					
				(at full capacity) 13.9 %					
1. of which Drs. 26 million are funds belonging to the enterprise.				- Level of production at break-even point: 37 % of the 1963 actual level.					
2. Gross accumulation includes 'interests paid'.									



**MAJOR PRODUCTS:** Rubber products (shoe soles, floor coverings for automobiles, retreaded tyres, etc.) Capable of producing 7,000 - 7,500 tons of rubber products per annum on the basis of partial 3-shift operation.

**REPORTING UNIT:** A one-factory enterprise with capital stock Fr. 6 million and employees 611 as of 1964. Founded in 1915.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Fr. 000 )	<u>18,938</u>	<u>4,860</u>
1. Land	187	46
2. Land improvements	-	-
3. Buildings	3,348	556
4. Other construction works	427	293
5. Machinery & equipment	10,496	3,161
6. Tools & instruments	2,743	233
7. Vehicles	580	124
8. Office furniture & fixtures	1,157	447

DETAIL OF I.5 (No.)	Total Bk value bef. depr.	Avr. Age (Yr.)	Oper. Cond.	Depr.* rate (%)
a. Blending machine, BANBURY (1)	218	27	B	
b. Blending machine, WERNER (1)	280	10	B	
c. Cylindrical blending machine (10)	1,087	13	A	"
d. Calendering machine (1)	63	10	B	
e. Roving frames (3)	69	15	B	
f. Crocodile presses (21)	1,604	3	A	
g. Monobloc presses (4)	90	25	B	
h. Automatic presses for floor coverings (4)	788	3	A	
i. Mounter, COLLMANN (1)	25	3	B	
j. Presses for recapping pneumatic tyres; MARPA (9)	283	2	A	
k. Presses for recapping pneumatic tyres; HERBERT (4)	136	1	A	
l. Presses for recapping pneumatic tyres; BACON (3)	41	2	A	
m. Presses for recapping pneumatic tyres; ZANGL (18)	281	4	"	
n. Compressor (7)	91	3	"	

\* Depressive depreciation over the period of 10 years.

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Fr. 000 )	<u>3,515</u>	...
1. Direct production materials	1,277	
2. Other input materials	623	
3. Work in process	439	
4. Finished products	1,175	

- Actual inventories of finished products 3.2 % of annual gross production

- Seasonal variations: Not significant.

Capacity of electr. motors: 7,050 KW

Total load, capacity of trucks: 30 t

(e),(f),(g),(j),(n) and part of (o) were domestically made. The rest was imported.

Average age of machinery (52% of total) is 7.2 years.

Up to 1954 the production capacity was about 2,000 t per annum; it was increased to 5,000 t level by 1960.

**ENVIRONMENTAL CONDITIONS:** Transportation, public utilities, health, recreation and educational facilities, excellent. Residential facilities, fair.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> (m. 276)	<u>453</u>	<u>90</u>	<u>68</u>
1. Direct production (f. 76)	<u>194</u>	<u>90</u>	<u>68</u>
Annual total manhours (000)	(455)	(207)	(166)
a. Mixing and forming	41	41	41
b. Rasping and assembly of pneumatic tyres	22	22	-
c. Casting and vulcanization	27	27	27
d. Finishing and trimming	104	-	-
2. Auxiliary activities (m. 203 f. 56)	<u>259</u>	-	-
a. Storage of primary materials	12		
b. Storage and delivery of finished products	36		
c. Maintenance	43		
d. Production management, administration and commercial services (central office separately located)	168		

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	
		Engl-nears	Other
TOTAL	6	10	589
<b>Management</b>	6	6	10
<b>Direct Production</b>			
Skilled	-	-	23
Semi-skilled	-	-	31
Unskilled	-	-	248
<b>Auxiliary Activities</b>			
Skilled	-	-	165
Semi-skilled	-	-	5
Unskilled	-	-	61

- Actual hours worked per annum per direct production worker: 2,352 hours.

- Proportion of motors and furnaces occupied: 83% for all shifts.

**Technological features:**  
a): Internal blending with BANBURY & WERNER, external blending, slubbing, pressing to vulcanise soles, floor coverings for autos and other moulded products.  
b): Rasping of pneumatic tyres and rolling of rubber to skelton pneuc.  
c): Cooking of rubber by hot water to pneuc.

- Degree of mechanization is excellent in pressing, mostly fair in other process in (a); mostly excellent but partly outdated in (b) and (c).

No automation except on presses and also in vulcanization (automatic opening at the end of cooking).

- **Skilled workers** in direct production are chiefs of shop (All other jobs can be done by operatives with no professional education provided that they are given a few days training). Those in auxiliary activities are for maintenance research and laboratory, planning, garage mechanics, accounting, etc. Out of 28 managers, 4 engineers, 1 other university graduate and 1 other graduate are assigned to the factory. The rest work at a separately located headquarters.

## IV. ANNUAL PRODUCTION (1964)

TOTAL VALUE OF PRODUCTION ( Fr. 000 ) 36,991

Product	Unit	Quantity Produced	Unit Value (Fr.)
a. Shoe soles	000 pcs.	7,485.0	1,431
b. Floor covers for automobiles	000 pcs.	442.0	4,300
c. Retreaded pneumatic tyres for automobiles & light vans	"	110.9	28,320
d. Retreaded pneumatic tyres for heavy weight vans	"	6.1	126,480
e. Retreaded pneumatic tyres for agricultural tractors	"	5.3	190,560
f. Non-vulcanized rubber bands for retreaded pneumatic tyres	ton	1,731.0	3,106
g. Shoe heels	000 pcs.	170.0	483
h. Shoe plates	000 pcs.	58.0	10,290
i. Vulcanized gum for soles	ton	359.0	3,300
j. Regenerated fine powder *	ton	1,037.0	(1,795)
k. Other products	000 Fr.	11,606	..
l. Revenues from technical assistance and other productive activities	"	464	..

\* Internally used and not counted in the total value of production.

**CAPACITY OUTPUT:** 10% higher than the 1964 actual production level with additional man-hours of 15,000, 500, 30,000 on 1st, 2nd and 3rd shift, respectively. Since the factory is surrounded by residential districts, there is no possibility for its expansion on the present premises; however, core processes are well balanced and presently no bottlenecks exist. Product - mix is not flexible.

Unit value of product: Market values f.o.b. before sales tax  
Unit value of material: Market price o.i.f.

- Energy and direct production materials are all domestically produced and delivered by road with freight rates about 7% for energy and direct production materials (d) to (h), 4% for neoprene rubber and 1.4% for natural rubber.

## V. INTERMEDIATE INPUTS (1964)

TOTAL VALUE OF CONSUMPTION ( Fr. 000 ) 21,818

1. Energy & water: total	Quantity consumed	Unit value (Fr.)
- Water (mostly internal supply)	m <sup>3</sup> 1,503	..
- Electricity	000 kWh 6,500	33.20
- Coal 215	ton 4,200	69.18
- Coal 418	" 103	90.65
- Domestic liquid fuel	000 lit. 38.4	177.00
2. Direct production materials: total		
a. Natural rubber	ton 660	3,000
b. Synthetic rubber	" 2,370	3,750
c. Neoprene rubber	ton 110	8,125
d. Nitrile rubber	" 2	2,625
e. Other chemicals	" 5	1,375
f. Regenerated fine powder (internally supplied and not included in total)	" 1,037	(1,795)
g. Vulcanizing agents	" 208	5,000
h. Plasticizer-peptioiser	" 3,291	720
i. Various pigments	" 487	575
3. Packaging materials: total		619
Metal containers (Fr. 4.8/unit) 1,783 cans; paper products (Fr. 1.05/unit) 1,784 units; wooden materials (Fr. 5.9/m <sup>2</sup> ) 1,184 m <sup>2</sup>		
4. Work performed by sub-contractors (see VIII)		1,513
5. Repairs & maintenance (materials & services purchased)		946
Consumable materials Fr. 84,000		
Parts for maintenance Fr. 223,000		
Services purchased Fr. 839,000		
6. Material inputs for auxiliary activities (Negligible)		
7. Non-factor service inputs: total		2,467
Of which transportation, insurance, storage services purchased separately Fr. 1,463,000.		

## VI. VALUE ADDED TOTAL 1964 ( Fr. 000 ) 15,173

1. Wages & salaries (before income tax)	
- Employees in direct production	4,717
- Other employees	3,930
2. Other expenditures for employees	456
3. Annual depreciation allowance	1,882
4. Rental paid	-
5. Sales & other indirect taxes (less subsidies) (not included in total)	1,734
6. Other gross business income (before income tax)	4,188

## SELECTED COEFFICIENTS

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Fr. 68,300 (60,200  $\frac{1}{2}$ )  
- Value added per employee: Fr. 24,800  
- Annual wage per employee in direct production: Fr. 13,400  
- Variable input costs/gross production ratio: 62.3%  
- Gross profit/gross production ratio: 11.3% (at full capacity : 13.7%)  
- Level of production at break-even point is approximately 70 % of the 1964 actual level.

## VII. EXPANSION: HISTORY &amp; PLAN

1. Recent Expansion	Gross acquisition	Scrapped or sold
From 1963 to 1965		
a. Total Investment ( Fr. 000 )	4,864	155
- Land	-	-
- Land improvements	-	-
- Buildings	149	-
- Other construction work	-	-
- Machinery & equipment	2,924	122
- Tools & instruments	931	-
- Vehicles	222	28
- Office furniture & fixtures	638	5
b. Corresponding increase:	From 1963	to 1965
In no. of employees	594	602
In annual gross production ( tons. )	7,031	7,753

## 2. Future Plan: None

a. Investment proposed for the period 19 to 19  
Total value ( )  
Of which: - Mach. & equipment \$  
          - Land improv. & bldg.  
          - Land  
          - Others  
b. Net increase in no. of employees envisaged for the same period:  
  - Direct production:  
  - Auxiliary:

## c. Purposes:

## VIII. SUPPLEMENT

**Work performed by subcontractors:** Three small subcontractors (with 5 to 30 employees each) worked on retreading 54,700 pieces of various types of tyres, receiving fees Fr. 1,211,000. (They work solely for this establishment as though they were an integral part of this company). 235 tons of rubber for retreading and frames for tyres were supplied by this enterprise. Additional small jobs were also done by scattered small subcontractors, amounting to the total subcontract fees of Fr. 302,000 in 1964.

1 The denominator includes workers engaging in maintenance.



**MAJOR PRODUCTS:** Rubber tubes and tyres: Annual outputs are about 10 million pcs. of tyre of various specifications and 10 million pcs. of various tubes (worth some Rs. 260 million) on three shift operation. Capacity outputs not available.  
**REPORTING UNIT:** A larger and older branch of a two-establishment enterprise with total assets Rs. 250 million (net worth Rs. 153 million) and employees 7,500 as of 1964. This branch with 5,457 employees was founded in 1936. See India 300 - (2) for the sister branch.

I. FIXED CAPITAL ASSETS (end of 1964)	Before deprec.		After deprec.	
	(Rs. million)		(Rs. million)	
TOTAL BOOK VALUE *	(141.2)	(77.2)		
1. Land	( 2.8 )	( 2.3 )		
2. Land improvements	( - )	( - )		
3. Buildings	( 35.2 )	( 24.2 )		
4. Other construction works	( .7 )	( .5 )		
5. Machinery & equipment	( 96.0 )	( 48.1 )		
6. Tools & instruments	( - )	( - )		
7. Vehicles	( 2.3 )	( .4 )		
8. Office furniture & fixtures	( 3.7 )	( 1.2 )		
* Refers to the company as a whole including India 300 - (2)				

DETAIL OF I.5 (No.)	Total Bk. value bef. depr.	Avg. Age (Yr.)	Oper. Cond. (%)	Depr. rate (%)	196 replace. value
a. Banbury size 11 (3)	Rs. 20 million = total book value after depreciation of all the machines and equipment in this establishment	A	"	6.6	"
b. Banbury size 11 D (1)		"	"	"	"
c. 24" Mills (1)		"	"	"	"
d. 60" Mills (26)		"	"	"	"
e. 4 Bowl calender 24" x 63" (1)		"	"	"	"
f. 3 Bowl calender 24" x 63" (3)		"	"	"	"
g. Bias cutters (3)		"	"	"	"
h. Spadone (1)		"	"	"	"
i. 8" Extruders (5)		"	"	"	"
j. 13" Extruder (1)		"	"	"	"
k. 4" Extruders (4)		"	"	"	"
l. Bell presses 32" x 6" (3)		"	"	"	"
m. Deal press for hose (1)		"	"	"	"

**Structure of liquid assets and current liability of the company.**  
 (end of 1964 : Rs. million)

Cash on hand + in bank	6.3	Taxes payable	12.0
Marketable securities and bonds	.6	Accounts payable	65.0
Accounts receivable	7.4		

II. INVENTORIES (end of 1964)	Actual	Normal
TOTAL VALUE (Rs. million)	53.30	.. 4
1. Direct production materials	33.47	..
2. Other input materials	3.36	..
3. Work in process	20.97	- 29
4. Finished products		
- Normal inventories of finished products	5.7 % of annual gross production	
- Seasonal variations:	None	

Capacity of electr. motors: 18,990 KW  
 Total load, capacity of trucks: 10 t  
 Only g), h) and k) were domestically produced; the rest were imported.  
 The average age of machinery is over 10 years.

**GENERAL CONDITIONS:**  
 Transportation, public utilities and educational facilities, excellent.  
 Residential, health and recreational facilities, fair.

III. LABOUR (196 average)	General shift				EDUCATIONAL BACKGROUND (No. of employees)			
	1st shift	2nd shift	3rd shift	TOTAL	Univ. or higher	Sr. High sch. or equiv.	Other	Others
TOTAL EMPLOYED	5,457	1,165	1,437	1,427	69	255	833	4,300
1. Direct production (All male)	7	1,134	1,123	1,125	69	235	350	23
Annual total manhours (000)	(..)	(2,434)	(2,433)	(2,431)				
a. Mill and reclaim section	-	33	36	36				
b. Fabric preparation section	-	30	30	30				
c. Bicycle cover section	-	137	133	137				
d. Bicycle rim section	-	32	31	32				
e. Pubs section	-	205	205	205				
f. Giant cover section	-	144	144	143				
g. Giant cover moulding	-	73	72	72				
h. Aero and tractor cover section	-	53	52	52				
i. Motor cover section	-	116	117	116				
j. Curim bag	-	23	27	27				
k. Dilo mls section	-	31	30	30				
l. Belting, hose, fan and vee belt section	-	31	31	80				
m. Permanent lever pool	-	16	15	15				
n. Accessories	7	-	-	-				
2. Auxiliary activities (all male)	1,153	303	299	303				
a. Repairs and maintenance	62	253	253	253				
b. Technical and managerial control	673	-	7	7				
c. Stores	113	5	3	3				
d. Sales and other tops	305	45	36	40				

- Average working hour per annum per direct production worker: 2,195 hours.  
 - Proportion of motore occupied: 95% on all three shifts.  
**Technological features:**  
 a) Banbury and open mill mixing.  
 b) Calendering.  
 c) and d) Monoband making; solid head press curing.  
 e) Extrusion; pot moulding.  
 f) to i) 20/30 machine cover building for truck tyre; semi-auto machine cover building for car tyre; autoclave moulding.  
 - Degree of mechanisation and automation is generally fair except in the pot - moulding section of e) which is excellent.  
 - Skilled workers in direct production are: cover makers and moulders; makers of cycle rims, latex foam, cushion, hose, fan and Vee belt, cord dipping operators, etc.  
 Those in auxiliary activities are: electricians, wiremen, fitters, firemen, administration assistants, accounts assistants, clerks, sales assistants etc.

**IV. ANNUAL PRODUCTION (1964)**TOTAL VALUE OF PRODUCTION (Rs. million) 263.2

Product	Unit	Quantity Produced	Unit Value (000Rs.)
a. Giant tyres	000 Nos.	328	260.5
b. Giant tubes	"	504	25.5
c. Aero tyres	"	14	204.1
d. Aero tubes	"	5	14.5
e. Motor + motor cycle tyres	"	393	53.7
f. Motor + motor cycle tubes	"	420	7.25
g. Bicycle tyres	"	8,106	3.66
h. Bicycles tubes	"	9,136	1.62
i. Tractor tyres	"	36	153.1
j. Tractor tubes	"	37	19.5
k. Off the road tyres	"	4	1,133.0
l. Off the road tubes	"	4	78.55
m. Animal driven vehicle tyres	"	67	34.62
n. Animal driven vehicle tubes	"	116	9.4
o. Vee belts	"	511	6.0
p. Conveyer belting	000 meters	117	125.2
q. Solid tyres	000 Nos.	101	6.3
r. Camel back	ton	512	Total
s. Flaps	000 Nos.	341	value Rs. 14.9 mill.
t. Repair materials	ton	1,014	
u. Transmission belting	000 meters	1,153	5.5
v. Fan belt	"	331	3.6
w. Hose	"	1,295	2,75
x. Retreaded + vulcanised tyres.	nos.	2	130.3
y. Cycle rims	000 "	2,456	7.6
z. Dunlopillo	ton	975	0.95
a. Others	000 Rs.	310	..

Unit value of product: Market value f.o.b. before sales tax.  
Unit value of material: Market price c.i.f.

- 1) v a), b), c) to 1) and y) are mostly exported.  
- 2) 1), e), i), s), w) and part of a), b), n) to q), t) and d) are of domestic origin and delivered by railroad, road and inland waterway. The rest directly imported and delivered mainly through railroad and road.

**V. INTERMEDIATE INPUTS (1964)**TOTAL VALUE OF CONSUMPTION (Rs. million) 185.3

Item	Unit	Quantity consumed	Unit value (Rs.)
1. Energy & water: total including 230,000 liters petroleum (Rs. 0.72/lit.) + 329,000 liters other fuel oils (Rs. 0.25/liter.)			5.31
- Electricity	000 K.W.	50,830	55
- Lubricating oil	000 ton	46,025	38
- Water	million liters	4,510	30
2. Direct production materials: total			167.75
a. Natural rubber	ton	13,376	3,340
b. Synthetic rubber	"	3,982	3,353
c. Rubber latex	000 lit.	1,795	3,200
d. Tyre cord (cotton, rayon + nylon)	ton	4,136	11,500
e. Belting cord (rayon)	"	13.34	13,350
f. Canvas duck (belting duck)	"	294	3,400
g. Tyre valves	Rs. million	4.65	..
h. Bead wire	ton	1,433	2,500
i. Copper wire	"	.16	4,340
j. Steel plates	"	2,934	1,545
k. Non ferrous metals	"	38	15,717
l. Hose yarn, cord	"	73	9,000
m. Tyre canvas	"	123	8,000
n. Accelerators	"	171	9,360
o. Antioxidants (agric. powder etc.)	"	326	7,850
p. Retreaders	"	24	11,000
q. Carbon black	"	5,779	2,080
r. Fillers and pigments (cont. on VIII)	"	435	895
3. Packaging materials: total			4.02
75,600 meters mattress covering rolls (Rs. 1.3/meter); 935 rolls alkathene (Rs. 911/roll); 18,000 lit. polyvinyl chloride (Rs. 0.95/litre); others Rs. 3.37 million			
4. Work performed by sub-contractors			..
5. Repairs & maintenance (materials & services purchased)			4.13
Consumable stores Rs. 500,000; materials Rs. 2.13 million; services Rs. 1.5 million			
6. Material inputs for auxiliary activities			.93
General consumable stores Rs. 630,000; Stationery Rs. 300,000			
7. Non-factor service inputs: total			3.14
Transportation, insurance and storage purchased separately Rs. 1.06 million			

**VI. VALUE ADDED TOTAL 1964 (Rs. million) 77.9**

1. Wages & salaries (before income tax)	
- Employees in direct production	17.29
- Other employees	17.41
2. Other expenditures for employees	1.55
3. Annual depreciation allowances	4.10
4. Rental paid	-
5. Sales & other indirect taxes (less subsidies) (not included in total)	[ 5.72 ]
6. Other gross business income (before income tax)	37.56

**SELECTED COEFFICIENTS**

- Mach., equip., per employee in direct production on 1st shift: Rs. 17,637 1/2  
- Value added per employee: Rs. 14,277  
- Annual wage per employee in direct production: Rs. 5,094  
- Variable input costs/gross production ratio: 73.9%  
- Gross profit/gross production ratio: 14.3%  
- Level of production at break-even point is approximately 46 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
1. Recent Expansion 2/ From 1960 to 1964		
a. Total Investment (Rs. million)	12.45	.56
- Land	.26	-
- Land improvements	-	-
- Buildings	2.50	-
- Other construction work	-	-
- Machinery & equipment	9.10	.27
- Tools & instruments	-	-
- Vehicles	.32	.29
- Office furniture & fixtures	.27	-
b. Corresponding increase:	From 1960	to 1964
In no. of employees	5,000	5,457
In annual gross production (Rs. million)	210.28	263.19

**2. Future Plan:**

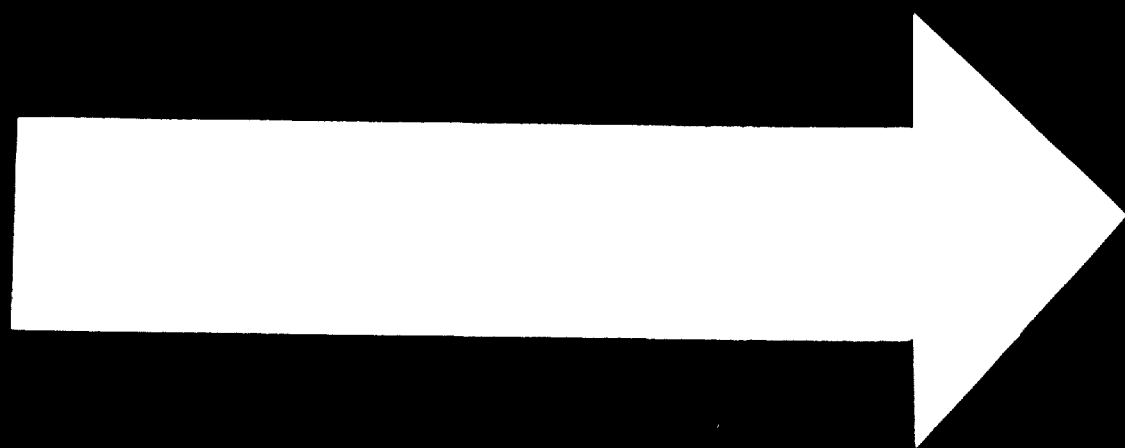
- a. Investment proposed for the period 19 to 19  
Total value ( )  
Of which: - Mach. & equipment %  
- Land improv. & bldg.  
- Land  
- Others
- b. Net increase in no. of employees envisaged for the same period: - Direct production:  
- Auxiliary:
- c. Purpose: The establishment does have some future plans, but the total value of investment and implementation period are not yet finalised.

**V 2 Direct production materials (continued):-****VIII. SUPPLEMENT**

1/ The numerator is the depreciated book value of the machinery of fairly old vintage.

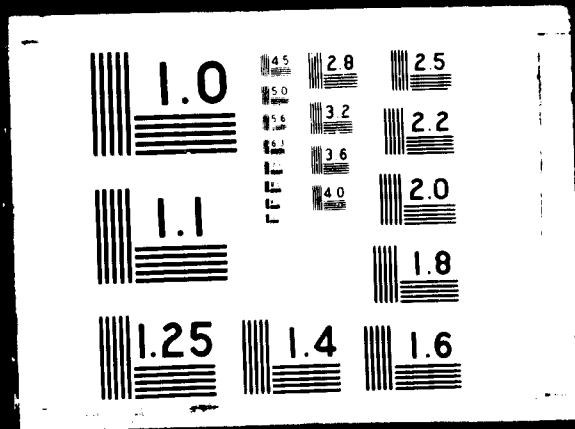
2/ A substantial expansion took place during 1951-54; prior to this expansion, the employment and output of this establishment were 60% and 55%, respectively, of the 1964 level.

g. Sulphur	ton	511	617
t. Softeners + plasticisers	"	1,331	950
u. Zinc oxide	"	1,760	1,815
v. Chins clay	"	876	272
w. Rubber colours	"	1.6	25,900
x. Whiting	"	351	211
y. Resins	"	78.34	3,420
z. Paraffin wax	"	124.78	1,110
a' Solvents	000 lit.	2,335	330
b' Reclaimed + crumb rubber	ton	1,322	1,341
c' Stearic acid	"	231	2,520
d' Solder + lead	"	73	4,110
e' Others	Rs. million	3.49	..



**18 . 12 . 73**

5 OF 10  
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**MAJOR PRODUCTS:** Rubber tyres and tubes: Installed annual capacity at about 4 million of various tyres and 5 million of various tubes (worth some Rs. 125 million) on three shift operation.

**REPORTING UNIT:** A younger branch of the two-establishment enterprise reporting for India 300-(1). This branch with 2,043 employees was founded in 1948. The two are operating practically independently of each other.

**I. FIXED CAPITAL ASSETS (end of 1964)**

- TOTAL BOOK VALUE** ( )
1. Land
  2. Land improvements
  3. Buildings
  4. Other construction works
  5. Machinery & equipment
  6. Tools & instruments
  7. Vehicles
  8. Office furniture & fixtures

	Before deprec.	After deprec.
See India 300 - (1) I for fixed capacity assets of the company as a whole.		
	Total Bk. value bef. deprec.	Avr. Age (Yr.)
		Depr. rate (%)
		196 replace value

**DETAIL OF 1.5 (No.)**

- a. Banbury size II (2)
- b. Banbury size II D (1)
- c. 84" mills (3)
- d. 60" mills (10)
- e. 4 Bowl calender (1)
- f. 3 Bowl calender (2)
- g. Press cutter (1)
- h. Spa done (1)
- i. 3" extruders (3)
- j. 3.1/2" extruder (1)
- k. 4" extruders (2)

Rs. 24 million      10      A      10      26.5

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE (Rs. million)</b>	18.70	- 8.4
1. Direct production materials	11.15	-10
2. Other input materials		
3. Work in process	1.25	-10
4. Finished products	6.30	- 4

- Normal inventories of finished products 5.8% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 7,650 KW

Total load, capacity of trucks: 5 t

(g), (h) and (k) were made domestically. The rest were imported.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

**TOTAL EMPLOYED** 2,043

1. Direct production (all male)

Annual total manhours (000)

- a. Mill + reclaim section
- b. Fabric preparation section
- c. Bicycle cover section
- d. Tube section
- e. Giant cover section
- f. Giant cover moulding
- g. Aero + motor cover section
- h. Curing bag

2. Auxiliary activities (all male)

- a. Repair and maintenance
- b. Technical, managerial and other activities.

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED	937	555	551
1. Direct production (all male)	447	430	426
Annual total manhours (000)	(1,100)	(1,085)	(1,075)

**EDUCATIONAL BACKGROUND (No. of employees)**

Engi-ners	Other	Sr. High sch. or equiv.	Other	Univ. or higher	
				High	Other
TOTAL	23	35	200	1,735	
Management	23	30	120	17	
<b>Direct Production</b>					
Skilled	-	-	35	185	
Semi-skilled	-	-	-	700	
Unskilled	-	-	-	383	
<b>Auxiliary Activities</b>					
Skilled	-	5	30	85	
Semi-skilled	-	-	15	185	
Unskilled	-	-	-	180	

- Actual hours worked in 1964 per direct production worker : 2502 hours.

- Proportion of motors occupied : 30% on all three shifts.

**Technological features:**

- a) Banbury and open mill mixing.
- b) Calendering.
- c) Monoband making and solid head press curing.
- d) Extrusion and pot moulding.
- e) to g) Auto-clave moulding, semi-automachine cover building.

- Mechanisation is generally excellent except in the car and truck tyre manufacturing which is rated as fair. Automation is excellent in (a) and (b), fair in the rest.

- Skilled workers in direct production are : latex foam workers, cover makers, cover moulders, etc. Those in auxiliary activities are : electricians, wiremen, fitters, firemen, administration assistants, accounts, sales assistants, etc.

IX. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)							
TOTAL VALUE OF PRODUCTION (Rs. million) 104.75				TOTAL VALUE OF CONSUMPTION (Rs. million) 72.76							
Product	Unit	Quantity	Unit Value (000 Rs)								
a. Giant tyre	000 Nos.	163	260.50	1. <u>Energy &amp; water: total</u> (including 132,000 liters other fuel oils (Rs. 0.25/L.)) 2.75							
b. Giant tube	" "	300	25.50			Quantity	Unit value				
c. Aero tyre	" "	10	204.10	- Water	million liters	4510	.20				
d. Aero tubes	" "	2	14.50	- Electricity	" kWh	20	50.				
e. Motor + motorcycle tyres	" "	200	58.70	- Coal	000 tone	18.4	35.				
f. Motor + motorcycle tubes	" "	4,000	7.25	- Petroleum	000 liters	112	.75				
g. Bicycle tyres	" "	3,000	3.66	- Lubricating oil	" "	72	1.20				
h. Bicycle tubes	" "	20	1.62	2. <u>Direct production materials: total</u> 67.72							
i. Others	" Rs.	820	..	a. Natural rubber	ton	6,700	3.35				
<b>CAPACITY OUTPUT:</b> 20% higher than the 1964 actual production level without additional man-hours. Underutilisation was due to insufficient supply of raw and intermediate materials. Product mix is flexible. This establishment, when it first entered commercial production, the capacity output and employment are about 40% and 50%, respectively, of the 1964 level.  Unit value of product: Market value f.o.b. before sales tax. Unit value of material: Market price c.i.f.  - Giant and bicycle tyres and tubes are mostly exported. - IV 2. d), h) and part of a) and b) are directly imported and delivered by railroad or sea. The direct production materials are of domestic origin and delivery is by road or railroad.				b. Synthetic rubber	"	1,600	3.86				
				c. Rubber latex	000 liters	370	3.20				
				d. Tyre cord	ton	1,680	11.47				
				e. Tyre valve	000 Rs.	1,870	..				
				f. Bead wire	ton	600	2.50				
				g. Steel plates	"	1,430	1.55				
				h. Non-ferrous metals	"	36	15.72				
				i. Others	000 Rs.	10,820	..				
				<b>VI. VALUE ADDED TOTAL 1964 (Rs. million) 28.67</b> 1. Wages & salaries (before income tax) 9.90 - Employees in direct production { .. } - Other employees { .. } 2. Other expenditures for employees 1.00 3. Annual depreciation allowances 1.64 4. Rental paid - 5. Sales & other indirect taxes (less subsidies) (not included in total) 2.10 6. Other gross business income (before income tax) 16.13				3. <u>Finishing materials: total</u> 1.64			
								4. <u>Work performed by sub-contractors ( )</u> -			
5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> 1.95 Parts and materials											
6. <u>Material inputs for auxiliary activities</u> .40 Printing, stationery and general consumable stores											
7. <u>Non-factor service inputs: total</u> 1.62											
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>SELECTED COEFFICIENTS</b> - Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 53,690 (46,800 1/) - Value added per employee: Rs. 14,030 - Annual wage per employee in direct production: Rs. 4,350 2/ - Variable input costs/gross production ratio: 68.8% 3/ - Gross profit/gross production ratio: 15.4% - Gross profit/assets ratio: (at full capacity) : 13.1% 3/ - Level of production at break-even point is approximately 51% of the 1964 actual level. 3/							
1. <u>Recent Expansion</u> From 1961 to 1964 a. Total Investment (Rs. million) 4.15 - Land - - Land improvements - - Buildings .80 - Other construction work - - Machinery & equipment) 3.00 - Tools & instruments - - Vehicles .20 - Office furniture & fixtures .15 b. Corresponding increase: In no. of employees 1890 2043 In annual gross production (Rs. million) 80.12 104.75				2. <u>Future Plan</u> : (not yet finalized) a. Investment proposed for the period 19 to 19 Total value ( ) Of which: - Mach. & equipment \$ - Land improv. & bldg. - Land - Others b. Net increase in no. of employees envisaged for the same period: - Direct production: - Auxiliary: c. Purposes:							
<b>VIII. SUPPLEMENT</b>  1/ The numerator is the 1964 replacement value. Denominator includes repairs and maintenance crew. 2/ Wages and salaries divided by total number of employees. 3/ Variable cost excludes wages and salaries.											

India : 500 - (3)

**MAJOR PRODUCTS:** Rubber tubes and tyre of various specifications. Annual capacity output about 400,000 pieces of tyre and tubes on three shift operation.

**REPORTING UNIT:** A one-establishment enterprise with total assets of about Rs. 80 million (net worth 20 million) and 1,113 employees as of 1965. Founded in 1961.

I. FIXED CAPITAL ASSETS (end of 1965)		Before deprec.	After deprec.	II. INVENTORIES (end of 1965)				
(Rs. million)		30.84	25.01	TOTAL VALUE (Rs. million)	Actual	Normal		
TOTAL BOOK VALUE		.48	.48	34.30	-11	%		
1. Land		-	-	1. Direct production materials	15.29	+ 5		
2. Land improvements		2.76	2.60	2. Other input materials	1.76	-26		
3. Buildings		.45	.38	3. Work in process	1.62	+23		
4. Other construction works		23.88	19.40	4. Finished products	15.63	-29.5		
5. Machinery & equipment		1.95	1.22	- Normal inventories of finished products 15.4% of annual gross production				
6. Tools & instruments		.47	.26	- Seasonal variations: None				
7. Vehicles		.85	.67					
8. Office furniture & fixtures								
		Total Bk. value bef. depr.	Avr. Age (Yr.)	Depr. rate (%)	1965 replace. value			
DETAIL OF I.5 (No.)								
a. Rubber mixing unit	}	14.51	2	A	10	15	Capacity of electr. motors: 5,250 KW	
b. Fabric unit							" " diesel engines 155 HP	
c. Milling unit							Total load, capacity of trucks: 11 t	
d. Hot stretch unit							Machines itemised were all imported.	
e. Innertube manufacturing unit								
f. Tyre building unit								
g. Linen rewinding unit								
h. Tyre finishing & inspection unit			<b>GENERAL CONDITIONS:</b>		Transportation, public utilities and community facilities, excellent.			

III. LABOUR (1965 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				
		586	285	247	Univ. or higher	Sr. High sch. or equiv.	Other		
TOTAL EMPLOYED		1,113							
1. Direct production (f. )		523							
Annual total manhours (000)		194	174	156	Engrs	Other			
		590	285	247	TOTAL	10	168	103	837
a. Banbury mixing		23	23	22	<b>Management</b>				
b. Calendering (fabric preparation)		14	13	13	10	125	-	7	
c. Band building		25	20	18	<b>Direct Production</b>				
1. Tyre building		45	40	33	<b>Skilled</b>				
e. Tread and camel back		38	32	26	<b>Semi-skilled</b>				
f. Tubes dept. (extrusion & pot-moulding)		13	18	18	<b>Unskilled</b>				
g. Air bag		8	7	7	<b>Auxiliary Activities</b>				
h. Curving		13	13	13	<b>Skilled</b>				
i. Finishing		10	8	6	<b>Semi-skilled</b>				
2. Auxiliary activities (all male)		392	111	91	<b>Unskilled</b>				
a. Technical and managerial control		270	19	4					
b. Repairs and maintenance		60	60	55					
c. Miscellaneous		62	32	32					

- Actual hours worked in 1965 per direct production worker: 2,141 hours.	
- Proportion of motors occupied: 30% on the 1st shift, 65% on 2nd shift and 50% on 3rd shift.	
- Mechanisation and automation are generally fair.	
- Skilled workers in direct production are: mill operators, banbury operators, tyre builders, inspectors, curing machine operators, etc. Those in auxiliary activities are: mechanics, fitters, maintenance workers, and office assistants, etc.	

India : 300 - (3)

**IV. ANNUAL PRODUCTION (1965)**

TOTAL VALUE OF PRODUCTION (Rs. Million)		71.79	
Product	Unit	Quantity Produced	Unit Value (000Rs.)
a. Giant tyres	000 Nos.	112	360
b. Motor & motor cycle tyres	"	63	66
c. Tractor tyres	"	4	182
d. Animal driven vehicle tyres	"	4	114
e. Giant tubes	"	102	35
f. Motor & motor cycle tubes	"	74	8
g. Tractor tubes	"	4	19
h. Animal driven vehicle tubes	"	4	11
i. Camel back	Ton	2,942	6.33
j. Repair material	"	64	9.98
k. Others	000 Rs.	780	..

**CAPACITY OUTPUT:**

20 higher than the 1965 actual production level. With an investment of Rs. 2 million in the banbury mixing and curing shops and additional manhours of 60,000 on 1st shift and 40,000 on 2nd shift, production could be raised to 2% higher than the 1965 level. Underutilization was due to insufficient demand for the products and insufficient supply of raw and intermediate materials. Product-mix is flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- IV a) to j) are all partly exported.
- V 2. g) and part of a) to d) and f) are directly imported. Part of a), b), f) and h) are domestically produced but have considerable import contents. The rest are of domestic origin. Delivery is by road and sea. Freight rates applied to c.i.f. value are 2%, 7%, 12%, 15%, 4%, 1%, 6% and 4% for a) to h), respectively.

**V. INTERMEDIATE INPUTS (1965)**

TOTAL VALUE OF CONSUMPTION (Rs. million)		53.93	
1. Energy & water: total		Quantity consumed	Unit value (Rs.)
- Electricity	000 KWH.	10,306	130
- Furnace oil	000 Lit.	3,803	140
(Value of consumption of water not available)			
<b>2. Direct production materials: total</b>			<b>45.34</b>
a. Natural rubber	Ton	3,353	3,410
b. Synthetic rubber	"	1,342	3,710
c. Carbon black	"	2,127	3,200
d. Tyre cord	"	796	17,390
e. Canvas duck	"	66	7,360
f. Bead wire	"	191	3,880
g. Valves	000 Nos.	187	2,710
h. Chemicals	Ton	992	3,040
i. Others	Rs. million	1.67	..

<b>3. Packaging materials: total</b>			<b>1.09</b>
Galvanized plain sheets Rs. 390,000; 38 tons polythene film.			
<b>4. Work performed by sub-contractors ( )</b>			<b>-</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>			<b>1.69</b>
Of which consumable stores, spare parts etc. Rs. 1.21 million			
<b>6. Material inputs for auxiliary activities</b>			<b>.85</b>
Stationery & office expenses Rs. 610,000 Vehicle maintenance Rs. 240,000			
<b>7. Non-factor service inputs: total</b>			<b>3.00</b>
Transportation, insurance and storage services (purchased separately) Rs. 1.31 million.			

**VI. VALUE ADDED TOTAL 1965 (Rs. million) 17.86**

1. Wages & salaries (before income tax)		
- Employees in direct production	1.50	
- Other employees	3.10	
2. Other expenditures for employees	.55	
3. Annual depreciation allowances (incl. royalties)	2.98	
4. Rental paid (buildings) (Rs. 850,000)	.61	
5. Sales & other indirect taxes (less subsidies) (not included in total)	1.35	
6. Other gross business income (before income tax)	9.12	

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 133,140 (1:1,500 1/2)
- Value added per employee: Rs. 15,970
- Annual wage per employee in direct production: Rs. 2,360
- Variable input costs/gross production ratio: 69.4
- Gross profit/gross production ratio: 12.7%
- (at full capacity : 15.7%)
- Level of production at break-even point is approximately 59% of the 1965 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition	Scrapped or sold	% of repair
From 19 63 to 1965			
a. Total Investment (Rs. million)	3.39		
- Land	-	-	-
- Land improvements	.20	.5	
- Buildings	.50	1.0	
- Other construction work	.04	-	
- Machinery & equipment	2.50	3.0	
- Tools & instruments	.01	-	
- Vehicles	.05	1.0	
- Office furniture & fixtures	.09	1.0	
b. Corresponding increase:	From 1963	to 1965	
In no. of employees	594	1,118	
In annual gross production (in value terms)		+131%	

**2. Future Plan : None**

- a. Investment proposed for the period 19 to 19
- Total value ( )
- Of which: - Mach. & equipment \$
- Land improv. & bldg.
- Land
- Others
- b. Net increase in no. of employees envisaged for the same period:
- Direct production:
- Auxiliary:
- c. Purposes:

**VIII. SUPPLEMENT**

Structure of liquid assets and short term liabilities (end of 1965; Rs. million).

Cash on hand and in bank	2.70	Accounts payable	11.01
Accounts receivable	15.29	Short term loans from commercial banks	25.04
		Short term loans from industrial banks	14.87

1/ Denominator includes repairs and maintenance force.



**MAJOR PRODUCTS:** Rubber tyres and tubes. Annual capacity output is some 220,000 tyres and 240,000 tubes for cars, trucks and tractors, with three shifts; the factory operated at full capacity in 1964.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets Re. 75 million. (net worth Re. 36 million) and employees 745 as of 1964. Founded in 1961.

### I. FIXED CAPITAL ASSETS (end of 1964)

TOTAL BOOK VALUE (Rs. million)	Before deprec.	After deprec.			
	39.31	27.04	Total	Avr.	Depr.
1. Land (total acreage: 71)	.45	.45			1964
2. Land improvements	-	-			replace
3. Buildings	6.96	6.05			value
4. Other construction works	-	-			
5. Machinery & equipment	29.93	19.83			
6. Tools & instruments	-	-			
7. Vehicles	1.04	.19			
8. Office furniture & fixtures	.60	.24			
9. Railway siding	.33	.28			
			30	4	10
					33

#### DETAIL OF I.5 (No.)

- a. 3 - T unit
- b. Banbury mixer
- c. Extruders
- d. 20-Can dryer
- e. 3-Roll calender
- f. Bond building machines
- g. Flipper applying machine
- h. Bias cutter; 4-roll calender
- i. Band building machine
- j. Tyre building machine
- k. Pot-heater
- l. Vacuum bagging machine
- m. Curing presses
- n. Inspection and machine shop equipment.

### II. INVENTORIES (end of 1964)

TOTAL VALUE (Rs. million)	Actual	Normal
20.74	+7	
1. Direct production materials	11.03	+19
2. Other input materials	2.71	-33
3. Work in process	.83	-
4. Finished products	6.17	+3
- Normal inventories of finished products 10.0% of annual gross production		
- Seasonal variations: ..		

Capacity of electr. motors: 4,310 KW

Total load, capacity of trucks: 6.7 t

Machines itemized were all imported with the exception of (n), part of which was domestically produced.

**ENVIRONMENTAL CONDITIONS:** Transportation, excellent. Electricity, fair. Water and community facilities, poor.

### III. LABOUR (1964 average)

TOTAL EMPLOYED 745	1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)*			
	436	160	148	Univ. or higher	Sr. High sch. or study	Other	Other
1. Direct production (all male)	204	160	148	Engl-nses	Other		
Annual total manhours (000)	(490)	(384)	(355)	TOTAL			
a. Mixing	53	43	40	3	33	163	420
b. Preparation of components	52	49	42	Management			
c. Assembly and finishing	50	43	43	3	31	-	-
d. Repairs and maintenance	39	20	18	Direct Production			
e. Steam plant	10	5	5	Skilled			
				-	2	20	63
				Semi-skilled			
				-	-	30	144
				Unskilled			
				-	-	50	203
				Auxiliary Activities			
				Skilled			
				-	-	63	10
				Semi-skilled			
				-	-	-	-
				Unskilled			
				-	-	-	-
2. Auxiliary activities (all males)	232						
a) Managerial and technical control	107						
b) Central office.	125						

-Average working hour per annum per direct production worker: 2,400 hrs.

-Proportion of motors occupied: 60% on the 1st shift, 64% on the 2nd shift and 65% on the 3rd shift.

#### Technological features:

- a) Mixing of rubber with different ingredients, dipping and coating of the fabric.
- b) Shaping of the various components like bead, rubber and fabric.
- c) Assembly and final finishing.

\*(The Data for Educational Background excludes the employees in the central office).

-Degree of mechanisation and automation is fair.

-Skilled workers in direct production: 3T operators, Banbury operators, calender operators, etc.

India: 300 - (4)			
<b>IV. ANNUAL PRODUCTION (1964)</b>		<b>V. INTERMEDIATE INPUTS (1964)</b>	
TOTAL VALUE OF PRODUCTION (Rs. million) <u>63.77</u>		TOTAL VALUE OF CONSUMPTION (Rs. million) <u>50.58</u>	
		1. <u>Power &amp; water: total</u> <u>1.60</u>	
<u>Product</u>	<u>Unit</u>	<u>Quantity Produced</u>	<u>Unit Value (000 Rs)</u>
a. Car tyres	000 No	62.7	76.98
b. Truck tyres	"	136.6	328.57
c. Off-the-road tyres	"	.5	3087.75
d. Tractor and ADV tyres	"	18.4	121.95
e. Car tubes	"	67.4	9.07
f. Truck tubes	"	151.0	29.22
g. Off-the-road tubes	"	.5	154.77
h. Tractor and ADV tubes	"	24.9	14.10
i. Tread rubber	Ton	688.7	5.07
j. Truck and earthmover flaps	000 No	84.0	10.00
k. Repair compounds	Ton	28.5	10.65
l. Repair cements	000 litres	49.2	2.34
<b>CAPACITY OUTPUT:</b> Just about the same as the 1964 actual production level. Product mix is flexible except for repair cements.		1. <u>Electricity</u> 000 Kwh 12,121 60	
		- Coal Ton 12,832 58	
		- Petroleum 000 l 76.5 760	
		- Fuel Oil " 150.7 440	
		2. <u>Direct production materials: total</u> <u>42.55</u>	
		a. Natural rubber Ton 3,006 3,381.7	
		b. Synthetic rubber " 1,288.7 3,961.4	
		c. Rubber latex 000 l 46.8 10,000	
		d. Tyre cord 000 Rs. 17,316 ..	
		e. Canvas duck " 497 ..	
		f. Tyre valves 000 No. 250.1 2,500	
		g. Bead wire Ton 238.1 2,300	
		h. Textile 000 m 7.9 7,450	
		i. Polyethylene Ton 12.1 9,400	
		j. Shredded wire " 2.5 10,000	
		k. Chemicals 000 Rs. 7,630 ..	
		3. <u>Packaging materials: total</u> <u>.41</u>	
		73,885 camel back tins and shells (Re.4 each)	
		233,616 tube bags (Re. 0.5 each)	
		4. <u>Work performed by sub-contractors</u> ( )	
		5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> Stationery, materials for laboratory, welfare, administration and transportation, insurance and storage services purchased separately. <u>1.01</u>	
		6. <u>Material inputs for auxiliary activities</u> <u>3.94</u>	
		7. <u>Non-factor service inputs: total</u> <u>1.07</u>	
		Communication, advertising and other business services (mostly expenses at the central office)	
<b>VI. VALUE ADDED</b>		<b>SELECTED COEFFICIENTS</b>	
TOTAL 1964 ( 000 Rs. ) <u>13.19</u>		- Mach., equip., instruments & tools per employee in direct production on 1st shift: Re. 146,700	
1. Wages & salaries (before income tax) 6.43		- Value added per employee: Re. 17,700	
- Employees in direct production (..)		- Annual wage per employee in direct production: Re. 8,650 <sup>2/</sup>	
- Other employees (..)		- Variable input costs/gross production ratio: 77.4% <sup>1/</sup>	
2. Other expenditures for employees .36		- Gross profit/gross production ratio: 3.9%	
3. Annual depreciation allowance 3.30		- Level of production at break-even point is approximately 83 % of the 1964 actual level.	
4. Rental paid .62			
5. Sales & other indirect taxes (less subsidies) (not included in total) [6.37]			
6. Other gross business income (before income tax) 2.48			
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>			
1. <u>Recent Expansion</u>		2. <u>Future Plan</u>	
From 1962 to 1964		a. Investment proposed for the period 1965 to 1966	
a. Total Investment (Rs. million) <u>3.76</u>		Total value (Rs. million) <u>22</u>	
- Land .03		Of which: - Mach. & equipment 90 %	
- Land improvements -		- Land improv. & bldg. 5	
- Buildings .53		- Land -	
- Other construction work -		- Others 5	
- Machinery & equipment 2.70		b. Net increase in no. of employees envisaged for the same period: - Direct production: 640	
- Tools & instruments -		- Auxiliary: 40	
- Vehicles .29		c. <u>Purposes:</u> Introduction of new products (dook fenders, full circles, curing bags and retreaders; introduction of new processes such as bolted mould curing station, high pressure hot water (400 psi) system; other selective expansion of the bakery, bead building and tyre building capacity.	
- Office furniture & fixtures .80			
- Railway Siding .80			
W. Corresponding increase: From 1962 to 1964			
In no. of employees (factory alone) 495 619			
In annual gross production + 63%			
<b>VIII. SUPPLEMENT</b>		Structure of liquid assets (end of 1964; Rs. million)	
Cash on hand and in bank 1.89		Accounts Payable	9.36
Accounts receivable 22.87			
Loans and advances 1.91			
1/Denominator includes the employees at the central office.			
2/Total wages and salaries divided by the total number of employees.			
3/75% of wages and salaries are regarded as variable cost.			

India : 300 - ( 5 )

**MAJOR PRODUCTS:** Rubber tubes and tyres: Annual capacity output (with three shifts) is about 88,000 of tubes and tyres, plus cables, sport goods etc, which amount to some Rs. 1.8 million altogether.

**REPORTING UNIT:** A one - establishment enterprise founded in 1945 with total assets of Rs. 1.2 million (net worth 0.4 million) and employees 214 as of 1964.

I. FIXED CAPITAL ASSETS (end of 1964)		Before deprec.	After deprec.	II. INVENTORIES (end of 1964)	
TOTAL BOOK VALUE (Rs. thousand)		798.1	376.8	TOTAL VALUE (Rs. thousand)	Actual Normal
1. Land		-	-	1. Direct production materials	291.7 -14
2. Land improvements		-	-	2. Other input materials	
3. Buildings		31.7	9.6	3. Work in process	33.9 +11
4. Other construction works		10.4	3.0	4. Finished products	190.1 + 5
5. Machinery & equipment		601.1	307.7	- Normal inventories of finished products	12.5% of annual gross production
6. Tools & instruments		60.6	10.9	- Seasonal variations: ..	
7. Vehicles		27.0	17.6		
8. Office furniture & fixtures		67.3	28.0		
				Capacity of electr. motors:	215 KW
				Capacity of furnaces (electric)	12 KW
				Total load, capacity of trucks:	- t
				- (a) is partly, and (d),(e),(g) and (h) fully domestically produced; the rest imported.	
				- Average age of machinery is estimated about 13 years.	
				<b>GENERAL CONDITIONS:</b>	
				Transportation, public utilities (no gas) and community facilities, all excellent.	

## DETAIL OF 1.5 (No.)

	Total Bk. value bef. depr.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Mixing mills (3)		15	B		
b. Calender machines (2)		20	"		
c. Braiding machines (9)		11	"		
d. Tubing machines (4)		11	"		
e. Twisting machines (4)		11	"		
f. Vulcanisers (6)	Rs. 360 thousand.	20	C	10%	Rs. 400 thousand
g. Workshop machines (6)		20	B		
h. Electric oven 12 KW. (1)		2	A		
i. Boilers (2)		20	B		
j. Band building machine (1)		5	A		
k. Tyre building machine (1)		5	A		

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
TOTAL EMPLOYED	214	103	70	41	Univ. or higher	Sr. High sch. or equiv.	Other	
1. Direct production (all male)		88	66	39	Engi-neers	Other		
Annual total manhours (000)		(218)	(148)	(85)	TOTAL			
a. Mixing shop		15	10	10	2	4	137	71
b. Production shop		41	33	21	Management			
c. Assembly and finishing		25	17	7	2	4	2	-
d. Steam plant		5	4	3	Direct Production			
e. Repairs and maintenance		2	2	2	Skilled			
					Semi-skilled	74	8	
					Unskilled	54	16	
					Auxiliary Activities			
					Skilled			41
					Semi-skilled	7	2	
					Unskilled			4
2. Auxiliary activities (all male)		15	4	2				
a. Managerial and technical control		15	4	2				

- Actual hours worked per annum per direct production worker: 2,337 hours.

- Proportion of motors occupied: 80%, 40% and 30% for 1st, 2nd and 3rd shifts, respectively.

**Technological features:**

a. Mixing of rubber with different ingredients, dipping and coating of fabric.

b. Shaping of various components like tyres and tubes etc.

c. Vulcanisation and other finishing processes.

- Mechanisation is fair and automation poor for all shops

- Major types of jobs performed by "skilled" workers: moulding, buffing and pressing.

IV. ANNUAL PRODUCTION (1964)		TOTAL VALUE OF PRODUCTION (Rs. thousand)		1,601.6	
Product	Unit	Quantity Produced	Unit Value (Rs.)		
a. Rubber tubes and tyres	Number	76,330	19.60		
b. Cable, sports goods etc.	Rs. thous.	105.5	..		
(b) Contains a large number of items and it is therefore not possible to give individual unit values.					
<b>CAPACITY OUTPUT:</b> 15% higher than 1964 actual production level with additional 50.4 thousand man-hours on 1st shift, 33.5 thousand on 2nd and 25 thousand on 3rd shift. Product-mix (proportion of tyre and tube) is flexible. There was some insufficiency in the supply of raw and intermediate materials in 1964. In the late 1940's, when commercial production first started, the production capacity was about one-fourth of the 1964 level.					
Unit value of product: Market value f.o.b. before sales tax Unit value of material: Market price c.i.f.					
- Sport goods are partly exported.					
- Direct production materials (e) and (g) and part of (a) are directly imported and delivered by sea and railroad. (f) of domestic origin. All the rest contain a significant amount of imports. Delivery by road and railroad.					
<b>VI. VALUE ADDED</b>		TOTAL 1964 (Rs. thousand)		527.8	
1. Wages & salaries (before income tax)		309.3			
- Employees in direct production		(..)			
- Other employees		(..)			
2. Other expenditures for employees		15.5			
3. Annual depreciation allowance		55.1			
4. Rental paid		-			
5. Sales & other indirect taxes (less subsidies) (not included in total)		[ 80.1 ]			
6. Other gross business income (before income tax)		147.9			
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>		Gross acquisition		% of repair	
1. Recent Expansion					
From 1963 to 1965		74.8			
a. Total Investment (Rs. thousand)					
- Land		-		-	
- Land improvements		-		-	
- Buildings		-		-	
- Other construction work		-		-	
- Machinery & equipment		18.4		5	
- Tools & instruments		18.3		-	
- Vehicles		26.0		10	
- Office furniture & fixtures		12.1		5	
b. Corresponding increase:		From 1963 to 1965			
In no. of employees		184		214	
In annual gross production (Rs. thousand)		1,267		1,602	
2. Future Plan : None					
a. Investment proposed for the period 19 to 19					
Total value ( )					
Of which: - Mach. & equipment				\$	
- Land improv. & bldg.					
- Land					
- Others					
b. Net increase in no. of employees envisaged for the same period:					
- Direct production:					
- Auxiliary:					
c. Purposes:					
<b>VIII. SUPPLEMENT</b> Structure of liquid assets and short term liabilities (end of 1964; Rs. thousand.)					
Cash on hand and in banks 13; Accounts receivable 222; Loans and advances 26; Taxes payable 30; Accounts payable 232; Short and medium term borrowing from commercial banks 524.					
Work performed by sub-contractors : detail. A sub-contractor (with 20 employees) made 24,000 dozens football bladders in 1964 with rubber sheets, nossles, glue and other materials, supplied by this establishment.					
1/ Using the 1964 replacement value as numerator.					
2/ Average wages and salaries as a whole.					
3/ Rs. 250,000 of wages and salaries are regarded as variable cost.					

## V. INTERMEDIATE INPUTS (1964)

TOTAL VALUE OF CONSUMPTION (Rs. thousand) 1,073.8

1. Energy &amp; water: total 82.5

	Quantity consumed	Unit value (Rs.)	Unit value (Rs.)
- Electricity	000 KWH	222.7	80
- Coal	ton	941	66
- Water	000 litre	1,532	0.40

2. Direct production materials: total 880.4

a. Natural rubber	ton	84.4	3,890
b. Synthetic rubber	"	7.9	3,700
c. Rubber latex	000 litre	10.5	5,700
d. Fictice	Kg.	350	8.8
e. Copper wire	ton	24	8,900
f. Textiles	000 metre	23.8	900
g. Aluminium	ton	3.0	3,000
h. Reclaimed rubber	ton	3.7	1,660
i. Cork	Kg.	1,150	1.7
j. Chemicals composing of some 25 items	Rs. thous.	360.2	..
k. Others	Rs. thous.	65.6	..

3. Packaging materials: total 35.8

a. Wooden cases	Numbers	99	15.2
b. Hessian cloth	metres	7,373	0.8
c. Others	Rs. thous.	10.6	36.0

4. Work performed by sub-contractors (See V111)

5. Repairs &amp; maintenance (materials &amp; services purchased) 10.9

6. Material inputs for auxiliary activities 17.9

Consumable stores

7. Non-factor service inputs: total 10.3

a. Transportation, insurance and storage services purchased (not incorporated in the value of input materials)	2.5
b. Communication, advertising, etc.	7.8

## SELECTED COEFFICIENTS

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 7,519 (8,360 1/)
- Value added per employee: Rs. 2,466
- Annual wage per employee in direct production: Rs. 1,445 2/
- Variable input costs/gross production ratio: 80% 3/
- Gross profit/gross production ratio: 9.3%
- (at full capacity : 10.6%)
- Level of production at break-even point is approximately 53 % of the 196 actual level.

## VIII. SUPPLEMENT

Structure of liquid assets and short term liabilities (end of 1964; Rs. thousand.)

Cash on hand and in banks 13; Accounts receivable 222; Loans and advances 26; Taxes payable 30; Accounts payable 232; Short and medium term borrowing from commercial banks 524.

Work performed by sub-contractors : detail. A sub-contractor (with 20 employees) made 24,000 dozens football bladders in 1964 with rubber sheets, nossles, glue and other materials, supplied by this establishment.

- 1/ Using the 1964 replacement value as numerator.
- 2/ Average wages and salaries as a whole.
- 3/ Rs. 250,000 of wages and salaries are regarded as variable cost.

Israel : 300 - ( : )

**MAJOR PRODUCTS:** Rubber tyres and tubes (natural & synthetic). With product-mix optimally chosen, the firm is capable of producing about 7,000 tons of tyres and 600 tons of tubes on three-shift operation. Also capable of producing various rubber products in small quantity.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets of 21 millions and employees 566 as of 1964. Founded in 1952.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE (IL 000)</b>	<u>19,236</u>	<u>8,178</u>
1. Land	211	211
2. Land improvements	-	-
3. Buildings	4,071	2,848
4. Other construction works	-	-
5. Machinery & equipment	14,335	4,850
6. Tools & instruments	-	-
7. Vehicles	265	145
8. Office furniture & fixtures	354	124

**DETAIL OF I.5 (No.)**

Presses, mixers and calendars. Mostly of common type for the rubber processing industry, except the tyre building equipment which is specialized processing equipment.

**II. INVENTORY (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE (IL 000)</b>	<u>6,100</u>	-
1. Direct production materials	1,516	-
2. Other input materials		-
3. Work in process	876	-
4. Finished products	3,090	-
5. General supplies	818	-
- Normal inventories of finished products 15.9 % of annual gross production		
- Seasonal variations: None.		

Capacity of electr. motors: 75 KW

No. of trucks: 3

**GENERAL CONDITIONS:**  
Transportation, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 566	<u>336</u>	<u>150</u>	<u>80</u>
1. Direct production (all male)	200	120	80
Annual total manhours (000)	(500)	(300)	(200)
a. Primary shop	35	51	34
b. Stock preparation	45	27	18
c. Tyre building	35	21	14
d. Curing room	20	12	8
e. Final inspection	15	9	6
2. Auxiliary activities (m. 154 / f. 12)	<u>136</u>	<u>30</u>	-
a. Maintenance	100	30	-
b. Administrative	36	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher		Sr. High sch. or equiv.		Other	
Engi-ners	Other	equiv.	Other	Other	Other
TOTAL	7	101	447	-	-
Management	11	7	5	-	-
Direct Production	-	-	20	260	-
Skilled	-	-	-	-	100
Semi-skilled	-	-	-	-	-
Unskilled	-	-	-	-	20
Auxiliary Activities	-	-	-	-	-
Skilled	-	-	-	-	-
Semi-skilled	-	-	-	-	-
Unskilled	-	-	76	67	-

- Actual hours worked per annum per direct production worker: 2,500 hours.

- Proportion of motors occupied: 80 % on all three shifts.

**Technological features:**  
Conventional processes are employed in all shops.

a) Mixing, calendaring and extrusion.  
b) Cutting and band building.

- Degree of mechanization is excellent for (a) and (d), fair for (b) and (c). Automation is excellent for (a) and fair for the rest.

- Skilled workers in direct production are operators, tyre builders, curing room and final inspection staff. Those in auxiliary are engaged in time-studies, scheduling and quality control.

Israel : 300 - (1)			
<b>IV. ANNUAL PRODUCTION (1964)</b>		<b>V. INTERMEDIATE INPUTS (1964)</b>	
TOTAL VALUE OF PRODUCTION ( I£ 000 )		TOTAL VALUE OF CONSUMPTION ( I£ 000 )	
19,530		12,628	
<u>Product</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit value</u>
		<u>Prod.</u>	<u>( I£ )</u>
a. Tyres	ton	4,767	18,800
b. Tubes	"	428	690
c. Various rubber products	"	204	40
d. Revenue from contract & commission work (various rubber products)	"	173	
* Products are much diversified and therefore average prices are meaningless.			
<b>CAPACITY OUTPUT:</b>			
30 % higher than the 1964 actual production level, provided that orders are given a year ahead;			
50 % higher, if in addition product-mix is optimally chosen; both achievable without additional manhours. The calendar shop presently forms a bottleneck, which can be eliminated by an investment of I£ 600,000. Then the capacity could be 65 % higher than the 1964 output level.			
Unit value of product: Market value f.o.b. before sales tax			
Unit value of material: Market price o.i.f.			
- About half of rubber tyres and tubes are exported.			
- Natural, synthetic and reclaimed rubber are directly imported and delivered by sea.			
<b>VI. VALUE ADDED TOTAL 1964 ( I£ 000 )</b>		<b>VI. VALUE ADDED TOTAL 1964 ( I£ 000 )</b>	
6,902		6,902	
1. Wages & salaries (before income tax)		1. Wages & salaries (before income tax)	
- Employees in direct production <sup>1/</sup>	4,684	- Employees in direct production <sup>1/</sup>	4,684
- Other employees	549	- Other employees	549
2. Other expenditures for employees	-	2. Other expenditures for employees	-
3. Annual depreciation allowance (incl. royalties I£ 445,000)	831	3. Annual depreciation allowance (incl. royalties I£ 445,000)	831
4. Rental paid (capital assets other than land & building)	600	4. Rental paid (capital assets other than land & building)	600
5. Sales & other indirect taxes & subsidies (less subsidies)	-	5. Sales & other indirect taxes & subsidies (less subsidies)	-
6. Other gross business income (before income tax)	238	6. Other gross business income (before income tax)	238
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>		<b>VII. EXPANSION: HISTORY &amp; PLAN</b>	
1. <b>Recent Expansion</b>		1. <b>Recent Expansion</b>	
From 1959 to 1964		From 1959 to 1964	
a. Total investment ( I£ 000 )	7,500	a. Total investment ( I£ 000 )	7,500
- Land	-	- Land	-
- Land improvements	-	- Land improvements	-
- Buildings	-	- Buildings	-
- Other construction work	-	- Other construction work	-
- Machinery & equipment	7,500	- Machinery & equipment	7,500
- Tools & instruments	-	- Tools & instruments	-
- Vehicles	-	- Vehicles	-
- Office furniture & fixtures	-	- Office furniture & fixtures	-
b. Corresponding increase:	From 19 to 20	b. Corresponding increase:	From 19 to 20
In no. of employees	..	In no. of employees	..
In annual gross production		In annual gross production	
2. <b>Future Plan</b> : Still at a planning stage		2. <b>Future Plan</b> : Still at a planning stage	
a. Investment proposed for the period 19 to 19		a. Investment proposed for the period 19 to 19	
Total value ( I£ million )		Total value ( I£ million )	
Of which:		Of which:	
- Mach. & equipment	90	- Mach. & equipment	90
- Land improv. & bldg.	10	- Land improv. & bldg.	10
- Land	-	- Land	-
- Others	-	- Others	-
b. Net increase in no. of employees envisaged for the same period:		b. Net increase in no. of employees envisaged for the same period:	
- Direct production:		- Direct production:	
- Auxiliary:		- Auxiliary:	
c. Purposes:		c. Purposes:	
<b>VIII. SUPPLEMENT</b>			
1/ Including maintenance crew.			
2/ Wages and salaries are excluded from variable costs.			
3/ Assuming the full capacity output being 150 % of the 1964 production.			

An old enterprise, established in 1921, manufacturing tyres, tubes and other rubber products; Annual capacity output is about 10,000 t on three-shift operation. Favourably located with respect to domestic and foreign markets. Basic raw materials such as crude rubber, synthetic rubber, soot, wire and organic chemicals, amounting to about a half of the total materials, are imported, while only 5% of the products are exported.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		3,861	4,543	175	452	875	1,542		
Buildings & land improvements		925	1,295	102	269	231	528		
Machinery & equipment		2,857	3,158						
Other capital assets		79	90						
<u>Major machinery crucial for determining the overall production capacity:</u>				Calculated average age of fixed assets: <u>6.3</u> years					
Tyres and tubes for motor vehicles: Bagomatic and conventional presses (3 shifts)				<u>Electric motors:</u> Total installed capacity: <u>5,881</u> KW Of which actually operated in 1965: 1st shift <u>94</u> %; 2nd shift <u>89</u> %; 3rd shift <u>85</u> %					
Other rubber products: Hydraulic presses and boiler room (3 shifts).				<u>Technological features:</u> Preparation of crude masses by mixers. Vulcanisation of tyres and tubes on Bagomatic and conventional presses; vulcanization of other products on hydraulic presses and in boiler rooms. Mechanisation and automation are moderate and satisfactory. Too large product - mix (technologically).					
- Machines are mostly (about 90%) imported.									
II. LABOUR (1965)		TOTAL no. of employees: 1,453			<u>Educational background of workers:</u>				
		1st shift	2nd shift	3rd shift	Techn.	Mecon.	Low	Others	Total
1. Factory workers:					7	7	2	-	16
Total 1,033 persons		640	236	157	1	-	-	1	2
(2,460 thous. manhrs.)		(1,517)	(573)	(370)	23	37	4	1	65
- Rolling department		66	55	45	-	-	-	1,370	1,370
- Tyres and tubes		123	115	66					
- Other rubber products		169	43	23					
- Auxiliary shops		149	16	16					
- Technical services and transport		133	7	7					
2. Non-factory workers: 420 persons									
(990 thous. manhours)									
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		IV. INTERMEDIATE INPUTS				
TOTAL actual revenue output 1965 *				11,955	Quantity		Value (Drs. Million)		
- Tyres for bicycles & motor cycles		798 t	823		TOTAL actual consumption 1965				
- Tyres for motor cars		1,341 t	1,705		1. Energy inputs: total				
- Tyres for trucks		3,370 t	4,071		- Electricity				
- Tubes for bicycles and motor cycles		179 t	220		- Brown coal				
- Tubes for motor cars		196 t	175		- Liquid fuel				
- Tubes for trucks		221 t	283		TOTAL 200				
- Tyres for other vehicles		21 t	27		- Electricity				
- Crude masses		103 t	121		- Brown coal				
- Profile rubber tubes		123 t	120		- Liquid fuel				
- Pressed rubber products		318 t	534		TOTAL 117				
- Transport tracks		595 t	1,109		- Brown coal				
- Industrial and other belts		47 t	121		- Liquid fuel				
- Rubber tubes, mixed and unmixed		366 t	616		TOTAL 67				
- Rubber carpeting		111 t	104		- Liquid fuel				
- Rubberised fabrics and clothing		429 t	819		TOTAL 16				
- Other rubber products		392 t	645		TOTAL 200				
- Rubber adhesives		326 t	105		TOTAL 117				
- Rubber products for footwear		528 t	357		TOTAL 67				
* Including turnover tax on sold products.					TOTAL 16				
<u>Capacity output:</u>					2. Major production materials: total 5,051				
Tyres and tubes for motor vehicles 6,400 t		Overall rate of utilization is 9%.			- Crude rubber				
Other rubber products 3,500 t					- Synthetic rubber				
Rubber products for foot-wear 600 t					- Active soot				
- Underutilization due to unbalance among capacities of various processes and insufficient supply of materials.					- Ordinary and semi-active soot				
					- Auto - cord				
					- Cotton fabrics				
					- Other materials				
					TOTAL 902				
					3. Repairs & maintenance: total 192				
					4. Other material & non-factor service inputs 665				
VI. SUPPLEMENT		Future plans:			V. VALUE ADDED (1965) (Drs. Million)				
a): Introduction of polyvinylchloride transport tracks.					TOTAL (except turnover tax) 3,020				
b): Automation of shops.					- Wages of factory workers 900				
c): Harmonisation of individual capacities.					- Salaries of non-factory workers 454				
1/ Of which Drs. 767 million belongs to this enterprise as retained fund.					- Depreciation 248				
2/ "Gross accumulation" includes interests paid.					- Interests paid 412				
					- Other accumulation 1,006 1/2				
					TOTAL (Turnover tax) 2,827				
					SELECTION COEFFICIENTS				
					- Mach. & equip. per factory worker on 1st shift: Drs. 4,930,000				
					- Value added per employee: Drs. 2,080,000				
					- Annual wage per factory worker: Drs. 870,000				
					- Variable input cost/gross production ratio: 67.4 %				
					- Gross accumulation/gross production ratio: 15.5 % (at full capacity: 16.4 %)				
					- Level of production at break-even point: 52 % of the 1965 actual level.				

An enterprise manufacturing tyres, tubes, footwear and other rubber products; annual capacity output is 4 million pairs of footwear and 6,000 t of tyres, tubes and other rubber products with three shifts; almost three-fourths of materials (crude and synthetic rubber, soot, organic chemicals) are imported. Exports account for 8% of total production. The enterprise was founded in 1946.

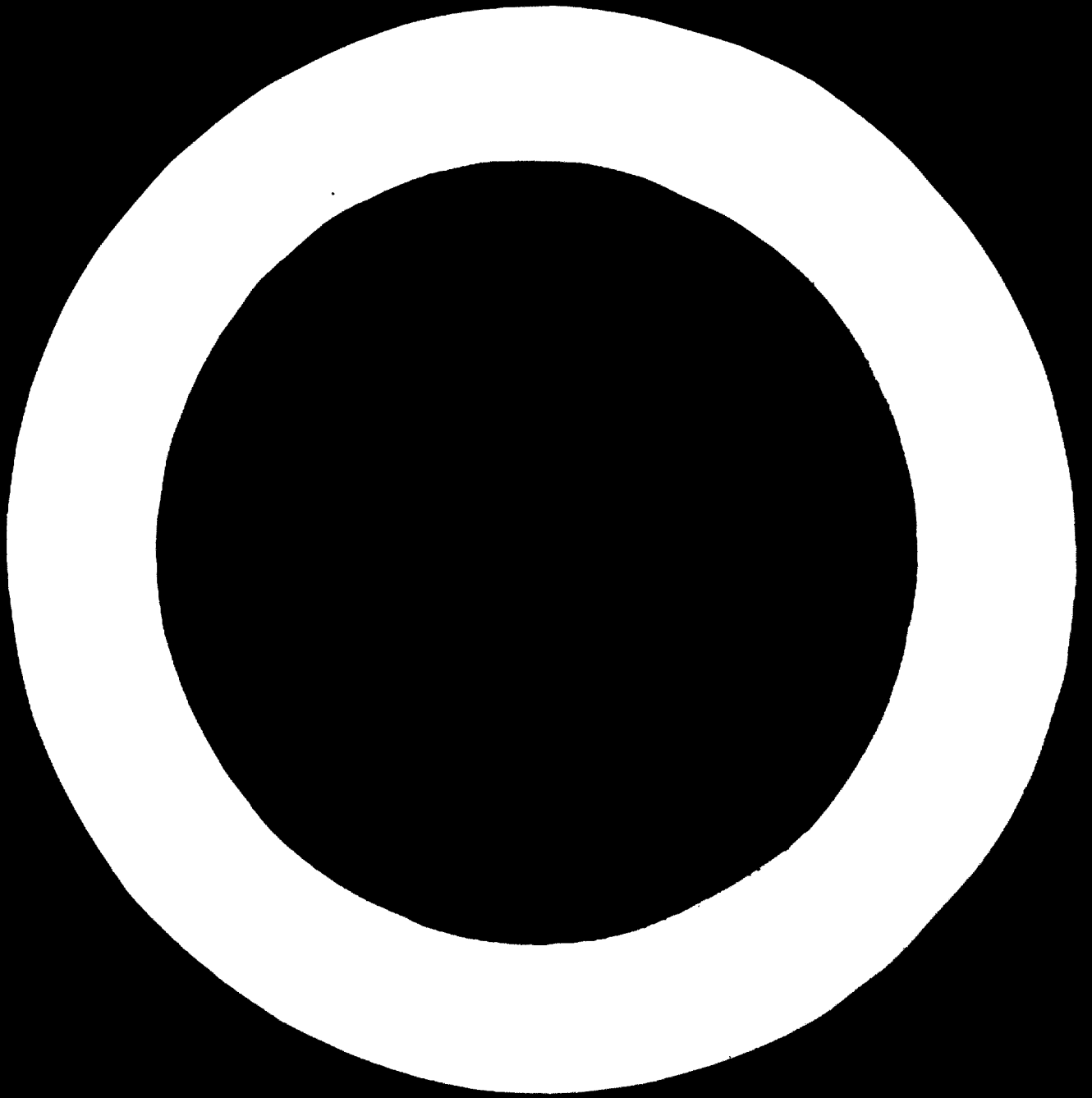
I. FIXED CAPITAL		(end of 1965)	Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)						
					1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)			1,986	2,683	Gross expenditures	93	137	962	497		
Buildings & land improvements			516	635	Retirements	13	44	88	269		
Machinery & equipment			1,424	1,988	Calculated average age of fixed assets: <u>5.8</u> years						
Other capital assets			46	60	<b>Electric motors:</b>						
<b>Major machinery crucial for determining the overall production capacity:</b>					Total installed capacity: <u>2,621</u> KW						
Tyres: Auto-clave for vulcanization (3 shifts).					Of which actually operated in 1965:						
Tubes: Electric press for vulcanization (3 shifts).					1st shift <u>100</u> %; 2nd shift <u>80</u> %; 3rd shift <u>70</u> %						
Rubber belts: Horizontal presser for vulcanization (3 shifts).					<b>Technological features:</b>						
Rubber adhesives: Mixing equipment (3 shifts).					Use up-to-date technology with up-to-date equipment of large capacity. The production process has four phases: 1) measurement of chemicals and preparation of crude masses; 2) production of semi-finished products (protectors, etc.); 3) production of tyres and tubes on automatic machinery; 4) vulcanization in the Bagomatic presses (made in England and Germany).						
Peasants' rubber shoes: Auto-claves for vulcanization (3 shifts).											
(About two thirds of machinery and equipment were imported).											
II. LABOUR		(1965)	TOTAL no. of employees:			Educational background of workers:					
			1st shift	2nd shift	3rd shift	Techn. Econ.	Low	Others	Total		
1. Factory workers:						Univ. or higher	-	8	2	10	20
Total 1,438 persons			792	446	200	Tech. Higher sch.	-	5	-	4	9
(3,052 thous. manhrs.)		(1,706)	(925)	(421)		Secondary sch.	42	24	-	26	92
- Footwear			300	261	59	Primary school	-	-	-	1,559	1,559
- Tyres and tubes			107	70	72	<b>IV. INTERMEDIATE INPUTS</b>					
- Other rubber products			93	69	69	Quantity		Value (Drs. Million)			
- Auxiliary shops			153	46	-	TOTAL actual consumption 1965					
- Other services			139	-	-	1. Energy inputs: total					
2. Non-factory workers: 242 persons						- Electricity					
(555 thous. manhours)						- Brown coal					
						- Liquid fuel					
						2. Major production materials: total					
						- Crude rubber					
						- Synthetic rubber					
						- Latex					
						- Active soot					
						- Semi-active soot					
						- Cord					
						3. Repairs & maintenance: total					
						4. Other material & non-factor service inputs					
III. ANNUAL PRODUCTION & CAPACITY		(1965)	Quantity	Value (Drs. Million)	V. VALUE ADDED (1965) (Drs. Million)						
TOTAL actual revenue output 1965*				8,603	TOTAL (except turnover tax)						
- Tyres for motor cars			652 t	728	- Wages of factory workers						
- Tyres for trucks			3,026 t	3,707	- Salaries of non-factory workers						
- Tyres for tractors			106 t	114	- Depreciation						
- Inner tubes for trucks			248 t	213	- Interests paid						
- Inner tubes for motor cars			186 t	132	- Other accumulation						
- Inner tubes for tractors			20 t	16	(Turnover tax)						
- Rubber platts for footwear			164 t	141							
- Rubber belts			93 t	138							
- Rubber tubes with other materials			104 t	83							
- Rubber tubes (purs)			46 t	31							
- Other technical rubber products			579 t	481							
- Spongy rubber products			72 t	129							
- Rubberized fabrics			88 t	159							
- Rubber adhesives			121 t	91							
- Rubber boots			399,000 prs.	688							
- Peasants' rubber shoes ("Opanak")			2,760,000 prs.	1,449							
- Other rubber footwear			516,000 prs.	303							
* Including turnover tax on sold products.											
<b>Capacity output:</b>											
Tyres and tubes			4,500 t	Overall rate of utilisation is 94%.							
Footwear			4,000,000 prs.								
Other rubber prod.			1,400 t								
- With the present manpower, the full utilization of the capacity can easily be attained.											
VI. SUPPLEMENT					SELECTED COEFFICIENTS						
No major expansion programs is presently envisaged; rather the existing facilities are being improved through regular overhauling.					- Mach. & equip. per factory worker on 1st shift: Drs. 2,510,000						
1/ Of which Drs. 486 million is retained by this enterprise as its own fund.					- Value added per employee: Drs. 1,490,000						
2/ "Gross accumulation" includes interests paid.					- Annual wage per factory worker: Drs. 550,000						
					- Variable input cost/gross production ratio: 69.0 %						
					- Gross accumulation/gross production ratio: 21.7 %						
					(at full capacity) 22.3 %						
					- Level of production at break-even point: 30 % of the 1965 actual level.						



YUGOSLAVIA : 300 - ( 3 )

An old enterprise, founded in 1925, producing tyres, tubes, and other rubber products; annual capacity output is about 6,000 t of various rubber products on three-shift operation. Major materials (crude rubber, synthetic rubber, active soot and auto-cord), amounting to 40% of total material expenditures, are purchased from abroad. Exports account for only 1% of the total production.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		1,917	2,850	116	168	598	436		
Buildings & land improvements		732	1,250	52	130	159	174		
Machinery & equipment		1,185	1,600	Retirements					
Other capital assets		-	-	Calculated average age of fixed assets: 7.1 years					
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Electric motors:</b>					
Tyres for trucks: Auto-clave for vulcanisation (3 shifts)				Total installed capacity: 3,505 KW					
Tubes for trucks: Hydraulic electric presses for vulcanisation (2 shifts)				Of which actually operated in 1965:					
Transport trucks: Hydraulic presses for vulcanisation (3 shifts)				1st shift 100 %; 2nd shift 49 %; 3rd shift 48 %					
Shoe maker's adhesives: Mixing equipment (3 shifts) (60% of machinery and equipment was imported).				<b>Technological features:</b>					
				Vulcanisation of crude rubber by hydraulic presses (for tubes) and auto-claves (for tyres). Mechanisation and automation are satisfactory. The product - mix is technologically too large, though diversification is required from the viewpoint of sales efficiency.					
II. LABOUR (1965)		TOTAL no. of employees:			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn. High.	Elem.	Low	Others	Total
1. Factory workers:					11	3	2	1	17
Total	739 persons	486	161	92	2	2	2	2	8
	(1,666 thous. manhrs.)	(1,099)	(362)	(205)	16	27	-	13	56
	- Semi-finished products	63	21	12	-	-	-	822	822
	- Technical goods	185	61	36	Primary school				
	- Tyres & tubes for motor vehicles	55	18	10	IV. INTERMEDIATE INPUTS				
	- Other rubber tubes	95	31	18	Quantity		Value (Drs. Million)		
	- Boiler room	14	4	4	TOTAL actual consumption 1965				
	- Repair and tool shop	56	26	12	1. Energy inputs: total				
	- Transport	18	-	-	- Electricity				
	2. Non-factory workers:	164 persons			- Brown coal				
		(359 thous. manhrs.)			TOTAL actual consumption 1965				
III. ANNUAL PRODUCTION & CAPACITY		Quantity		Value (Drs. Million)	2. Major production materials: total				
TOTAL actual revenue output 1965*				4,985	- Crude rubber				
	- Tyres for bicycles	101 t	87	- Synthetic rubber					
	- Tyres for trucks	700 t	1,049	- Active soot					
	- Tubes for bicycles	8 t	10	- Ordinary soot					
	- Tubes for trucks	104 t	138	- Cotton fabrics					
	- Other tyres	20 t	10	- Other materials (Drs. million)					
	- Crude masses of rubber	81 t	73	3. Repairs & maintenance: total					
	- Heels, semi-soles and soles	75 t	47	4. Other material & non-factor service inputs					
	- Rubber plates for footwear	187 t	112	V. VALUE ADDED (1965) (Drs. Million)					
	- Transport trucks	116 t	194	TOTAL (except turnover tax)					
	- Industrial belts	92 t	252	- Wages of factory workers					
	- Rubber tubes with other materials	1,091 t	1,255	- Salaries of non-factory workers					
	- Rubber tubes (unmixed)	97 t	68	- Depreciation					
	- Profile rubber tracks	139 t	111	- Interest paid					
	- Pressed plates, both mixed & unmixed	219 t	121	- Other accumulation (Turnover tax)					
	- Various technical products	531 t	1,146						
	- Rubber rugs, carpets & misc. prod.	342 t	205						
	- Rubber adhesives	261 t	107						
* Including turnover tax on sold products.					VI. SUPPLEMENT				
Capacity output:					Future plans: a) Reduction of the product assortment and concentration on the production of tyres and tubes for trucks; introduction of tyres for dumpers, other hard tyres for construction machinery and high pressure tubes. b) Substitution of synthetic rubber for natural rubber. c) Reconstruction and expansion of the shop for tyres and tubes and increasing the degree of mechanisation and automation from the present level of 70% and 40%, respectively, of the European standard, by 20 to 30%.				
- Underutilization due to deficiency of large tools and insufficient supply of materials (to a smaller extent).					SELECTED COEFFICIENTS				
Tyres & tubes for motor vehicles 1,700 t } Overall rate of utilization is 68%.					- Mech. & equip. per factory worker on 1st shift: Drs. 3,290,000				
Other rubber tubes 1,400 t }					- Value added per employee: Drs. 1,590,000				
Other rubber products 2,800 t }					- Annual wage per factory worker: Drs. 700,000				
					- Variable input cost/gross production ratio: 70.5 %				
					- Gross accumulation/gross production ratio: 2/ 19.4 %				
					- Level of production at break-even point: 34 % of the 1965 actual level.				
1/ Of which Drs. 251 million is retained by this enterprise as its own fund.					2/ "Gross accumulation" includes interests paid.				



France : 311 (C.F.) - (2)

**MAJOR PRODUCTS:** Mixed fertilizers (potassic scoria). Capable of mixing 130,000 tons of fertilizers annually with two shift operation. (Currently operating with one shift alone)

**REPORTING UNIT:** A small enterprise with capital stock of Fr. 1 million and 27 employees as of 1964. Founded in 1956.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE (Fr. 000)</b>	1,920	755
1. Land	60	60
2. Land improvements	-	-
3. Buildings	190	80
4. Other construction works	-	-
5. Machinery & equipment	1,600	600
6. Tools & instruments	10	5
7. Vehicles	30	5
8. Office furniture & fixtures	30	5

	Avg. Age (Yr.)	Oper. Cond.	1964 replace. value
<b>DETAIL OF I.5 (No.)</b>			
a. Machine shop	5-10	A	200
b. Storing and production facilities	1-10	A	2,000
c. Transformers	10	A	50

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE (Fr. 000)</b>	1,030	..
1. Direct production materials	800	
2. Other input materials	-	
3. Work in process	30	
4. Finished products	200	

- Actual inventories of finished products 1.9 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 240 KW

Total load, capacity of trucks: - t

Part of storing and production facilities were imported; the rest domestically produced.

**GENERAL CONDITIONS:** Transportation and public utilities, excellent. Health and recreational facilities, fair. Residential and educational facilities, poor.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
				Univ. or higher	Engrs	Other	Sr. High sch or equiv. Others
<b>TOTAL EMPLOYED</b>	27	-	-	-	-	-	-
1. Direct production ( .. )	15	-	-	-	-	-	-
Annual total manhours (000)	(45.3)	( )	( )				
a. Fabrication	11	-	-	-	-	-	-
b. Maintenance	4	-	-	-	-	-	-
				<b>Management</b>			
				-	1	4	-
				<b>Direct Production</b>			
				Skilled	-	-	6
				Semi-skilled	-	-	-
				Unskilled	-	-	9
				<b>Auxiliary Activities</b>			
				Skilled	-	-	-
				Semi-skilled	-	-	-
				Unskilled	-	-	7
				-	-	-	-
2. Auxiliary activities ( .. )	12	-	-				

Actual hours worked per annum per direct production worker: 2,330 hours.

Proportion of motore occupied: 77%

Skilled workers in direct production are machine operators and maintenance crew.

Degree of mechanization: fair in both shops.

France : 311 (C.F.) - (2)

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( Frs. 000 ) 10,583

Product	Unit	Quantity Produced	Unit Value ( Fr. )
a. Mixed fertilizers "Potassic scoria"	ton	75,800	139.5

**CAPACITY OUTPUT:** 80% higher than the actual 1964 production level with sufficient supply of raw and intermediates materials and about 30,000 additional manhours for a new 2nd shift.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- The product is partly exported.
- Materials are domestically produced and delivered by rail and road.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( Frs. 000 ) 9,393

1. Energy & water: total	Quantity Unit consumed	Unit Value ( Fr. )
- Electricity	kwh 4,935	2.5
- Liquid fuel	litre 2,000	2.5
* price at the user's ent.		1,223
<b>2. Direct production materials: total</b>		
a. Thomas scoria	ton 60,000	11.2
b. Potassium chloride	" 14,200	201.2
<b>3. Packaging materials: total</b>		600
Paper bags	1,520,000	-
<b>4. Work performed by sub-contractors ( )</b>		-
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>		35
Consumable materials		5
Repair services		30
<b>6. Material inputs for auxiliary activities</b>		-
<b>7. Non-factor services inputs: total</b>		1,430
of which transportation, insurance and storage services purchased separately		1,000

**VI. VALUE ADDED TOTAL 196 ( Frs. 000 ) 1,090**

1. Wages & salaries (before income tax)	330
- Employees in direct production	(..)
- Other employees	(..)
2. Other expenditures for employees	120
3. Annual depreciation allowance	160
4. Rental paid	40
5. Sales & other indirect taxes (less subsidies) (not included in total)	[ 1,200 ]
6. Other gross business income (before income tax)	440

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Frs. 107,000 (Frs. 150,000 1/2)
- Value added per employee: Frs. 40,370
- Annual wage per employee: Frs. 1,000 2/3
- Variable input costs/gross production ratio: 77.4%
- Gross profit/gross production ratio: 4.2 (at full capacity: 12.4)
- Level of production at break-even point is approximately 82 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acqui- sition	Scrapped or sold
<b>1. Recent Expansion</b>		
From 1956 to 1966		
a. Total Investment ( Frs. 000 )	1,602	
- Land	-	
- Land improvements		
- Buildings	100	
- Other construction work		
- Machinery & equipment	1,500	
- Tools & instruments		
- Vehicles	-	
- Office furniture & fixtures	-	
b. Corresponding increase:	From 1956	To 1966
In no. of employees (decrease)	50	25
In annual gross production ( Frs. 000 ) (incl. tax)	5,000	15,000

**2. Future Plan**

- a. Investment proposed for the period 1967 to 1971
- Total value ( Frs. 000 ) 250
- Of which: - Mach. & equipment 100 %
- Land improv. & bldg. -
- Land -
- Others -
- b. Net increase in no. of employees envisaged for the same period: - Direct production: 3
- Auxiliary: 2
- c. Purposes: Introduction of new products; expansion of the production of granulated fertilizers.

**VIII. SUPPLEMENT**

1. Using the 1964 replacement value.
2. Wages and salaries divided by the total number of employees.
3. One half of wages and salaries considered as variable cost.

**MAJOR PRODUCTS:** Concentrated super-phosphate. Annual capacity output is 34,000 tons on partial three shifts, which is fully utilized. Sulphuric acid is internally supplied, but its facility is becoming a bottleneck. An investment of Rs. 2 million is being planned to alleviate the bottleneck.

**REPORTING UNIT:** A small one-establishment enterprise with total assets Rs. 8 million (net worth Rs. 3.4 million) and 165 employees as of 1965. Founded in 1961.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
TOTAL BOOK VALUE ( '00 Rs. )	5,989	4,455
1. Land )	66	66
2. Land improvements )		
3. Buildings	1,543	1,324
4. Other construction works	366	235
5. Machinery & equipment	3,931	2,729
6. Tools & instruments	-	-
7. Vehicles	33	13
8. Office furniture & fixtures	50	38

**DETAIL OF 1.5 (No.)**

	Total Bk. value	Avg. Age (Yr.)	Oper. Cond.	Deprec. rate (%)	1965 replace. value
a. Sulphuric acid plant )		5			
b. Super phosphate plant )		"			
c. Grinding mill (1) )		"			
d. Elevators (3) )	3,931	"	A	10	5,240
e. Mixer (1) )		"			
f. Den (1) )		"			
g. Conveyors (2) )		5			

**II. INVENTORIES**

(end of 1965)	Actual	Normal
TOTAL VALUE (Rs. million)	2.25	- 2.5
1. Direct production materials	1.72	-15
2. Other input materials	.30	-34
3. Work in process	-	-
4. Finished products	.23	+140

- Normal inventories of finished products 5.2 % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 460.5 KW  
 " " prime movers 97 HP  
 Total load, capacity of trucks: - t

a) and b) were imported. The rest were domestically made.

**GENERAL CONDITIONS:** Transportation, excellent. Public utilities, fair. Community facilities, poor.

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED	165		
1. Direct production (all male )	71	32	32
Annual total manhours (000)	(177.5)	(111.0)	(60.4)
a. Sulphuric acid plant	20	20	20
b. Super phosphate plant	10	10	10
c. Water treatment plant	2	2	2
d. Warehouse	14	-	-
e. Workshop	25	-	-
2. Auxiliary activities (all male )	30	-	-

Technical and managerial control

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Other
Engrs			
TOTAL	8	16	141
Management	4	10	-
Direct Production			
Skilled		4	60
Semi-skilled			
Unskilled			71
Auxiliary Activities			
Skilled	4	2	-
Semi-skilled			
Unskilled			10

- Actual hours worked in 1965 per direct production worker: 2,534 hrs.

- Proportion of motors occupied: 93% on the 1st shift, 85% on 2nd shift and 75% on 3rd shift

- Technological features:

a) Oxidation of sulphur and absorption of sulphur trioxide.  
 b) Chemical reaction of raw phosphate with sulphuric acid.

- Degree of mechanization and automation is generally fair.

- Skilled workers in direct production are engine drivers, boiler attendants, turners, fitters, operators, plant attendants, etc. Those in auxiliary activities are sales and purchase assistants and administrative assistants.

IV. ANNUAL PRODUCTION (1965)		TOTAL VALUE OF PRODUCTION ( 000 Rs. )		8,123	
Product	Unit	Quantity Produced	Unit Value (Rs.)		
a. Concentrated super phosphate	Ton	34,000	231		
b. Sulphuric acid	"	12,791*	211		
* includes 11,517 tons internally used and not counted in the value of production.					
<b>CAPACITY OUTPUT:</b> Close to the 1965 actual production level. However, this is constrained by a bottleneck in the sulphuric acid plant. An investment of Rs. 2 million and additional 10,000 manhours on the 1st shift, given sufficient supply of raw and intermediate materials, would increase production by 30% over the 1965 actual level.					
Unit value of product: Market value f.o.b. before sales tax					
Unit value of material: Market price c.i.f.					
- Rock phosphate and sulphur are directly imported with freight rates 36% and 23%, respectively. Delivery is by railroad, road and inland water.					
VI. VALUE ADDED		TOTAL 1965 ( 000 Rs. )		986	
1. Wages & salaries (before income tax)					
- Employees in direct production		245			
- Other employees		225			
2. Other expenditures for employees		45			
3. Annual depreciation allowance		207			
4. Rental paid		-			
5. Sales & other indirect taxes (less subsidies)		-			
6. Other gross business income (before income tax)		264			
VII. EXPANSION: HISTORY & PLAN		Gross acquisition		Scrapped or sold	
1. Recent Expansion					
From 1963 to 1965					
a. Total Investment ( 000 Rs. )		794.8		% of repair	
- Land		-		-	
- Land improvements		59.2		-	
- Buildings		8.4		1	
- Other construction work		547.2		2	
- Machinery & equipment		141.6		5	
- Tools & instruments					
- Vehicles		38.4		2	
- Office furniture & fixtures					
b. Corresponding increase:		From 1963	to 1965		
In no. of employees		107	165		
In annual gross production			+ 20%		
2. Future Plan					
a. Investment proposed for the period 1967 to 1970					
Total value ( Rs. million )				8	
Of which: - Mach. & equipment				80	%
- Land improv. & bldg.				20	
- Land				-	
- Others				-	
b. Net increase in no. of employees envisaged for the same period:					
- Direct production:				10	
- Auxiliary:				-	
c. Purpose: Introduction of granular fertilisers and granulation process; and selective expansion of existing capacity concentrating on sulphuric acid plant in the same location.					
VIII. SUPPLEMENT		Structure of liquid assets and short term liabilities			
				(end of 1965; 000 Rs.)	
Cash on hand and in bank	25	Taxes payable	53		
Accounts receivable	595	Accounts payable	1,670		
1/ Numerator is replacement value.					

## V. INTERMEDIATE INPUTS (1965)

TOTAL VALUE OF CONSUMPTION ( 000 Rs. ) 7,137

211

## 1. Energy &amp; water: total

Quantity Unit

con- value

Unit sumed (Rs.)

000 kwh. 1,532 113

- Electricity

- Petroleum K.L. 16 1,020

- Other fuel oils " 22.6 530

- Lubricating oil " 6 1,660

## 2. Direct production materials: total

4,720

a. Rock phosphate Ton 19,700 165

b. Sulphur " 4,500 279

c. Sulphuric acid (inter- nally supplied) " 11,517 ( . . )

d. Consumable stores (000 Rs) 16 . .

e. Others " 29 . .

## 3. Packaging materials: total

831

361,000 gunny bags (w. 1.67 each); 363,000 polythene

bags (Rs. 0.31 each)

4. Work performed by sub-contractors ( ) -

5. Repairs &amp; maintenance (materials &amp; services purchased)

216

6. Material inputs for auxiliary activities

Stationery and printing Rs. 3,000

Administrative charges Rs. 20,000

7. Non-factor service inputs: total

1,061

Transportation, insurance and storage

(purchased separately) Rs. 1,055,000

## SELECTED COEFFICIENTS

- Mach., equip., instruments &amp; tools per employee in

direct production on 1st shift: Rs. 73,800 1/2

- Value added per employee: Rs. 5,980

- Annual wage per employee in direct production: Rs. 1,810

- Variable input costs/gross production ratio: 73.8%

- Gross profit/gross production ratio: 3.3%

- Level of production at break-even point is approximately

87 % of the 1965 actual level.

**MAJOR PRODUCTS:** Ammonium sulphate, double salt and urea. Annual capacity outputs are 370,000 t, 48,000 t and 1,00,000 t, respectively, on three shift operation.

**REPORTING UNIT:** A sister branch of a two-establishment government enterprise (both branches engaging in fertilizers manufacture) founded in 1952 with total capital of Rs. 476 million & 1,525 employees as of 1964. This branch with 1,200 employees has total assets of Rs. 250 million. See India 311 (C.F.)-4 for the sister branch.

### I. FIXED CAPITAL ASSETS (end of 1964)

TOTAL BOOK VALUE (Rs. million)	Before deprec.		After deprec.	
	450.10		161.56	
1. Land	8.84		1.84	
2. Land improvements	-		-	
3. Buildings	81.34		46.40	
4. Other construction works	30.12		24.12	
5. Machinery & equipment	112.25		60.61	
6. Tools & instruments	2.16		1.01	
7. Vehicles	1.01		0.4	
8. Office furniture & fixtures	1.58		0.40	
	<b>Total</b>	<b>Avr. Age</b>	<b>Depr. rate</b>	<b>1964 replace. value</b>
		<b>(Yr.)</b>	<b>Cond. (%)</b>	

DETAIL OF 1.5 (No.)

- e. Coke ovens and by-product recovery unit (60)
- b. Gas generation plant (1)
- c. Gas reformation plant (1)
- d. Ammonia plant (1)
- e. Ammonium sulphate plant (1)
- f. Nitric acid plant (1)
- g. Double salt plant (1)
- h. Equipment for maintenance shop (1)
- i. Power house
- j. Bagging & storage plant
- k. Urea plant (1)

304	12	B	8
10	10	B	8

### II. INVENTORIES (end of 1964)

	Actual	Normal
<b>TOTAL VALUE (Rs. million)</b>	4.78	4.8
1. Direct production materials	0.13	0.11
2. Other input materials	0.06	0.03
3. Work in process	0.40	0.25
4. Finished products	3.99	4.41
- Normal inventories of finished products % of annual gross production		
- Seasonal variations: ..		

Capacity of electr. motore: 10,000 KW

Total load, capacity of trucks: 400 t

Nominal installed capacity of electric generator: 24,000 KW. Actual production of electricity in 1964: 100 million KW. Machines were partly imported and partly produced domestically.

### GENERAL CONDITIONS:

Transportation, public utilities and community facilities, excellent. Educational facilities, fair.

### III. LABOUR (1964 average)

TOTAL EMPLOYED	1st shift	2nd shift	3rd shift
	2,735	1,419	1,119
1. Direct production (all male)	808	765	752
Annual total manhours (000)		2,735	
e. Coke ovens & by-products recovery unit	85	78	77
b. Gas generation plant	66	58	56
c. Gas reformation plant	41	40	39
d. Ammonia plant	44	39	37
e. Ammonium sulphate plant	128	117	115
f. Urea plant	43	40	37
g. Nitric acid plant	42	40	38
h. Double salt plant	44	38	38
i. Power house	90	90	90
j. Central maintenance shops	85	85	85
k. Fertiliser bagging & storage unit	140	140	140
2. Auxiliary activities (M: 1346, F: 88)	711	54	415

Technical and managerial control.

### EDUCATIONAL BACKGROUND (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other		
		Engi-neers	Other	
TOTAL	192	453	808	2,285
Management	192	115	-	-
Direct Production	-	-	722	606
Skilled	-	-	-	531
Semi-skilled	-	-	-	466
Unskilled	-	-	-	-
Auxiliary Activities	138	83	-	-
Skilled	-	-	-	111
Semi-skilled	-	-	-	671
Unskilled	-	-	-	-

- Actual hours worked in 1964 per direct production worker: 2,499 hours.

- Technological features:

a) Pulverised coal is fed into coke ovens and coke is discharged to rail trolleys.  
b) Coke is converted into blue water gas by action of steam on hot coke.

a) Gas obtained from (b) is purified for getting pure hydrogen & nitrogen mixture.

a) Hydrogen & nitrogen mixture is synthesized to ammonia.

Ground gypsum is reacted with ammonia  $\text{CO}_2$  to ultimately get  $\text{CaSO}_4$ .

a)  $\text{NH}_3$  are reacted under high pressure & temperature to get urea.

Ammonia oxidation process is followed for the manufacture of  $\text{HNO}_3$ .

Ammonium nitrate is produced by reacting  $\text{NH}_3$  with  $\text{HNO}_3$  and the  $(\text{NH}_4)\text{NO}_3$  is mixed with  $(\text{NH}_4)_2\text{SO}_4$  in order to get double salt.

- Mechanization and automation are generally rated as fair.  
- Skilled workers in direct production are charge-men, operators, fitters, etc.

IX. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION (Rs. million) <u>145.34</u>				TOTAL VALUE OF CONSUMPTION (Rs. million) <u>77.92</u>			
Product	Unit	Quantity Produced	Unit Value (100 Rs.)		Quantity consumed	Unit value (100 Rs.)	
1. Ammonium sulphate	1000 tons	311	316	1. Energy & water: total			11.99
2. Double salt	"	48	426	- Electricity	million kWh.	300*	30
3. Urea	"	13	582	- Others	Rs. million	1.99	..
4. Others	Rs. million	16.14	..	- Water (free of charge)			..
<b>CAPACITY OUTPUT:</b>				2. Direct production materials: total			52.82
20% higher than the 1964 actual production with no additional manhours. Underutilization is due to unavailability of better grade gypsum.				- Coal	ton	..	5
Unit value of product: Market value f.o.b. before sales tax.				- Gypsum **	ton	..	45
Unit value of material: Market price c.i.f.				- Chemicals and others	..	..	..
Coal and gypsum are of domestic origin and delivered by railroad with freight rate of 2% and 15%, respectively.				* Include 130 million kWh of electricity internally generated. But the cost of coal used for electricity generation is not included in 1.1, but V.P.			
<b>VI. VALUE ADDED TOTAL 1964 (Rs. million) <u>47.42</u></b>				3. Packaging materials: total <u>7.40</u>			
1. Wages & salaries (before income tax)			22.91	5,036,000 gunny bags (Rs. 1.47 each)			
- Employees in direct production		{ .. }		4. Work performed by sub-contractors ( )			—
- Other employees		{ .. }		5. Repairs & maintenance (materials & services purchased)			15.35
2. Other expenditures for employees			4.13	Of which machinery Rs. 13.72 million; building Rs. .37 million			
3. Annual depreciation allowance			18.90	6. Material inputs for auxiliary activities			2.74
4. Rental paid			.03	Of which share of head office expenses Rs. 1.45 million			
5. Royalties			.26	7. Non-factor service inputs: total <u>1.62</u>			
6. Other gross business income (before income tax)			1.19	- Transportation, storage and insurance (purchased separately) Rs. 1.62 million.			
				- Communication, advertising, and other business services are included in item 6.			
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>SELECTED COEFFICIENTS</b>			
1. Recent Expansion				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 477,000 1/			
From 19 62 to 19 64				- Value added per employee: Rs. 12,700			
a. Total Investment (Rs. million)		9.24	4.97	- Annual wage per employee in direct production: Rs. 6,130 2/			
- Land		.06	—	- Variable input costs/gross production ratio: 53.3% 3/			
- Land improvements		—	—	- Gross profit/gross production ratio: 7% (at full capacity : 3.5. )			
- Buildings		.94 4/	1.73	- Level of production at break-even point is approximately 93% of the 1964 actual level.			
- Other construction work		.32	.07				
- Machinery & equipment		6.32 4/	1.73				
- Tools & instruments		.43 4/	.74				
- Vehicles		.18 4/	.03				
- Office furniture & fixtures		.49 4/	.67				
b. Corresponding decrease:							
From 19 62 to 19 64							
In no. of employees		4,132	3,735				
In annual gross production (Rs. million)		158	145 5/				
2. Future Plan: None							
a. Investment proposed for the period 19 to 19							
Total value ( )							
Of which: - Mach. & equipment							
- Land improv. & bldg.							
- Land							
- Others							
b. Net increase in no. of employees envisaged for the same period:							
- Direct production:							
- Auxiliary:							
c. Purposes:							
<b>VIII. SUPPLEMENT</b>				Structure of liquid assets and short term liabilities of the establishment (end of 1964, Rs. million)			
		Cash on hand and in bank	1.52			Accounts payable	16.52
		Accounts receivable	14.54				
		Loans and advances	5.03				
- The company has a separately located head office with 345 employees. Annual operating cost of the head office is, in 1964, Rs. 2.5 million for wages and salaries and Rs. 0.2 million for others.							
1/ 1964 replacement value of machinery and equipment for numerator.							
2/ Total wages and salaries divided by the total employed.							
3/ Of which 1% of buildings, 4% of machinery + equipment, 1% of hand tools, 8% of vehicles and 10% of furniture and fixtures are for simple repair and maintenance work.							
4/ Variable cost excludes wages and salaries.							
5/ The prices of fertilizers were reduced in 1964 as a government policy.							



**MAJOR PRODUCTS:** Calcium ammonium nitrate. Capable of producing annually 390,000 tons of calcium ammonium nitrate on continuous three shift operation. Also able to produce about 12,000 tons heavy water.

**REPORTING UNIT:** A branch of a two-establishment government enterprise founded in 1952 with total capital Rs. 476 million and 7,525 employees as of 1964. This branch with 3,445 employees was founded in 1964. See India 311 (C.F.) - (3) for the sister branch.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. million)	315.63	232.38
1. Land	9.99	9.99
2. Land improvements	-	-
3. Buildings	57.09	48.16
4. Other construction works	22.16	18.66
5. Machinery & equipment	221.83	153.29
6. Tools & instruments	2.43	1.57
7. Vehicles	1.03	.20
8. Office furniture & fixtures	1.05	.51

**DETAIL OF I.5 (No.)**

	Total Bk. value	Avg. Age	Oper. Cond.	Depr. rate (%)	1964 replace. value
a. Hot water plant	222	4	A	5	245
b. Demineralising plant		"	"	"	
c. Electrolysis plant		"	"	8 1/3	
d. Ammonia plant		"	"	"	
e. Nitric acid plant		"	"	"	
f. Nitro-lime stone plant		"	"	"	
g. Production		"	"	"	
h. Sewing plant		"	"	"	
i. Heavy water plant	2	"	"		

**II. INVENTORY (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE</b> (Rs. Million)	27.03	-15.5
1. Direct production materials	1.13	-
2. Other input materials	21.22	-13
3. Work in process	.31	-27
4. Finished products	4.37	-26

- Normal inventory of finished products 3.3% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 162,000 KW

Total load, capacity of trucks: 35 t

Total length of railway tracks: 1.2 km.

a) and b) were made domestically.

The rest were imported.

**GENERAL CONDITIONS:**  
Transport, public utilities, residential, health and recreational facilities, excellent. Educational facilities, fair.

**III. LABOUR (196 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 3,445	3,445		
1. Direct production (all shifts)	1,969		
Annual total manhours (000)	1,690	1,630	1,602

The plant is run continuously on three shifts.

The break-down of the workers for individual shops is not available.

(See detail of I.5 for division of shops).

2. Auxiliary activities (1,406) 70 ) 1,476 - -

**EDUCATIONAL BACKGROUND (No. of employees)**

Engl-ness	Univ. or higher		Sr. High sch. or equiv.	
	Other			Other
<b>TOTAL</b>	189	443	820	1,993
<b>Management</b>	189	114	-	-
<b>Direct Production</b>	-	-	708	506
<b>Skilled</b>	-	-	-	431
<b>Semi-skilled</b>	-	-	-	324
<b>Unskilled</b>	-	-	-	-
<b>Auxiliary Activities</b>	-	-	112	-
<b>Skilled</b>	-	329	-	-
<b>Semi-skilled</b>	-	-	-	127
<b>Unskilled</b>	-	-	-	605

- Actual hours worked in 1964 per direct production worker: 2,500 hours.

- Proportion of motors occupied: 98% on all three shifts.

- Mechanisation and automation are excellent.

- Skilled workers in direct production are chargemen, operators, fitters, etc.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION (Rs. million ) 99.29				TOTAL VALUE OF CONSUMPTION (Rs. million ) 54.40			
Product	Unit	Quantity	Unit Price (Rs.)			Quantity	Unit Price (Rs.)
a. Calcium ammonium nitrate	ton	372,241	256				
b. Heavy water	kg.	11,172	358				
<b>CAPACITY OUTPUT:</b>				<b>1. Energy &amp; water: total 25.37</b>			
5% higher than the 1964 actual production level without additional manhours. Underutilization was due to leakage in electrolyzers on account of excessive corrosion.				- Electricity 000 KWH 1,331,155 13.2			
Unit value of product: market value f.o.b. before sales tax				- Liquid fuel 000 liters 1,335 106.0			
Unit value of material: market price c.i.f.				- Water (obtained free of charge) mil. gal. 23,734 ..			
Caustic soda is directly imported and delivered by sea with freight 10% of c.i.f. Other direct production materials are of domestic origin and delivered by railroad. Freight rates are 2% for (a) and (b) and 5% for the rest.				<b>2. Direct production materials: total 5.58</b>			
				a. Limestone ton 154,495 32.20			
				b. Soap stone " 606 37.43			
				c. Caustic soda solid " 215 964.43			
				d. Caustic potash " 713 212.07			
				e. Lime hydrated " 44 214.00			
				f. Caustic soda flakes " 54 936.00			
				g. Sulphuric acid " 89 247.80			
				h. Alum sulphate " 1 8,357.15			
				i. Chlorine " 15.5 640.00			
				j. Ammonia catalyst " 13.5 6,811.40			
				<b>3. Packaging materials: total 11.35</b>			
				7,637,000 bags (Rs. 1.47/bag)			
				29,000 spools (Rs. 4,125.7/000)			
				<b>4. Work performed by sub-contractors ( )</b>			
				<b>5. Repairs &amp; maintenance (materials &amp; services purchased) 6.72</b>			
				Machinery Rs. 6.11 million			
				Buildings Rs. .61 Million			
				<b>6. Material inputs for auxiliary activities * 4.95</b>			
				Materials Rs. 2.50 million; administration Rs. 1.22 million share of head office expenses Rs. 1.23 million			
				<b>7. Non-factor service inputs: total .43</b>			
				Transportation, insurance and storage (purchased separately)			
				* Administrative expenses include communications, advertising and other business services purchased.			
<b>VI. VALUE ADDED TOTAL 1964 (Rs. million) 44.89</b>				<b>SELECTED COEFFICIENTS</b>			
1. Wages & salaries (before income tax) 6.91				- Mach., equip., instruments & tools per employee in direct production Rs. 125,660 2/			
- Employees in direct production ( .. )				- Value added per employee: Rs. 13,150			
- Other employees ( .. )				- Annual wage p/r employee in direct production: Rs. 2,010 3/			
2. Other expenditures for employees 2.05				- Variable input costs/gross production ratio: 42.6% 4/			
3. Annual depreciation allowance 21.06				- Gross profit/gross production ratio: 15.4%			
4. Rental paid -				- (at full capacity: 17.4% 4/)			
5. Sales & other indirect taxes (less subsidies) -				- Level of production at break-even point is approximately 13 % of the 1964 actual level. 4/			
6. Other gross business income (before income tax) 14.87							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <b>Recent Expenditure</b>				2. <b>Future Plan</b> : None			
From 1962 to 1964				a. Investment proposed for the period 19 to 19			
a. Total Investment (Rs. million) 7.71 .93				Total value ( )			
- Land .01 -				Of which: - Mach. & equipment \$			
- Land improvements - -				- Land improv. & bldg.			
- Buildings 1.48 1/ .28				- Land			
- Other construction work .48 1/ .28				- Others			
- Machinery & equipment 4.95 1/ .46				b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments .51 -				- Direct production:			
- Vehicles .19 1/ .19				- Auxiliary:			
- Office furniture & fixtures .09 1/ -				c. Purposes:			
b. Corresponding increase: From 19 62 to 19 64							
In no. of employees 3,156 3,445							
In annual gross production (Rs. million) 74.66 99.29							
<b>VIII. SUPPLEMENT</b>				Structure of liquid assets and short term liabilities of the establishment (end of 1964; Rs. Million).			
Cash on hand and in bank .01				Taxes and accounts payable 10.89			
Accounts receivable 6.28							
Loans and advances 3.83							
1/ 2% of buildings, .5% of other construction work, 3% of machinery and equipment, 5% of vehicles and 1% of furniture and fixtures are for repairs and maintenance purposes.							
2/ Replacement value of equipment divided by total number of direct production workers.							
3/ Wages and salaries divided by total number of employees.							
4/ Variable cost excludes wages and salaries.							

**MAJOR PRODUCTS:** Viscose staple fibre. Annual capacity output with full three shifts is about 35,000 tons of various viscose staple fibres. Also produces and sells about 12,000 tons of anhydrous sodium sulphate.

**REPORTING UNIT:** Branch of a five-establishment enterprise founded in 1952 with total assets Rs. 200 million (net worth Rs. 110 million) as of 1965 (see note at the bottom). This branch founded in 1954, has 1,558 employees.

I. FIXED CAPITAL ASSETS (end of 1965)		end of 1964	end of 1965	II. INVENTORIES	
		After deprec.	After deprec.	(end of 1965)	
TOTAL BOOK VALUE (Rs. million)		26.98	22.61	TOTAL VALUE (Rs. million)	Actual Normal
1. Land		.30	.30	1. Direct production materials	13.15 + 14
2. Land improvements		-	-	2. Other input materials	.77 + 4
3. Buildings		10.35	10.38	3. Work in process	33.72 - 26
4. Other construction works		-	-		
5. Machinery & equipment		14.45	10.76		
6. Tools & instruments		-	-		
7. Vehicles		.27	.21		
8. Office furniture & fixtures		1.11	.97		
	1964				
	Total Bk. value After deprec.	Avr. Age (Yr.)	Depr. rate (%)	1965 replace. value	
<b>DETAIL OF I.5 (No.)</b>					
a. Staple fibre machines (c)	} 14.45	1-11	B	30	16.0
b. Sulphate soda plant (1)					
c. Sulphate acid plant (1)					
d. Sulphate plant (1)					
e. Electric generator (1)					
f. Steam boilers ( )					
g. Turbomachines					
<p><b>GENERAL CONDITIONS:</b>            Transportation, public utilities and residential facilities, excellent.            Health, recreational and educational facilities fair.</p>					

III. LABOUR (1965 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				
		778	400	380	Univ. or higher	Sr. High sch. or equiv.	Other	Others	
TOTAL EMPLOYED	m. 1,553								- Actual hours worked in 1965 per direct production worker: 2,920 hours.
1. Direct production (m. 1,203 f. 30)		453	400	380					- Proportion of productive facilities occupied: Motors: 100% on 1st shift and 80% on 2nd and 3rd shifts. Furnaces: 100% on 1st shift and 60% on 2nd and 3rd shifts.
Annual total manhours (000)		(1,340)	(1,168)	(1,110)					- Mechanization and automation are generally fair.
a. Staple fibre shop		83	70	65					- Skilled workers in direct production are: carders, dyers, fitters, turners, carpenters, welders etc.
b. Chemicals shop		71	60	60					
c. Bleaching and dyeing		53	45	40					
d. Repair and maintenance		77	70	60					
e. Electrical engineering and machine shop		83	75	75					
f. Waste plant		86	80	80					
					<b>EDUCATIONAL BACKGROUND (No. of employees)</b> Management: 4 100 80 - Direct Production: Skilled - - - 600 Semi-skilled - - - 300 Unskilled - - - 333 Auxiliary Activities: Skilled - 3 22 95 Semi-skilled - - - - Unskilled - - - 21				
2. Auxiliary activities (all male)		325	-	-					
Mechanical and managerial control									
					<b>Other establishments in the enterprise.</b> The other establishments are engaging in manufacturing: 1) Cotton textile (1,495 employees), 2) Dissolving pulp (1,507 employees), 3) Man-made fibre fabrics (1,497 employees), and 4) Machinery and equipment for rayon and allied chemicals plant (943 employees). The five-establishments are operating relatively independently of each other. There is a separately located central office.				

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IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION (Rs. million)			140.16	TOTAL VALUE OF CONSUMPTION (Rs. million)			108.02
Product	Unit	Quantity Produced	Unit Value (Rs.)	1. <u>Energy &amp; water: total</u>	12.57		
a. Bright bleached viscose staple fibre	Ton	30,600	3,610	(includes 220 tons of coke (Rs. 93/ton) and others Rs. 15,000)	Quantity consumed	Unit value (Rs.)	
b. Dull varieties of viscose staple fibre	"	3,059	3,705	- Other fuel oil	000 Rs.	1,217	..
c. Coloured staple fibre	"	472	4,750	- Electricity (internal supply)	000 kWh	9,200	..
d. Anhydrous sodium sulphate	"	11,930	347.4	- Coal	ton	134,033	65.4
e. Other sales revenues	Rs. million	1.97	..	- Petroleum	000 litres	23.1	910
				- Lubricating oil	"	101	1,273
<b>CAPACITY OUTPUT:</b>				2. <u>Direct production materials: total</u>	83.25		
Close to the 1965 actual production level.				a. Wood pulp	ton	36,355	1,530
Unit value of product: Market value f.o.b. before sales tax				b. Caustic soda	"	19,939	966
Unit value of material: Market price c.i.f.				c. Sulphuric Acid	"	881	273
- Sulphure, synthetic P.V.C. cloth and some of zinc and finishing agents are directly imported and delivered by railroad, road and sea.				d. Sulphur	"	17,072	545
The other production materials are domestically produced but have significant import contents. Delivery is by road and railroad.				e. Zinc (slag + oxides)	"	217	2,330
				f. Chlorine	"	233.1	540
				g. Calcium chloride	"	33	600
				h. Soda ash	"	180	433
				i. Sodium chloride	"	3,487	58
				j. Alumina sulphate	"	114	257
				k. Finishing agents	"	125.8	4,272
				l. Dulling agents + dyes	"	65.7	943
				m. Swansdown	000 metres	32.7	3,270
				n. Gangee	"	40.5	5,511
				o. Sheeting	"	54.7	1,410
				p. Poplin	"	79.6	3,395
				- cont. on bottom of page -			
				3. <u>Finishing materials: total</u>	891,000 meters 4.35		
				(includes 120,000 m. 120,000 heavy bags (Rs. 1.33/bag); 850,000 sq. m. kraft paper (Rs. 0.203/sq. m.); 108 tons black wire (Rs. 1,199/ton); 7 tons hemp string (Rs. 1,909/ton); others Rs. 3,120,000.)			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>	1.05		
				Parts and materials Rs. 844,000			
				Services purchased Rs. 201,000			
				6. <u>Material inputs for auxiliary activities</u>	1.14		
				Administration, water supply, electricity generation, etc.			
				7. <u>Non-factor service inputs: total</u>	.66		
				Transportation, insurance and storage services (purchased separately)			
				Rs. 139,000			
<b>VI. VALUE ADDED</b>				<b>SELECTED COEFFICIENTS</b>			
TOTAL 1965 (Rs. million)			32.14	- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 35,320 1/			
1. Wages & salaries (before income tax)			6.28	- Value added per employee: Rs. 20,600			
- Employees in direct production			{ .. }	- Annual wage per employee in direct production: Rs. 4,031 2/			
- Other employees			{ .. }	- Variable input costs/gross production ratio: 83.5% 3/			
2. Other expenditures for employees			-	- Gross profit/gross production ratio: 15.5%			
3. Annual depreciation allowances			4.03	- Level of production at break-even point is approximately 39 % of the 1965 actual level. 3/			
4. Rental paid			.06				
5. Sales & other indirect taxes (less subsidies) (not included in total)			2.50 7/				
6. Other gross business income (before income tax)			21.77 4/				
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
		Gross acquisition	% of simple repair				
1. <u>Recent Expansion</u>				2. <u>Future Plan</u>			
From 1963 to 1965				a. Investment proposed for the period 1965 to 1967			
a. Total Investment (ks. million)	11.16	-	-	Total value (Rs. million) 15			
- Land	.22	-	-	Of which: - Mach. & equipment 35 %			
- Land improvements	-	-	-	- Land improv. & bldg. 15			
- Buildings	3.51	15	-	- Land -			
- Other construction work	-	-	-	- Others -			
- Machinery & equipment	6.56	10	-	b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments	-	-	-	- Direct production: 100			
- Vehicles	.25	8	-	- Auxiliary: 30			
- Office furniture & fixtures	.62	11	-	c. Purposes: Largely balanced expansion of the existing capacity in the same location.			
b. Corresponding increase:	From 1963	to 1965					
In no. of employees							
In annual gross production (in value terms)	1,401	1,558	+ 32%				
<b>VIII. SUPPLEMENT</b>				V 2 Direct production materials continued -			
1/ Numerator is the replacement value.				q. Synthetic I.V.C. cloth metre 643 120			
2/ Wages and salaries divided by total number of employees.				r. H.W. charcoal ton 2,764 303			
3/ One third of wages and salaries is considered as fixed cost.				s. Long cloth 000 metres 3.2 3,100			
4/ The establishment reports only Rs. 1.98 million under this item. The detail of "Other sales revenue" (1v.e) is not revealed; Rs. 21.77 million is obtained as residual income, possibly, including the profit accruing in the parent enterprise's account if not the account of this branch establishment.				t. Others Million Rs. 0.54 ..			

India : 311 - (3)

**MAJOR PRODUCTS:** Vat dyes and other dyestuffs. Annual capacity output is over 6 t with three shifts.**REPORTING UNIT:** A one-establishment enterprise, founded in 1959, with total assets Rs.1.7 million (net worth Rs.0.2 million) and 155 employees as of 1964.**I. FIXED CAPITAL ASSETS** (end of 1964)

TOTAL BOOK VALUE (000 Rs.)	Before deprec.	After deprec.
	589	450
1. Land	9	9
2. Land improvements	-	-
3. Buildings	280	238
4. Other construction works	-	-
5. Machinery & equipment	270	182
6. Tools & instruments	-	-
7. Vehicles	-	-
8. Office furniture & fixtures	30	21

DETAIL OF I.5 (No.)	Total BK value bef. deprec.	Avg. Age (Yr.)	Oper. Cond. (%)	Depr. rate (%)	1964 replace value
a. Workshop Machines Tools (12)	260	5	B	10	290
b. Weighing scales (5)		3	A		
c. Steam, water and air piping		3	"		
d. Boiler and accessories (4)		5	B		
e. Reaction vessels (6)		5	"		
f. Drawing tanks & wooden vats (6)		2	A		
g. Transformer (1)		5	B		
h. Drying ovens (2)		5	"		
i. Pulverizers (2)		3	A		
j. Vacuum pumps (2)		1	"		
k. Centrifugal pumps (4)		5	B		
l. Storage tanks (6)		5	"		
m. Others	..	..			

**II. INVENTORIES** (end of 1964)

TOTAL VALUE (000 Rs.)	Actual	Normal
	496	-25 %
1. Direct production materials	350	-20
2. Other input materials		
3. Work in process	104	-42
4. Finished products	42	-25

- Normal inventories of finished products 2.3% of annual gross production

- Seasonal variations:

Capacity of electr. motors: 50 KW  
 Total load, capacity of trucks: t  
 Machines are all of domestic makes.  
 Average age of machinery is 4 years

**GENERAL CONDITIONS:** Public utilities excellent. Transportation and community facilities, fair.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 155	72	46	37
1. Direct production (all male)	64	43	36
Annual total manhours (000)	(145)	(125)	(90)
a. Vat golden yellow dept.	17	15	13
b. Acid colour & bases dept.	17	13	10
c. Laboratory	10	6	6
d. Workshop	12	7	5
e. Carpentry shop	5	-	-
f. Watch & Ward	3	2	2
2. Auxiliary activities (all male)	8	3	1
Technical & Managerial staff			

**EDUCATIONAL BACKGROUND** (No. of employees)

Engr-Asst-Eng	Other	Sr. High sch. or equiv.		Others
		Univ. or higher	Sr. High sch. or equiv.	
TOTAL	1	3	5	146
Management	1	2	3	-
Direct Production	-	-	-	-
Skilled	-	-	-	20
Semi-skilled	-	-	-	44
Unskilled	-	-	-	79
Auxiliary Activities	-	-	-	-
Skilled	-	1	2	-
Semi-skilled	-	-	-	-
Unskilled	-	-	-	3

-Actual hours worked in 1964 per direct production worker: 2,517 hrs.  
 -Proportion of motors occupied: 95% on 1st shift, 60% on 2nd shift and 40% on 3rd shift.

-Fair degree of mechanization and automation.

-Skilled workers in direct production are boiler attendants, carpenters, mechanics, plant operators etc. Those in auxiliary activities are in sales, purchase, administration and accounts.

IV. ANNUAL PRODUCTION (1964)		TOTAL VALUE OF PRODUCTION ( 000 Re. )		1,416.	
Product	Unit	Quantity Produced	Unit Value (Rs.)		
a. Vet dyec; Golden yellow G.K.	Kg.	6,128	216		
b. Othere (Vat orange R.K. Azo-dyee, etc.)	000Rs.	92	..		

V. INTERMEDIATE INPUTS (1964)		TOTAL VALUE OF CONSUMPTION ( 000 Rs. )		1,020	
1. Energy & water: total		128			
	Unit	Quantity consumed	Unit value (Rs.)		
- Electricity	000 Kwh	444	130		
- Fuel oil	000 litres	190	310		
- Lubricating Oil	" "	1.64	1,200		
- Water	000 Kl	14	700		
2. Direct production materials: total		726			
a. Sulphuric Acid	Kg	793	.19		
b. Hydrochloric Acid	"	2,720	.12		
c. Caustic Soda	"	9,086	1.64		
d. Soda Ash	"	7,606	.78		
e. Salt	"	4,644	.14		
f. Napthalene	"	6,148	1.21		
g. Pyridine	"	120	4.50		
h. Aluminium Chloride	"	79,064	3.42		
i. Actinol R.O.	"	7,572	9.09		
j. Benzyl Chloride	"	17,841	5.36		
k. Monochloro Benzene	"	33,381	1.81		
l. Others	000 Re	201	..		
3. Packaging materials: total		4			
291 Metal containers (Rs.13 each)		-			
4. Work performed by sub-contractors ( )		-			
5. Repairs & maintenance (materials)		80			
6. Material inputs for auxiliary activities		12			
Stationery & printing		70			
7. Non-factor service inputs: total		-			

**CAPACITY OUTPUT:** Close to the 1964 Actual production level.

Unit value of product: MARKET VALUE F.O.B. BEFORE SALES TAX  
Unit value of material: MARKET PRICE C.I.F.

Aluminium chloride, benzyl chloride and monochloro benzene are directly imported and delivered by road and sea with freight rate at 10% of c.i.f. value. The rest are all of domestic origin with freight rates 5% for sulphuric acid, 4% for hydrochloric acid and 3% for the others. Delivery is by road and railroad.

VI. VALUE ADDED		TOTAL 1964 ( 000 Rs )		396	
1. Wages & salaries (before income tax)		220			
- Employees in direct production	{..}				
- Other employees	{..}				
2. Other expenditures for employees		25			
3. Annual depreciation allowance		31			
4. Rental paid		-			
5. Sales & other indirect taxes (less subsidies)(not included in total)	[ 29 ]				
6. Other gross business income (before income tax)		120			

VII. EXPANSION: HISTORY & PLAN		Gross acquisition	
1. Recent Expansion			
From 1962 to 1964		% of simple	
a. Total Investment ( 000 Rs. )	147	repair	
- Land	-		
- Land improvements	-		
- Buildings	74	5	
- Other construction work	-	-	
- Machinery & equipment	63	5	
- Tools & instruments	-	-	
- Vehicles	-	-	
- Office furniture & fixtures	10	10	
b. Corresponding increase:	From 19 62 to 19 64		
In no. of employees	100	155	
In annual gross production ( 000 Rs. )	650	1,416	
2. Future Plan			
a. Investment proposed for the period 1964 to 1966			
Total value ( 000 Rs )	175		
Of which:			
- Mach. & equipment	60	%	
- Land improv. & bldg.	40		
- Land	-		
- Others	-		
b. Net increase in no. of employees envisaged for the same period:			
- Direct production:	5		
- Auxiliary:	-		
c. Purposes:	Raising the capacity of vat golden yellow and largely balanced expansion of existing capacity in the same location.		

VIII. SUPPLEMENT		Structure of liquid assets and short term liabilities ( End of 1964; 000 Rs)	
Cash on hand and in bank	6	Taxes payable	55
Accounts receivable	749	Accounts	132
Loans and Advances	17	Short term borrowing from commercial banks	309

1/ Numerator is replacement value.  
2/ Wage and salaries divided by the total number of employees.  
3/ 80% of wages and salaries regarded as variable cost.



IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( 000 Rs. )		6,286		TOTAL VALUE OF CONSUMPTION ( 000 Rs. )		3,593	
Product	Unit	Quantity (Tons)	Unit Value (Rs.)		Quantity (Units)	Unit Value (Rs.)	
a. Acetic acid glacial	ton	2,352	1,800	1. Energy & water: total			343
b. Polyethylenecarboys	Nos.	36,244	16	- Electricity	000 kWh	1,997	30
c. Ethyl acetate	ton	136	3,143	- Petroleum	000 liters	26	100
d. Sodium crystalline	"	34	1,152	- Other fuel oils	000 liters	924	130
e. Soda anhydrous	"	19.5	2,503.6	- Gas	000 Rs.	1.2	..
f. Butyl acetate	"	214.5	4,462	2. Direct production materials: total			51
<b>CAPACITY OUTPUT:</b>				a. Alcohol	000 liters	3,537	390
<p>1. Higher than the 1964 actual production level without any addition to man-hours.</p> <p>2. Overutilization was due to insufficient supply of raw and intermediate materials and the temporary shut down.</p> <p>3. Product mix cannot profitably be changed.</p>				b. Butyl alcohol	ton	153	3,260
<p>Unit value of product: Market value f.o.b. before sales tax.</p> <p>Unit value of material: Market price c.i.f.</p> <p>- Acetic acid glacial is partly exported.</p> <p>- Production materials are all of domestic origin and delivered by road and railroad.</p> <p>- Freight rates are 2% for vestoline, 3% for alkathene and 4% for soda ash.</p>				c. Soda ash	ton	32	490.3
				d. Alkathene	kg.	11,487	7.4
				e. Vestoline	ton	30	6,600
				f. Consumable stores + others	000 Rs.	374	..
				** 12,137 car-boys (Rs. 16.3 each) + others Rs. 71,000.			
				3. Packaging materials: total			
				450 metal drums (Rs. 52 each); 11,400 metal cans (Rs. 7.2 each); 11,000 wooden crates (Rs. 6.8 each); **			
				4. Work performed by sub-contractors ( )			-
				5. Repairs & maintenance (materials & services purchased)			42
				Of which buildings Rs. 18,000; plant and machinery Rs. 21,000			
				6. Material inputs for auxiliary activities			6
				stationery and printing			
				7. Non-factor service inputs: total			122
				Transportation, insurance and storage (purchased separately) Rs. 53,000.			
<b>VI. VALUE ADDED TOTAL 1964 ( 000 Rs. )</b>				<b>SELECTED COEFFICIENTS</b>			
1. Wages & salaries (before income tax)		488		- Mach. equip., per employee in direct production on 1st shift: Rs. 59,400 1/			
- Employees in direct production		(..)		- Value added per employee: Rs. 15,330			
- Other employees		(..)		- Annual wage per employee in direct production: Rs. 2,773 2/			
2. Other expenditures for employees		43		- Variable input costs/gross production ratio: 53.3% 3/			
3. Annual depreciation allowance		975		- Gross profit/gross production ratio: 19.0% (at full capacity : 23.0%) 3/			
4. Rental paid		-		- Level of production at break-even point is approximately 59% of the 1964 actual level. 3/			
5. Sales & other indirect taxes (less subsidies)		-					
6. Other gross business income (before income tax)		1,192					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. Recent Expansion		Gross acquisition		%		of repair	
From 1962 to 1964							
a. Total Investment ( 000 Rs. )		1,726		2. Future Plan			
- Land		104		a. Investment proposed for the period 1967 to 1970			
- Land improvements		-		Total value (Rs. million)			
- Buildings		-		Of which: - Mach. & equipment 75 %			
- Other construction work		748		- Land improv. & bldg. 25			
- Machinery & equipment		763		- Land -			
- Tools & instruments		-		- Others -			
- Vehicles		32		b. Net increase in no. of employees envisaged for the same period:			
- Office furniture & fixtures		74		- Direct production: 30			
b. Corresponding increase:		From 1962 to 1964		- Auxiliary: 10			
In no. of employees		140		c. Purposes: Introduction of new products (benzyl acetate, mono-chloro acetate, sthyl, chloride) and large balanced expansion of the existing capacity in the same location.			
In annual gross production ( 000 Rs. )		4,200					
<b>VIII. SUPPLEMENT</b>				Structure of liquid assets and short term liabilities (000 Rs. end of 1964)			
Cash on hand and in bank		322		Taxes payable		23	
Accounts receivable		557		Accounts payable		479	
Deposits with others		610		Short term loans from commercial banks		1,202	
Advances etc.		507		Short term loans from industrial banks		1,173	
1/ Numerator is the 1964 replacement value.							
2/ Wages and salaries divided by total no. of employees.							
3/ Wages and salaries are excluded from variable cost.							



**MAJOR PRODUCTS:** Calcium carbide. Annual capacity output is about 5,000 tons of calcium carbide on three shifts.

**REPORTING UNIT:** A branch of an enterprise having two establishments <sup>1/</sup> with total assets of 8 million and employees 230 as of 1964. Founded in 1958.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
TOTAL BOOK VALUE ( 000 IE )	1,400	500
1. Land (rented)	-	-
2. Land improvements	-	-
3. Buildings (rented)	-	-
4. Other construction works	-	-
5. Machinery & equipment	1,200	400
6. Tools & instruments	-	-
7. Vehicles	200	100
8. Office furniture & fixtures	-	-

DETAIL OF I.5 (No.)	Total Bk. value	Avg. Age	Oper. rate	Depr. rate (%)	1964 replace value
a. Calcium carbide plant	1,000	6	A	20	2,000
b. Others	200	..	..	..	..

**II. INVENTORIES (end of 1964)**

	Actual	Normal
TOTAL VALUE ( 000 IE )	120	-
1. Direct production materials	50	-
2. Other input materials	20	-
3. Work in process	-	-
4. Finished products	50	-

- Normal inventories of finished products 3.6% of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 15 KW

Total load, capacity of trucks: - t

Part of equipment was domestically made; part imported.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED <sup>60</sup>	26	17	17
1. Direct production ( all male )	18	17	17
Annual total manhours (000)	(46,8)	(44,2)	(44,2)

2. Auxiliary activities ( <sup>8</sup> ) 8

**EDUCATIONAL BACKGROUND (No. of employees)**

	Univ. or higher		Sr. High sch. or equiv. Others	
	Engrs	Other	Engrs	Other
TOTAL	1	1	4	54
Management	1	1	-	-
Direct Production	-	-	-	-
Skilled	-	-	-	-
Semi-skilled	-	-	-	-
Unskilled	-	-	-	-
Auxiliary Activities	-	-	2	50
Skilled	-	-	-	-
Semi-skilled	-	-	2	-
Unskilled	-	-	-	4

- Average working hour per annum per direct production worker: 2,600 hrs.

- Proportion of motors occupied 100% on all shifts

- Conventional process employed in calcium carbide plant. High degree of mechanization and moderately automated.

<sup>1/</sup> The other establishment are engaging in manufacture of plastics.

<p><b>IV. ANNUAL PRODUCTION (1964)</b></p> <p>TOTAL VALUE OF PRODUCTION ( 000 I£ ) <u>1,400</u></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Product</th> <th style="text-align: center;">Unit</th> <th style="text-align: center;">Quantity Produced</th> <th style="text-align: center;">Unit Value ( I£ )</th> </tr> </thead> <tbody> <tr> <td>a. Calcium carbide</td> <td style="text-align: center;">ton</td> <td style="text-align: center;">3,850</td> <td style="text-align: center;">425</td> </tr> </tbody> </table> <p><b>CAPACITY OUTPUT:</b></p> <p>100% higher than the 1964 actual level with sufficient demand but without any addition to equipment and manhours.</p> <p>Unit value of product: Market value f.o.b. before sales tax Unit value of material: Market price c.i.f.</p> <ul style="list-style-type: none"> <li>- About half of calcium carbide is exported at special export price \$60 per ton.</li> <li>- Coke is imported at c.i.f. \$38 per ton and delivered by sea. Freight rate is about \$1 per ton.</li> </ul>	Product	Unit	Quantity Produced	Unit Value ( I£ )	a. Calcium carbide	ton	3,850	425	<p><b>V. INTERMEDIATE INPUTS (1964)</b></p> <p>TOTAL VALUE OF CONSUMPTION ( 000 I£ ) <u>1,000</u></p> <p>1. <u>Energy &amp; water: total</u> <u>18</u></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: center;">Quantity Consumed</th> <th style="text-align: center;">Unit Value ( I£ )</th> </tr> </thead> <tbody> <tr> <td>- Electricity</td> <td style="text-align: center;">000 kwh</td> <td style="text-align: center;">600</td> </tr> <tr> <td>- Water</td> <td style="text-align: center;">000 cu.m.</td> <td style="text-align: center;">40</td> </tr> <tr> <td colspan="3">(Consumption of liquid fuel is negligible)</td> </tr> <tr> <td><b>2. Direct production materials: total</b></td> <td></td> <td style="text-align: center;"><b>622</b></td> </tr> <tr> <td>a. Coke</td> <td style="text-align: center;">ton</td> <td style="text-align: center;">1,400</td> </tr> <tr> <td>b. Lime</td> <td style="text-align: center;">"</td> <td style="text-align: center;">1,900</td> </tr> <tr> <td>c. Electricity</td> <td style="text-align: center;">000 kwh</td> <td style="text-align: center;">12,400</td> </tr> <tr> <td>d. Others</td> <td style="text-align: center;">000 I£</td> <td style="text-align: center;">110</td> </tr> <tr> <td><b>3. Packaging materials: (metal product)</b></td> <td></td> <td style="text-align: center;"><b>120</b></td> </tr> <tr> <td>4. <u>Work performed by sub-contractors (</u></td> <td></td> <td style="text-align: center;"><u>-</u></td> </tr> <tr> <td>5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u></td> <td></td> <td style="text-align: center;"><u>70</u></td> </tr> <tr> <td><b>6. Material inputs for auxiliary activities</b></td> <td></td> <td style="text-align: center;"><b>30</b></td> </tr> <tr> <td><b>7. Non-factor service inputs: total</b></td> <td></td> <td style="text-align: center;"><b>140</b></td> </tr> <tr> <td colspan="3">Of which transport, insurance and storage services purchased separately amount to I£ 40,000</td> </tr> </tbody> </table> <p><b>VI. VALUE ADDED TOTAL 1964 ( 000 I£ ) <u>400</u></b></p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr> <td>1. Wages &amp; salaries (before income tax)</td> <td style="text-align: right;">180</td> </tr> <tr> <td>- Employees in direct production</td> <td style="text-align: right;">(..)</td> </tr> <tr> <td>- Other employees</td> <td style="text-align: right;">(..)</td> </tr> <tr> <td>2. Other expenditures for employees</td> <td style="text-align: right;">20</td> </tr> <tr> <td>3. Annual depreciation allowance</td> <td style="text-align: right;">100</td> </tr> <tr> <td>4. Rental paid</td> <td style="text-align: right;">50</td> </tr> <tr> <td>5. Sales &amp; other indirect taxes (less subsidies)</td> <td style="text-align: right;">-</td> </tr> <tr> <td>6. Other gross business income (before income tax)</td> <td style="text-align: right;">50</td> </tr> </tbody> </table> <p><b>VII. EXPANSION: HISTORY &amp; PLAN</b></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: center;">Gross acqui- sition</th> <th style="text-align: center;">Scrapped or sold</th> </tr> </thead> <tbody> <tr> <td><b>1. Recent Expansion</b> <u>None</u></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">From 19 to 19</td> <td></td> <td></td> </tr> <tr> <td>a. Total Investment ( )</td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">- Land</td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">- Land improvements</td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">- Buildings</td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">- Other construction work</td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">- Machinery &amp; equipment</td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">- Tools &amp; instruments</td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">- Vehicles</td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">- Office furniture &amp; fixtures</td> <td></td> <td></td> </tr> <tr> <td>b. 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Direct production materials: total</b>		<b>622</b>	a. Coke	ton	1,400	b. Lime	"	1,900	c. Electricity	000 kwh	12,400	d. Others	000 I£	110	<b>3. Packaging materials: (metal product)</b>		<b>120</b>	4. <u>Work performed by sub-contractors (</u>		<u>-</u>	5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>		<u>70</u>	<b>6. Material inputs for auxiliary activities</b>		<b>30</b>	<b>7. Non-factor service inputs: total</b>		<b>140</b>	Of which transport, insurance and storage services purchased separately amount to I£ 40,000			1. Wages & salaries (before income tax)	180	- Employees in direct production	(..)	- Other employees	(..)	2. Other expenditures for employees	20	3. Annual depreciation allowance	100	4. Rental paid	50	5. Sales & other indirect taxes (less subsidies)	-	6. Other gross business income (before income tax)	50		Gross acqui- sition	Scrapped or sold	<b>1. Recent Expansion</b> <u>None</u>			From 19 to 19			a. Total Investment ( )			- Land			- Land improvements			- Buildings			- Other construction work			- Machinery & equipment			- Tools & instruments			- Vehicles			- Office furniture & fixtures			b. Corresponding increase:	<u>From 19</u>	<u>to 19</u>	In no. of employees			In annual gross production ( )		
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5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>		<u>70</u>																																																																																																																	
<b>6. Material inputs for auxiliary activities</b>		<b>30</b>																																																																																																																	
<b>7. Non-factor service inputs: total</b>		<b>140</b>																																																																																																																	
Of which transport, insurance and storage services purchased separately amount to I£ 40,000																																																																																																																			
1. Wages & salaries (before income tax)	180																																																																																																																		
- Employees in direct production	(..)																																																																																																																		
- Other employees	(..)																																																																																																																		
2. Other expenditures for employees	20																																																																																																																		
3. Annual depreciation allowance	100																																																																																																																		
4. Rental paid	50																																																																																																																		
5. Sales & other indirect taxes (less subsidies)	-																																																																																																																		
6. Other gross business income (before income tax)	50																																																																																																																		
	Gross acqui- sition	Scrapped or sold																																																																																																																	
<b>1. Recent Expansion</b> <u>None</u>																																																																																																																			
From 19 to 19																																																																																																																			
a. Total Investment ( )																																																																																																																			
- Land																																																																																																																			
- Land improvements																																																																																																																			
- Buildings																																																																																																																			
- Other construction work																																																																																																																			
- Machinery & equipment																																																																																																																			
- Tools & instruments																																																																																																																			
- Vehicles																																																																																																																			
- Office furniture & fixtures																																																																																																																			
b. Corresponding increase:	<u>From 19</u>	<u>to 19</u>																																																																																																																	
In no. of employees																																																																																																																			
In annual gross production ( )																																																																																																																			
<p><b>VIII. SUPPLEMENT</b></p> <p>1/ Total wages and salaries divided by total number of employees.</p> <p>2/ All wages and salaries are considered as fixed cost.</p>																																																																																																																			

Israel : 311 - (6)

**MAJOR PRODUCTS:** Formalin. Annual capacity is about 11,000 tons of formalin with three shifts. (Only a guardman is on post on 2nd and 3rd shift.)

**REPORTING UNIT:** A small one-establishment enterprise with total assets I£ 2.5 million and employees 25 as of 1964. Founded in 1961.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
TOTAL BOOK VALUE ( 000 I£ )	2,000	1,160
1. Land (30,000 sq.m.)	-	-
2. Land improvements	-	-
3. Buildings (floor space: 10,000 sq.m.)	200	130
4. Other construction works	-	-
5. Machinery & equipment	1,750	1,000
6. Tools & instruments	-	-
7. Vehicles	50	30
8. Office furniture & fixtures	-	-

Total Bk. value def. depr.	Avg. Age (Yr.)	Depr. rate (%)
1,650 (\$550,000)	4	20
100	..	..

**DETAIL OF I.5 (No.)**

a. Principal equipment, 30 ton per 24 hours	}	1,650 (\$550,000)	4	A	20
b. Heat changers					
c. Reactors					
d. Evaporators					
e. Distillation equipment					
f. Refrigerators					
g. Others					

**II. INVENTORIES (end of 1964)**

	Actual	Normal
TOTAL VALUE ( 000 I£ )	400	-
1. Direct production materials		
2. Other input materials	..	
3. Work in process		
4. Finished products		
- Normal inventories of finished products .. % of annual gross production		
- Seasonal variations:	None	

Capacity of electr. motors: 100 KW

Total load, capacity of trucks: 20 t

Nominal installed capacity of electricity generator: 325 KW (not used during 1964).

(a) was imported from Germany and the rest were either domestically produced or imported. Most of the machines were purchased when the firm was established.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED 25	25	1	1
1. Direct production ( all male )	10	1	1
Annual total manhours (000)	(25.0)	(2.9)	(2.9)
a. Formalin	10	1	1
2. Auxiliary activities ( m. 10 f. 3 )	13		
a. Management and auxiliary activities	13		

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	
		Engi-ROSK	Other
3	-	4	18
<b>Management</b>			
3	-	-	-
<b>Direct Production</b>			
-	-	-	-
<b>Skilled</b>			
-	-	-	-
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	-	12
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	-	-	-
<b>Semi-skilled</b>			
-	-	1	-
<b>Unskilled</b>			
-	-	3	6

- Average working hours per annum per direct production worker: 2,567 hrs.
- Proportion of motors occupied: 60% on all three shifts.
- Conventional process of methyl alcohol oxidation is employed.
- Excellent degree of mechanization and fairly automated.

IV. ANNUAL PRODUCTION (1964)			
TOTAL VALUE OF PRODUCTION ( 000 I£ ) <u>2,033</u>			
Product	Unit	Quantity Produced	Unit Value ( I£ )
a. Formalin	ton	5,800	350

**CAPACITY OUTPUT:**

90% higher than the 1964 actual level with sufficient demand and with no addition to manhours.

Unit value of product: Market value f.o.b. before sales tax  
 Unit value of material: Market price c.i.f.

- Formalin is partly exported.
- Methyl alcohol is imported at c.i.f. \$100 per ton (of which \$20 is for freight).

VI. VALUE ADDED		TOTAL 1964 ( 000 I£ )	311
1. Wages & salaries (before income tax)			170
- Employees in direct production			(..)
- Other employees			(..)
2. Other expenditures for employees			20
3. Annual depreciation allowance			100
4. Rental paid			1
5. Sales & other indirect taxes (less subsidies)			-
6. Other gross business income (before income tax)			20

VII. EXPANSION: HISTORY & PLAN			
		Gross acquisition	Scrapped or sold
1. Recent Expansion			
From 1962 to 1964			
a. Total Investment ( 000 I£ )		250	
- Land		-	
- Land improvements		-	
- Buildings		-	
- Other construction work		20	
- Machinery & equipment		200	
- Tools & instruments			
- Vehicles		30	
- Office furniture & fixtures			
b. Corresponding increase:		From 1961	to 1964
In no. of employees (direct production)		12	12
In annual gross production ( 000 I£ )		1,300	2,033

**VIII. SUPPLEMENT**

1/ Total wages and salaries divided by total employees.

2/ Total wages and salaries considered as fixed cost.

V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF CONSUMPTION ( 000 I£ ) <u>1,722</u>			
1. Energy & water: total <u>40</u>			
	Unit	Quantity consumed	Unit value ( I£ )
- Electricity	000 kwh	700	35
- Solar oil	000 litres	146	100
- Water	000 cu.m.	4.5	100
2. Direct production materials: total <u>1,500</u>			
e. Methyl alcohol	ton	5,000	300
3. Packaging materials: total <u>5</u>			
4. Work performed by sub-contractors ( ) <u>-</u>			
5. Repairs & maintenance (materials & services purchased) <u>40</u>			
6. Material inputs for auxiliary activities <u>2</u>			
7. Non-factor service inputs: total <u>135</u>			
Transportation, insurance and storage (purchased separately) I£ 75,000			

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: I£ 175,000
- Value added per employee: I£ 12,440
- Annual wage per employee in direct production: I£ 6,800 1/
- Variable input costs/gross production ratio: 76.0% 2/
- Gross profit/gross production ratio: 1.0%
- Gross profit/gross production ratio at full capacity: 11.9% 2/
- Level of production at break-even point is approximately 96 % of the 1964 actual level. 2/

2. Future Plan	
a. Investment proposed for the period 1966	
Total value ( )	<u>100</u> \$
Of which:	
- Mach. & equipment	100
- Land improv. & bldg.	-
- Land	-
- Others	-
b. Net increase in no. of employees envisaged for the same period:	
- Direct production:	-
- Auxiliary:	-
c. Purpose:	Introduction of new products

**MAJOR PRODUCTS:** Coal-based basic organic chemicals and portland cement; Installed annual capacity is about 1,000 tons of coal-based basic organic chemicals and 870,000 tons of portland cement on continuous three-shift operation.

**REPORTING UNIT:** A multi-establishment enterprise, having several separately located factories; total assets ¥ 17,000 million (net worth ¥ 3,000 million) and 1,626 employees as of 1964. Founded in 1956.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (¥ million)	<u>16,300</u>	<u>9,532</u>
1. Land (99,000 m <sup>3</sup> )	124	601
2. Land improvements	1,728	1,278
3. Buildings (total floor space 103,000 m <sup>3</sup> )	2,480	2,123
4. Other construction works	242	283
5. Machinery & equipment	11,206	4,969
6. Tools & instruments	278	193
7. Vehicles	242	85
8. Office furniture & fixtures		

DETAIL OF 1.5 (No.)	Total	Avr.	Depr.	196	
	bk. value	Age	Oper. rate	replac.	
	bef. deprec.	(Yr.)	Cond. (%)	value	
a. Equipment for manufacturing ammonium sulphate - No. 1	..	29	C	26.8	300
b. Equipment for manufacturing ammonium sulphate - No. 2	279	7	B	"	300
c. Light oil treating equipment -No. 1	..	29	"	"	300
d. Light oil treating equipment -No. 2	324	7	A	"	300
e. Benzene refining equipment	1,130	7	"	"	1,100
f. Coal tar fractionation equipment	346	8	B	"	300
g. Naphthalene refining equipment	..	20	C	"	..
h. Natural phenol recovery equipment	246	6	A	"	250
i. Pyridine recovery equipment	29	5	"	"	100
j. Equipment for manufacturing diphenyl anthraquinone	64	5	"	30.4	70
k. Equipment for manufacturing anthraquinone	112	5	B	26.8	120
l. Equipment for manufacturing phthalic anhydride	940	7	A	34.0	100
m. Ammonia recovery equipment	1,653	4	"	24.0	1,500
n. Equipment for manufacturing methanol	425	2	"	"	1,500
o. Furnace for manufacturing cement	275	8	B	14.0	250
p. Equipment for manufacturing slag wool	61	4	A	18.4	60
q. Blast furnace slag ballast	77	1	"	26.4	78

**II. INVENTORIES**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> (¥ million)	<u>94.5</u>	<u>+ 1</u>
1. Direct production materials	17.0	+ 6
2. Other input materials	.5	-
3. Work in process	29.0	+ 3
4. Finished products	48.0	- 1

- Normal inventories of finished products 0.5% of annual gross production

- Seasonal variations:

Capacity of electr. motors: 47,000 KW  
 " " prime movers: 5,400 HP  
 " " electr. furnaces: 1,400 KW  
 Total load, capacity of railway: 400 Kw  
 Total length of railway tracks: 12 Km.

The itemized machines were all domestic - locally made. Average age of machinery (54% of total) is 6 years. The enterprise expanded its capacity by more than 100% during 1960 - 64, and is still envisaging another expansion programme for 1966 - 68. (See VII.)

**EXTERNAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 1,626	<u>1,302</u>	<u>166</u>	<u>158</u>
1. Direct production (all male)	<u>310</u>	<u>154</u>	<u>148</u>
Annual total manhours (000)	(800)	(450)	(430)
a. 1st. production section experiment	21	5	5
b. Tar	34	19	18
c. Phthalic anhydride	19	10	10
d. Anthraquinone	9	7	7
e. 2nd. production section experiment	16	4	4
f. Benzene	15	7	7
g. Ammonium sulphate	27	14	14
h. 3rd. production section experiment	17	2	2
i. Natural phenol, pyridines, naphthalene, anthracene etc.	39	20	17
j. 4th. production section experiment	12	4	4
k. Ammonia	15	11	11
l. Methanol	11	10	10
m. Cement production section experiment	28	6	4
n. Clinker	15	12	12
o. Cement	32	23	23
2. Auxiliary activities (m. 952 f. 62)	992	12	10
a. Storage, receipt & shipment	20	2	-
b. Power supply	19	9	9
c. Measure maintenance	16	1	1
d. Electricity maintenance	20	-	-
e. Construction	15	-	-
f. General maintenance	65	-	-
g. Design	5	-	-
h. Laboratory	128	-	-
i. Administration and other office work	7.3	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Other
Engi- Masters			
<b>TOTAL</b>	55	137	1,170
<b>Management</b>	55	14	3
<b>Direct Production</b>			
Skilled	-	-	492
Semi-skilled	-	-	-
Unskilled	-	-	-
<b>Auxiliary Activities</b>			
Skilled	-	123	675
Semi-skilled	-	-	-
Unskilled	-	-	-

- Actual hours worked in 1964 per direct production worker: 2,745 hours.

- Normal work hours per day: 8 hours. Normal work days per annum: 286 days.

- Proportion of productive facilities occupied: 62% for motors and 53% for furnaces on all three shifts.

**Technological features:**

b): Continuous fractionation of tar. Fair mechanisation & excellent automation.  
 c) & d): Catalytic air-oxidation. Moderately mechanised. Automation is excellent in c) & fair in d).  
 f): Hydro-treating for refining crude benzene; continuous fractionation of benzene. Highly mechanised and automated.

1): Highly mechanised & automated continuous fractionation; moderately mechanised & automated bath distillation.

n): Wet long kiln. mechanisation & automation are fair.  
 o): Compound tube mill; highly mechanised & moderately automated.

- **Skilled workers** in direct production are engaged in the production of portland blast-furnace cement and in the synthesis, reaction, oxidation, distillation and low temperature separation for the production of tar, benzene, ammonium, methanol, phthalic anhydride, etc.

Japan : 311/334 - (3)

## IV. ANNUAL PRODUCTION (1964)

TOTAL VALUE OF PRODUCTION ( ¥ million ) 10,596

Product	Unit	Quantity Produced	Unit Value ( ¥ 000 )
a. Benzene	ton	57,600 *	30
b. Tar	"	142,000 *	10
c. Natural phenole	"	4,400	100
d. Pyridine	"	510 *	370
e. Phthalic anhydride	"	10,810	83
f. Methanol	"	26,000	26
g. 9% naphthalene	"	16,000 *	28
h. Anthracene	"	2,430 *	4.3
i. Ammonium	"	39,063	29
j. Ammonia sulphate	"	49,000	14
k. Other coal-based basic organic chemicals (anthraquinone, etc.)	¥ mil.	25.5	..
l. Cement	ton	754,000	4.6

\* 2,100 t benzene, 3,000 t tar, 200 t pyridines, 980 t slag wool, 14,500 t naphthalene and 2,500 t anthracene internally used and not counted in value of production.

## CAPACITY OUTPUT: 15% higher than the 1964 actual

production level without any additional man-hours.

Product - mix is not flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- IV. (a) to (m) are partly exported and partly used for production of exports.

## V. INTERMEDIATE INPUTS (1964)

TOTAL VALUE OF CONSUMPTION ( ¥ million ) 5,393

1. Energy & water: total	Quantity consumed	Unit value ( ¥ 000 )
- Water	mil. m <sup>3</sup>	17
- Electricity	mil. KWH	200
- Coal	000 tons	93
- Liquid fuel	"	35
- Gas	mil. m <sup>3</sup>	30
2. Direct production materials: total		2,310
a. Coal tar	000 tons	190.2
b. Ammonia	"	12.0
c. Benzene gas	"	10.0
d. 98% sulfuric acid	"	40.0
e. Hydrogen	"	90.0
f. Nitrogen	"	38.0
g. Methane gas	"	39.0
h. Lime stone	"	453.0
i. Ganister	"	59.0
j. Open-hearth furnace slag	"	13.5
k. Clay	"	21.0
l. Gypsum	"	36.1
m. Granulated slag	"	390.0
n. Others	¥ mil.	884
3. Packaging materials: total		210
8,800,000 cement bags; 330,000 bags for phthalic anhydride ( ¥ 30.7 each); 139,000 seals; 29,000 straw mats ( ¥ 36 each); 1,600 rolls of rope ( ¥ 270/roll) and 9,000 jute bags ( ¥ 40/ bag).		
4. Work performed by sub-contractors ( )		260
5. Repairs & maintenance (materials & services purchased)		360
6. Material inputs for auxiliary activities		-
Included in V.2. n.		
7. Non-factor service inputs: total		450
Of which transportation, insurance and storage (purchased separately) ¥ 200 million.		

## VI. VALUE ADDED TOTAL 1964 ( ¥ million ) 5,203

1. Wages & salaries (before income tax)	
- Employees in direct production	559
- Other employees	1,031
2. Other expenditures for employees	103
3. Annual depreciation allowances	1,900
4. Rental paid (land 90; bldgs. 60; others 50)	200
5. Royalties	210
6. Other gross business income (before income tax)	1,200

## SELECTED COEFFICIENTS

- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 37,045,000 ( ¥ 27,100,000 1/)
- Value added per employee: ¥ 3,200,000
- Annual wage per employee in direct production: ¥ 913,000
- Variable input costs/gross production ratio: 43.3% 2/
- Gross profit/gross production ratio: 11.3% (at full capacity: 17.2%)
- Level of production at break-even point is approximately 80 % of the 1964 actual level.

## VII. EXPANSION: HISTORY &amp; PLAN

	Gross acquisition	Scrapped or sold
1. Recent Expansion		
From 1960 to 1964		
a. Total Investment ( ¥ million )	8,900	61.7
- Land	110	.2
- Land improvements	771	1.7
- Buildings	1,197	15.6
- Other construction work	-	-
- Machinery & equipment	6,593	31.9
- Tools & instruments	184	6.7
- Vehicles	45	5.6
- Office furniture & fixtures	-	-
b. Corresponding increase:	From 1960	to 1964
In no. of employees	1,405	1,626
In annual gross production ( ¥ billion )	8	11

## 2. Future Plan

- a. Investment proposed for the period 1966 to 1968
 

Total value ( ¥ million )	1,700
Of which:	
- Mach. & equipment	96
- Land improv. & bldg.	4
- Land	-
- Others	-
- b. Net increase in no. of employees envisaged for the same period:
 

- Direct production:	37
- Auxiliary:	13
- c. Purpose: Introduction of a steam reforming process, and selective expansion of the existing capacity concentrating on ammonium naphthalene, tars & phthalic anhydride.

## VIII. SUPPLEMENT

## Structure of liquid assets and short term liabilities (end of 1964; ¥ million).

Cash on hand and in bank	2,279	Taxes payable & accounts payable	7,283
Marketable securities	424		
Accounts receivable	2,565	Short-term loans from commercial banks	1,640
Prepaid expenses, etc.	393		

1/ Numerator is the 1964 replacement value; the denominator includes the workers in power supply, measure maintenance, electricity maintenance, construction and general maintenance.

2/ Wage and salaries are excluded from variable cost.

An old but modernized enterprise, founded in 1938, manufacturing sulphuric acid for local markets. Annual capacity output is slightly less than 100,000 t of sulphuric acids with three shifts. Raw materials are all domestic origins. Located at about 400-500 km. from the source of pyrite concentrates; also has good communication lines with consumers.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		3,198	3,450	Gross expenditures	520	9	8	17	
Buildings & land improvements		345	450	Retirements	97	329	564	609	
Machinery & equipment		2,853	3,000	Calculated average age of fixed assets: <u>10.8</u> years					
Other capital assets		-	-	<b>Electric motors:</b>					
				Total installed capacity: <u>1,512</u> KW					
				Of which actually operated in 1963:					
				1st shift <u>100</u> %; 2nd shift <u>88</u> %; 3rd shift <u>88</u> %					
<b>Major machinery crucial for determining the overall production capacity:</b> (70% imported).				<b>Technological features:</b>					
Sulphuric acid 60 Bé (tower process): Equipment for electrolytic purification of SO <sub>2</sub> (metallurgical gas); towers for production of nitrosyl-sulphur acid, etc. with the lowest class of optimum capacity (3 shifts).				Pyrite concentrates are roasted to produce SO <sub>2</sub> , which in turn is absorbed to form sulphuric acid 66 Bé.					
Sulphuric acid 66 Bé (contact process): Equipment for roasting pyrites, dry and damp (electrostatic) purification of gases; equipment for production and absorption of SO <sub>2</sub> , etc. (small capacity but well automated). (3 shifts).				Sulphuric acid 60 Bé is obtained through the tower system. Highly mechanized and automated. Obsolete equipment has been extensively scrapped during the recent years, and construction of a new plant doubling the present capacity is being planned.					
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Tech.	Eng.	Low	Others	Total
1. Factory workers:									
Total	123 persone	49	37	37	Univ. or higher	1	-	-	1
	(259 thous. manhrs.)	(101)	(79)	(79)	Tech. Higher sch.	3	-	-	3
					Secondary sch.	4	3	-	7
					Primary school	-	-	-	130
	- Sulphuric acid	49	37	37	IV. INTERMEDIATE INPUTS				
	(both 60 Bé and 66 Bé)				Quantity		Value (Drs. Million)		
2. Non-factory workers:		18 persone			TOTAL actual consumption 1963				
	(40 thous. manhours)				681				
					1. Energy inputs: total				
					65				
					- Electricity				
					4,481 KWH				
					65				
					2. Major production materials: total				
					483				
					- Pyrite concentrates				
					33,691 t				
					310				
					- Nitric acid				
					380 t				
					32				
					- Sulphurous anhydride gas				
					..				
					141				
					3. Repairs & maintenance: total				
					99				
					4. Other material & non-factor service inputs (services)				
					34				
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	V. VALUE ADDED (1963) (Drs. Million)					
TOTAL actual revenue output 1963*			1,538	TOTAL (except turnover tax)					
				842					
- Sulphuric acid 66 Baumé		45,162 t	768	- Wages of factory workers					
				79					
- Sulphuric acid 60 Baumé		46,553 t	745	- Salaries of non-factory workers					
				16					
- Pyrite ash		21,226 t	25	- Depreciation					
				203					
				- Interests paid					
				144					
				- Other accumulation					
				400					
				(Turnover tax)					
				(15)					
				VI. SUPPLEMENT Future plans:					
				SELECTION COEFFICIENTS					
Construction of a new plant of sulphuric acid with the capacity of 210,000 t of 100% H <sub>2</sub> SO <sub>4</sub> .				- Mech. & equip. per factory worker on 1st shift: Drs. 24,195,000 <sup>1/</sup>					
				- Value added per employee: Drs. 5,972,000					
				- Annual wage per factory worker: Drs. 642,000					
				- Variable input cost/gross production ratio: 41.2 %					
				- Gross accumulation/gross production ratio: 1/ 35.7 %					
				(at full capacity) 36.6 %					
				- Level of production at break-even point: 39 % of the 1963 actual level.					
1/ "Gross accumulation" includes interests paid.									

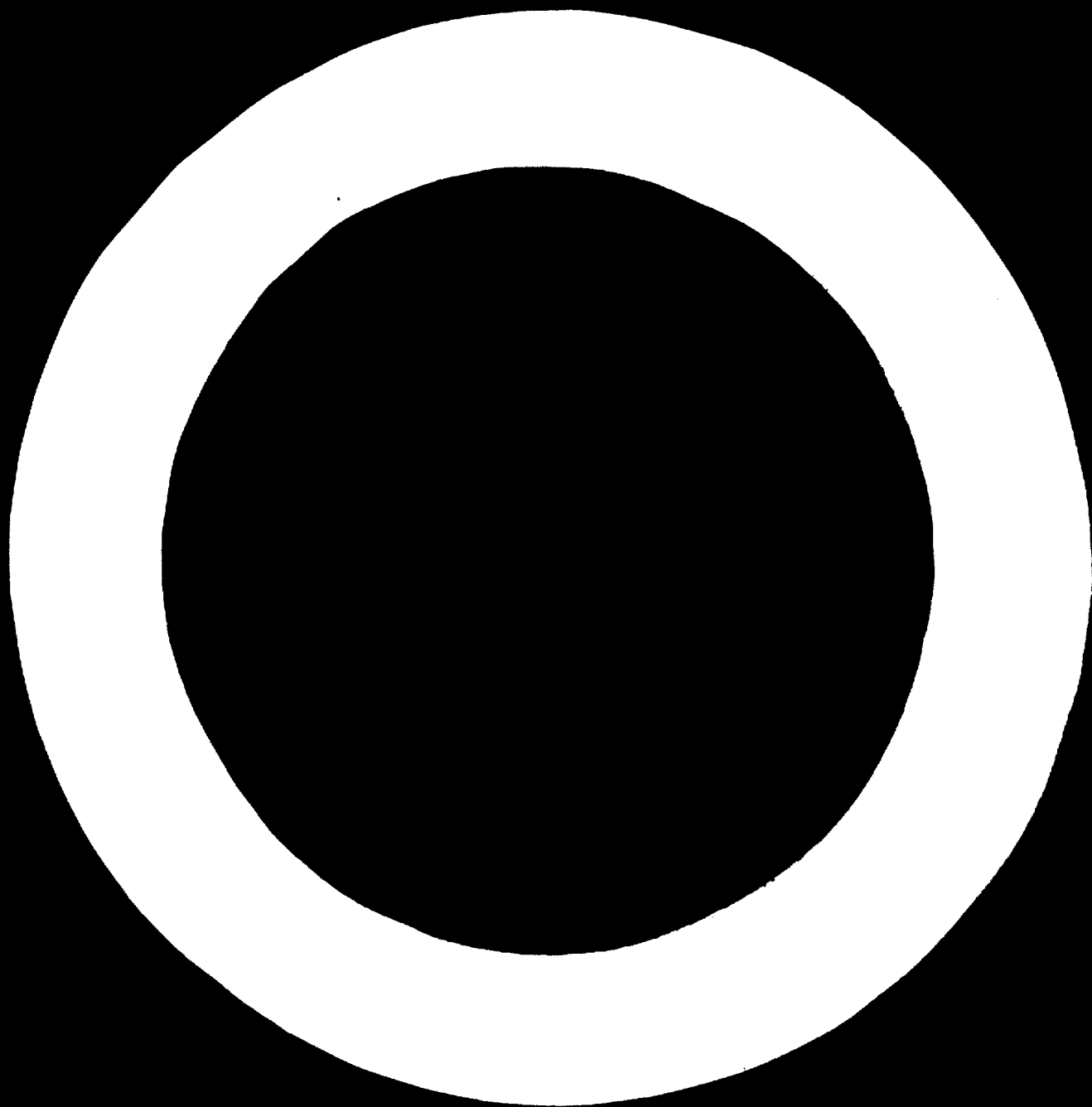
A new factory, founded in 1961, manufacturing sulphuric acid. Annual capacity output is some 220,000 t with three shifts. Located at the source of raw materials.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)	
TOTAL (Drs. million)		6,007	7,200	1958-60	1961-65
Buildings & land improvements		937	1,200	—	223
Machinery & equipment		4,084	5,000	—	914
Other capital assets		986	1,000	Retirements	
				Calculated average age of fixed assets: 2.0 years	
<u>Major machinery crucial for determining the overall production capacity:</u> (90% imported).		<u>Electric motors:</u>			
Sulphuric acid: equipment for electrostatic purification of metallurgic gases of the SO <sub>2</sub> group (3 shifts). Towers for production of nitrosyl-sulphuric acid and for stabilisation; equipment for gases and liquids; refrigerators; equipment for control and regulation of the processes.		Total installed capacity: 2,776 KW			
		Of which actually operated in 1965:			
		1st shift 100 %; 2nd shift 100 %; 3rd shift 100 %			
		<u>Technological features:</u>			
		Sulphuric acid is produced according to the nitric process of "Petersann Towers" (towers for production of nitrosyl-sulphuric acids and for stabilisation). Highly mechanized and automated. Closely connected with a superphosphate producing factory as to sales of the product.			
II. LABOUR (1965)		TOTAL no. of employees: 74		<u>Educational background of workers:</u>	
1. Factory workers:		1st shift	2nd shift	3rd shift	
Total 66 persons		38	14	14	
(144 thous. manhrs.)		(84)	(36)	(24)	
Sulphuric acid		38	14	14	
2. Non-factory workers: 8 persons		(18 thous. manhours)		<u>Educational background of workers:</u>	
				Techn.	Econ.
				Law	Others
				Total	
				Univ. or higher	1
				Tech. Higher sch.	—
				Secondary sch.	7
				Primary school	66
					66
III. ANNUAL PRODUCTION & CAPACITY		Quantity		Value (Drs. Million)	
TOTAL actual revenue output 1965*		2,001		844	
Sulphuric acid 66 B4		185,411 t		2,001	
* Includes turnover tax.					
<u>Capacity output:</u>					
Sulphuric acid 66 B4 : 217,500 - Rate of utilisation is 85%.					
Underutilisation due to lack of co-ordination in production scheduling between this establishment and the brother establishment producing superphosphate.					
				IV. INTERMEDIATE INPUTS	
				Quantity	Value (Drs. Million)
				TOTAL actual consumption 1965	844
				1. Energy inputs: total	151
				- Electricity	10,811 KWH
				2. Major production materials: total	605
				- Nitric acid	1,699 t
				- Residual gases with 5% SO <sub>2</sub>	844,115,000 m <sup>3</sup>
				3. Repairs & maintenance: total	45
				4. Other material & non-factor service inputs (services only)	43
VI. SUPPLEMENT		Future plans:		V. VALUE ADDED (1965) (Drs. Million)	
Construction of another factory to expand the present capacity for sulphuric acid.				TOTAL (except turnover tax)	
1/ "Gross accumulation" includes interests paid.				1,155	
				- Wages of factory workers	
				- Salaries of non-factory workers	
				- Depreciation	
				- Interests paid	
				- Other accumulation (Turnover tax)	
				SELECTED COEFFICIENTS	
				- Mach. & equip. per factory worker on 1st shift: Drs. 13,158,000	
				- Value added per employee: Drs. 15,608,000	
				- Annual wage per factory worker: Drs. 939,000	
				- Variable input cost/gross production ratio: 41 %	
				- Gross accumulation/gross production ratio: 1/ 34.8 %	
				(at full capacity, 40 %)	
				- Level of production at break-even point: 37 % of the 1965 actual level.	



An enterprise, founded in 1952, producing ferro-chrome, ferro-silicon, calcium carbide and calcium cyanamide. Annual capacity output is 2,000 t of ferro-chrome and ferro-silicon; 75,000 t of calcium carbide and calcium cyanamide. Strongly export-oriented (62% of the products are exported). Imported materials (anthracite, coke, pickled metal sheets, graphite electrodes, calcium fluoride etc.) account for 20% of the total material consumption. Favorably located with respect to the source of raw materials.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		10,811	12,660	1,992	1,021	3,283	3,867		
Buildings & land improvements		2,981	4,400	-	-	828	1,617		
Machinery & equipment		6,591	6,900						
Other capital assets		1,239	1,360						
<b>Major machinery crucial for determining the overall production capacity:</b> (half of which imported)				Calculated average age of fixed assets: <u>5.8</u> years					
Ferro-alloys: Equipment for transportation, preparation of raw materials and feeding them into ovens; electro-ovens for production of ferro-alloys (medium capacity with full automation); 3 shifts.				Electric motors: <u>4,354</u> KW					
Calcium carbide: Equipment for production of lime, transporting and feeding roast lime and cokes (anthracite) into electro-ovens with rotating basins (medium capacity with full automation); 3 shifts.				Total installed capacity: _____ KW					
				Of which actually operated in 1963: _____ KW					
				1st shift <u>100</u> %; 2nd shift <u>88</u> %; 3rd shift <u>86</u> %					
				<b>Technological features:</b> Ferrochrome: Reduction of chromite in electro-ovens. Ferrosilicon: Reduction of quartzite with carbon in electric torch ovens. Calcium carbide: Reduction of lime with carbon in electric ovens. Calcium cyanamide: Obtained in rotating ovens from calcium carbide and nitric acid. Automation is at the world average level. The present product-mix is regarded as very appropriate.					
II. LABOUR (1963)		TOTAL no. of employees: 1,356			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Law	Others	Total
1. Factory workers:					25	3	3	2	33
Total 1,12 persons		652	258	216	5	6	1	-	12
(1,427 thous. manhrs.)		(1,427)	(563)	(468)	29	28	-	5	62
- Ferrochrome		15	31	69	-	-	-	1,249	1,249
- Ferro-silicon		23	63	36					
- Calcium carbide		17	55	35					
- Calcium cyanamide		44	27	25					
- Maintenance and other		235	37	25					
2. Non-factory workers:		236 persons							
		(525 thous. manhrs.)							
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		IV. INTERMEDIATE INPUTS				
TOTAL actual revenue output 1963			7,023		Quantity		Value (Drs. Million)		
- Ferrochrome		2,133 t	3,778		TOTAL actual consumption 1963 <u>4,957</u>				
- Ferro-silicon		2,733 t	2,381		1. Energy inputs: total <u>1,674</u>				
- Calcium carbide		29,114 t	1,455		- Electricity 203,000 mwh <u>1,095</u>				
- Calcium cyanamide		14,461 t	79		- Coke 15,448 t <u>415</u>				
					- Anthracite 5,919 t <u>129</u>				
					- Lignite 11,002 t <u>35</u>				
Includes turnover tax on sold products.					2. Major production materials: total <u>2,804</u>				
Capacity output:					- Quartzite 26,122 t <u>131</u>				
Ferrochrome 1,000 t		} overall rate of utilization is 64. %			- Chrome ore and concentrates 24,898 t <u>1,136</u>				
Ferro-silicon 1,000 t					- Limestone 43,810 t <u>219</u>				
Calcium carbide 35,000 t					- Pickled metal sheets 1,296 t <u>162</u>				
Calcium cyanamide 3,000 t					- Calcium carbide (purchased) 12,148 t <u>607</u>				
With the same labor force on the first shift the present capacity can be fully occupied.					- Other materials .. <u>549</u>				
					3. Repairs & maintenance: total <u>224</u>				
					4. Other material & non-factor service inputs (services only) <u>255</u>				
VI. SUPPLEMENT		A new product, sodium sulphide (to be made from chromite and salt), will be introduced to the production line.			V. VALUE ADDED (1963) (Drs. Million)				
1. Of which only Drs. 3 million retained internally (as against Drs. 218 million out of Drs. 601 million in the previous year).					TOTAL (except turnover tax) <u>2,525</u>				
2. Wages and salaries regarded as fixed cost.					- Wages of factory workers <u>620</u>				
3. Gross accumulation includes interests paid.					- Salaries of non-factory workers <u>271</u>				
					- Depreciation <u>591</u>				
					- Interests paid <u>740</u>				
					- Other accumulation <u>303 1/2</u>				
					- (Turnover tax) <u>(141)</u>				
					<b>SELECTED COEFFICIENTS</b>				
					- Mech. & equip. per factory worker on 1st shift: Drs. 10,600,000				
					- Value added per employee: Drs. 1,860,000				
					- Annual wage per factory worker: Drs. 553,000				
					- Variable input cost/gross production ratio: <u>2/</u> 59.8 %				
					- Gross accumulation/gross production ratio: <u>3/</u> 13.9 %				
					(at full capacity) 18.2 %				
					- Level of production at break-even point: <u>65</u> % of the 1963 actual level.				



**MAJOR PRODUCTS:** Hydrogenated vegetable oil. Annual capacity output is about 25,000 tons on three shift operation. (The product is under a Governmental control.)

**REPORTING UNIT:** Branch of an eleven-establishment enterprise with total assets Re. 50 million (net worth Re. 20 million) and employees 5,200 as of 1964 (see note below). Founded in 1939. This branch, also founded in 1939, has 482 employees.

I. FIXED CAPITAL ASSETS (end of year)	1963		1964	
	After deprec.		After deprec.	
TOTAL BOOK VALUE * (Rs. million)	(25.41)		(22.69)	
1. Land	(.52)		(.52)	
2. Land improvements	(-)		(-)	
3. Buildings	(8.48)		(8.16)	
4. Other construction works	(.87)		(.82)	
5. Machinery & equipment	(14.29)		(12.10)	
6. Tools & instruments	(-)		(-)	
7. Vehicles	(.54)		(.44)	
8. Office furniture & fixtures	(.71)		(.65)	

\* Refers to the company as a whole.

DETAIL OF I.5 (No.)

	Total Bk. value bef. deprec.	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace. value
a. Neutralisers capacity 10 tons (9)	} 20	} C	} 10	} Approx. Re. 2 million	}
b. Washers capacity 10 tons (4)					
c. Delaval soap separator (1)					
d. Bleachers capacity 3.3 - 7 tone (7)					
e. Filter presses (9)					
f. Auto-claves capacity 3 - 20 tons (3)					
g. Deodorisers capacity 3 - 13.5 tons (4)					
h. Coolers capacity 11 tone (2)					
i. Hydrogen generators (7)					
j. Packing machines capacity 4 - 16.5 Kg. (4)					
k. Seaming machines (2)					
l. Refrigerators diffuser type, capacity 100 tons/hr. (3)					
m. Boilers Lancashire capacity 6,000 tone/hr. (6)					

II. INVENTORIES (end of 1964)	Actual	Normal
TOTAL VALUE (Re. million)	1.27	+ 88 %
1. Direct production materials	1.12	+ 50
2. Other input materials	-	
3. Work in process	.06	+400
4. Finished products	.09	+350
- Normal inventories of finished products - % of annual gross production		
- Seasonal variations: ..		

Capacity of electr. motors: 2,099 KW

Total load, capacity of trucks: - t

- a), b), d), e) and h) were domestically produced. The others were imported

- The last major expansion/renovation of manufacturing processes and building took place during 1950 - 52 with approximate investments of Rs. 3.5 million.

**GENERAL CONDITIONS:**

- Local transport, recreational and educational facilities, excellent; long distance transport, utilities and residential facilities, fair.

III. LABOUR (1964 average)	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED	359	62	61
1. Direct production (all male)	182	58	57
Annual total manhours (000)	(540)	(171)	(168)
a. Production unit	95	58	57
b. Tin factory	87	-	-
2. Auxiliary activities (all male)	177	-	-
a. Oil warehouses	7	4	4
b. Hydrogenated oil warehouses	41	-	-
c. Work shop	45	-	-
d. Managerial supervision and other activities	84	-	-

1/ Actually referred to as "general shift".

EDUCATIONAL BACKGROUND (No. of employees)			
Engrs	Other	Sr. High sch. or equiv.	
		Others	Others
TOTAL	80	96	304
<b>Management</b>			
-	20	3	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	48	40
<b>Semi-skilled</b>			
-	-	15	94
<b>Unskilled</b>			
-	-	-	100
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	60	30	10
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	-	60

Actual hours worked per annum per direct production worker : 2,960 hours.

Proportion of motors occupied: 85% on the 1st. shift 80% on the 2nd. shift and 75% on the 3rd. shift.

**Technological features:**

a) Neutralisation, filtration, catalytic hydrogenation and deodorisation of vegetable oil. Poorly mechanised and automated.

Skilled workers in direct production are: operators of various machines, vacuum engine, compressors, bleaching machines, etc.

**Structure of the parent enterprise.**

Other branch establishments are engaged in manufacturing: (1) paints and varnishes (172 employees), (2) refined sugar (1,091 employees), (3) soap (35 employees), (4) oils and fats (68 employees), (5) lanterns (71 employees) (6) torches (51 employees), (7) gas and chemicals (186 employees), (8) distillery (554 employees), (9) arc electrodes (800 employees), and (10) rolled steel (1,440 employees). For details of (1) and (2) see India 313 - (3) and 207 - (2), respectively. All branches are operating practically independently of one another. There is also a separate central office with 11 employees and with annual operating costs are about Rs. 1.30 million for wages and salaries and Rs. 0.33 for others.

IV. ANNUAL PRODUCTION (1964)		V. INTERMEDIATE INPUTS (1964)																																																																																																									
TOTAL VALUE OF PRODUCTION (Rs. million) <u>70.63</u>		TOTAL VALUE OF CONSUMPTION (Rs. million) <u>47.37</u>																																																																																																									
<table border="1"> <thead> <tr> <th>Product</th> <th>Unit</th> <th>Quantity Produced</th> <th>Unit Value (Rs.)</th> </tr> </thead> <tbody> <tr> <td>a. Hydrogenated vegetable oil</td> <td>ton</td> <td>22,414</td> <td>3,151</td> </tr> </tbody> </table>		Product	Unit	Quantity Produced	Unit Value (Rs.)	a. Hydrogenated vegetable oil	ton	22,414	3,151	<p>1. <u>Energy &amp; water:</u> total <u>.83</u> (incl. 2 tons coke (Rs. 75/ton))</p> <p>* Drawn from the tube well of the establishment.</p> <table border="1"> <thead> <tr> <th></th> <th>Quantity</th> <th>Unit</th> <th>Value (Rs.)</th> </tr> </thead> <tbody> <tr> <td>- Electricity</td> <td>000 KWH</td> <td></td> <td>6,278.5</td> </tr> <tr> <td>- Coal</td> <td>ton</td> <td></td> <td>4,498.0</td> </tr> <tr> <td>- Petroleum</td> <td>000 litres</td> <td></td> <td>25.0</td> </tr> <tr> <td>- Lubricating oil</td> <td>"</td> <td></td> <td>8.6</td> </tr> <tr> <td>- Lubricating oil</td> <td>"</td> <td></td> <td>1,300</td> </tr> </tbody> </table> <p>2. <u>Direct production materials:</u> total <u>42.83</u></p> <table border="1"> <thead> <tr> <th></th> <th>Quantity</th> <th>Unit</th> <th>Value (Rs.)</th> </tr> </thead> <tbody> <tr> <td>a. Ground nut oil</td> <td>ton</td> <td>17,120</td> <td>2,075</td> </tr> <tr> <td>b. Cotton seed oil</td> <td>"</td> <td>2,039</td> <td>1,866</td> </tr> <tr> <td>c. Sesame oil</td> <td>"</td> <td>1,235</td> <td>2,346</td> </tr> <tr> <td>d. Palm oil</td> <td>"</td> <td>60</td> <td>1,399</td> </tr> <tr> <td>e. Linseed oil</td> <td>"</td> <td>42</td> <td>1,958</td> </tr> <tr> <td>f. Castor oil</td> <td>"</td> <td>6</td> <td>1,808</td> </tr> <tr> <td>g. Caustic soda</td> <td>"</td> <td>65</td> <td>1,094</td> </tr> <tr> <td>h. Soda ash</td> <td>"</td> <td>5.3</td> <td>462</td> </tr> <tr> <td>i. Bleach earth</td> <td>"</td> <td>76</td> <td>838</td> </tr> <tr> <td>j. Carbon</td> <td>"</td> <td>4</td> <td>2,435</td> </tr> <tr> <td>k. Sulphuric acid</td> <td>"</td> <td>9</td> <td>234</td> </tr> <tr> <td>l. Common salt</td> <td>"</td> <td>71</td> <td>59</td> </tr> <tr> <td>m. Hydrogen</td> <td>000 C.m.</td> <td>3</td> <td>8,713</td> </tr> <tr> <td>n. Vitamins</td> <td>000 MIU</td> <td>481.5</td> <td>500</td> </tr> <tr> <td>o. Phosphoric acid</td> <td>Kg.</td> <td>1,100</td> <td>5</td> </tr> <tr> <td>p. Ammonia gas</td> <td>Kg.</td> <td>476</td> <td>3</td> </tr> <tr> <td>q. Laboratory chemicals</td> <td>000 Rs.</td> <td>3.12</td> <td>4,000</td> </tr> </tbody> </table>			Quantity	Unit	Value (Rs.)	- Electricity	000 KWH		6,278.5	- Coal	ton		4,498.0	- Petroleum	000 litres		25.0	- Lubricating oil	"		8.6	- Lubricating oil	"		1,300		Quantity	Unit	Value (Rs.)	a. Ground nut oil	ton	17,120	2,075	b. Cotton seed oil	"	2,039	1,866	c. Sesame oil	"	1,235	2,346	d. Palm oil	"	60	1,399	e. Linseed oil	"	42	1,958	f. Castor oil	"	6	1,808	g. Caustic soda	"	65	1,094	h. Soda ash	"	5.3	462	i. Bleach earth	"	76	838	j. Carbon	"	4	2,435	k. Sulphuric acid	"	9	234	l. Common salt	"	71	59	m. Hydrogen	000 C.m.	3	8,713	n. Vitamins	000 MIU	481.5	500	o. Phosphoric acid	Kg.	1,100	5	p. Ammonia gas	Kg.	476	3	q. Laboratory chemicals	000 Rs.	3.12	4,000
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<p><b>CAPACITY OUTPUT:</b></p> <p>10% higher than the 1964 actual output level with negligibly small, if any, addition to man-hours and given sufficient supply of raw materials and availability of long distance transport.</p>		<p>3. <u>Laboratory materials:</u> total <u>4.00</u></p> <p>4. <u>Metal containers</u> (Rs. 2.50 each) <u>1,247,085</u></p> <p>5. <u>Work performed by sub-contractors</u> ( ) <u>-</u></p> <p>6. <u>Repairs &amp; maintenance</u> (materials &amp; services purchased) <u>.14</u></p> <p>7. <u>Material inputs for auxiliary activities</u> <u>-</u></p> <p>8. <u>Non-factor service inputs:</u> total <u>.45</u> Transportation, insurance and storage services (purchased separately) Rs. 26,000</p>																																																																																																									
<p>Unit value of product: Market value f.o.b. before sales tax Unit value of material: Market price c.i.f.</p> <p>- V. 2. (i) and (j) are directly imported (seaborne) with freight rate 11%. The prices of those materials are considered peculiarly high owing to some discriminatory treatment. All other materials are domestically produced and delivered by railroads with freight rate about 5%.</p>		<p>9. <u>SELECTED COEFFICIENTS</u></p> <p>- Mach., equip., instruments &amp; tools per employee in direct production on let shift: Rs. 11,000 <sup>1/</sup></p> <p>- Value added per employee: Rs. 48,200 <sup>2/</sup></p> <p>- Annual wage per employee in direct production: Rs. 1,180 <sup>3/</sup></p> <p>- Variable input costs/gross production ratio: 66.2% <sup>4/</sup></p> <p>- Gross profit/gross production ratio: 31.6% <sup>2/</sup> (At full capacity : 31.9%)</p> <p>- Level of production at break-even point is approximately 61% of the 1964 actual level.</p>																																																																																																									
<p><b>VI. VALUE ADDED</b> TOTAL 1964 (Rs. million) <u>23.26</u></p> <p>1. Wages &amp; salaries (before income tax)</p> <p>- Employees in direct production { .57 }</p> <p>- Other employees { .. }</p> <p>2. Other expenditures for employees -</p> <p>3. Annual depreciation allowance .31</p> <p>4. Rental paid -</p> <p>5. Sales &amp; other indirect taxes (less subsidies) (not included in total) [1.74]</p> <p>6. Other gross business income (before income tax) 22.38 <sup>2/</sup></p>		<p><b>VII. EXPANSION: HISTORY &amp; PLAN</b></p> <table border="1"> <thead> <tr> <th></th> <th>Gross acquisition</th> <th>Scrapped or sold</th> </tr> </thead> <tbody> <tr> <td>1. <u>Recent Expansion</u></td> <td></td> <td></td> </tr> <tr> <td colspan="3">From 19 61 to 19 64</td> </tr> <tr> <td>a. Total Investment ( 000 Rs. )</td> <td>50</td> <td>-</td> </tr> <tr> <td>- Land</td> <td>-</td> <td>-</td> </tr> <tr> <td>- Land improvements</td> <td>-</td> <td>-</td> </tr> <tr> <td>- Buildings</td> <td>-</td> <td>-</td> </tr> <tr> <td>- Other construction work</td> <td>50</td> <td>-</td> </tr> <tr> <td>- Machinery &amp; equipment</td> <td>-</td> <td>-</td> </tr> <tr> <td>- Tools &amp; instruments</td> <td>-</td> <td>-</td> </tr> <tr> <td>- Vehicles</td> <td>-</td> <td>-</td> </tr> <tr> <td>- Office furniture &amp; fixtures</td> <td>-</td> <td>-</td> </tr> <tr> <td>b. Corresponding increase:</td> <td>From 19 61</td> <td>to 19 64</td> </tr> <tr> <td>In no. of employees</td> <td>450</td> <td>482</td> </tr> <tr> <td>In annual gross production (Rs. million)</td> <td>52.55</td> <td>70.63</td> </tr> </tbody> </table> <p>2. <u>Future Plan</u> : None*</p> <p>a. Investment proposed for the period 19 to 19 Total value ( ) Of which: - Mach. &amp; equipment \$ - Land improv. &amp; bldg. - Land - Others</p> <p>b. Net increase in no. of employees envisaged for the same period: - Direct production: - Auxiliary:</p> <p>* The product is Government - controlled; no expansion is presently envisaged by the establishment.</p>			Gross acquisition	Scrapped or sold	1. <u>Recent Expansion</u>			From 19 61 to 19 64			a. Total Investment ( 000 Rs. )	50	-	- Land	-	-	- Land improvements	-	-	- Buildings	-	-	- Other construction work	50	-	- Machinery & equipment	-	-	- Tools & instruments	-	-	- Vehicles	-	-	- Office furniture & fixtures	-	-	b. Corresponding increase:	From 19 61	to 19 64	In no. of employees	450	482	In annual gross production (Rs. million)	52.55	70.63																																																											
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<p><b>VIII. SUPPLEMENT</b></p> <p>1/ Due to the oldness of the machinery and equipment, neither the original cost nor the replacement value gives a meaningful measure of capital/labor ratio.</p> <p>2/ "Other gross business" income is not adjusted for overhead and other costs of the headquarters.</p> <p>3/ Wages and salaries divided by total number of employees.</p> <p>4/ Wages and salaries are excluded from variable cost.</p>																																																																																																											

**MAJOR PRODUCTS:** Hydrogenated vegetable oil. Annual capacity output is 25,000 tons on three shifts. Also produces and sells small amount of soap, acid oil and oxygen.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets Rs. 20 million (net worth Rs. 12 million) and employees 331 as of 1964. Founded in 1940.

**I. FIXED CAPITAL ASSETS** (end of year)

	1963		1964	
	After deprec.		After deprec.	
<b>TOTAL BOOK VALUE</b> (Rs. million)	6.29		6.35	
1. Land	4.45	1/	4.45	1/
2. Land improvements	-		-	
3. Buildings	.41		.47	
4. Other construction works	.02		.02	
5. Machinery & equipment	1.21		1.19	
6. Tools & instruments	.02		.02	
7. Vehicles	.11		.13	
8. Office furniture & fixtures	.07		.07	

1/ Of which Rs. 4 million is the land located outside the factory premises.

**DETAIL OF I.5 (No.)**

	Total Bk. value	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Sharples vegetable oil refining unit (1)		1	A	10	.550
b. Soap separators 25 tons (2)	.95	18	B	"	.100
c. Bleachers 12 tons (2)		24	"	"	.050
d. Filter presses 75 tons (7)		24	"	"	.105
e. Autoclaves (3)		24	"	"	.150
f. Deodorisers (3)		24	"	"	.120
g. Coolers 12 tons (3)		20	"	"	.075
h. Hydrogen generators 220 cells (3)		20	"	"	.760
i. Packing machines (4)		22	"	"	.020
j. Seaming machines (3)		24	"	"	.055
k. Refrigerators 75 tons (3)		24	"	"	.475
l. Boilers (3)	20	"	"	.300	

**II. INVENTORIES**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> (Rs. million)	5.52	- 22 \$
1. Direct production materials	3.24	- 16
2. Other input materials		
3. Work in process	.38	+ 20
4. Finished products	1.90	- 42
- Normal inventories of finished products 2.2 % of annual gross production		
- Seasonal variations: ..		

Capacity of electr. motors: 184 KW

Total load, capacity of railway: 100 t  
Total length of railway tracks: 0.4 Km.

c), d) and g) were domestically produced; some of h) was made internally and the rest were imported. Average age of the machinery (79% of total) is 17 years.

**ENVIRONMENTAL CONDITIONS:**

Transport, utilities and community facilities, excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
	<b>TOTAL EMPLOYED</b> 331	201	71
1. Direct production (all male)	79	62	52
Annual total manhours (000)	(262)	(111)	(100)
a. Manufacturing unit	27	27	22
b. Soap manufacturing	12	5	5
c. Work shop	20	15	15
d. Maintenance	20	15	10
2. Auxiliary activities (all male)	122	9	7
a. Hydrogenated oil warehouse	20	-	-
b. Oil warehouse	2	2	-
c. Managerial supervision and other activities	100	7	7

**EDUCATIONAL BACKGROUND** (No. of employees)

Engl- ASSIST	Other	Univ. or higher	Sr. High sch. or equiv.	Other
		2	13	57
<b>Management</b>				
2				
<b>Direct Production</b>				
Skilled				
-				
Semi-skilled				
-				
Unskilled				
-				
-				
56				
<b>Auxiliary Activities</b>				
Skilled				
-				
Semi-skilled				
5				
-				
Unskilled				
-				
-				
10				
-				
-				
36				

- Average working hours per annum per direct production worker: 2,535 hrs.

- Proportion of motors occupied: 80% on the 1st. and 2nd. shift and 70% on the 3rd. shift.

**Technological features:**

a) Neutralisation, filtration, catalytic hydrogenation, bleaching and deodorisation of vegetable oil. Poorly mechanised and automated.

- Skilled workers in direct production are; fitters, welders, turners, boilers, attendants, blacksmiths, harding men, refining men, etc. In auxiliary activities they are sales and purchase assistants, accountants, administrative assistants, etc.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION (Rs. million)		49.31		TOTAL VALUE OF CONSUMPTION (Rs. million)		46.46	
Product	Unit	Quantity Produced	Unit Value (Rs.)				
a. Hydrogenated vegetable oil.	ton	19,282	2,530	1. <u>Energy &amp; water:</u> total <u>4.72</u>			
b. Soap	"	268	1,121	* Water is drawn from the tube well of the company.			
c. Acid oils (100% fatty matter)	"	140	1,362	Quantity Unit value Unit sum (Rs.)			
d. Oxygen	000 C.m.	184	242	- Electricity	000 KWH	5,314	70
				- Coal	ton	5,538	57
				- Petroleum	000 litre	24.26	870
				- Lubricating oil	"	11.65	1,370
				2. <u>Plant production materials:</u> total <u>44.17</u>			
				a. Ground nut oil	ton	15,507	2,190
				b. Cotton seed oil	"	2,595	2,066
				c. Sesame oil	"	1,658	2,388
				d. Caustic soda	"	65	1,277
				e. Soda ash	"	4	500
				f. Bleach earth	"	104	615
				g. Carbon (vegetable)	"	20	1,600
				h. Sulphuric acid	"	36	222
				i. Common salt	"	80	100
				j. Nickel	"	80	9,000
				k. Vitamins	000 M.I.U.	506	580
				l. Others	000 Rs.	300	..
				3. <u>Packaging materials:</u> total <u>1.11</u>			
				800,000 metal containers (see V111); 541 tons other metal products (Rs. 1578/ton); others Rs. 31,000			
				4. <u>Work performed by sub-contractors</u> (see V111) <u>—</u>			
				5. <u>Repairs &amp; maintenance</u> (materials & services purchased) <u>.10</u>			
				Repairs + maintenance Rs. 60,000			
				Parts + materials Rs. 40,000			
				6. <u>Material inputs for auxiliary activities</u> <u>.03</u>			
				Printing + Stationery			
				7. <u>Non-factor service inputs:</u> total <u>.33</u>			
CAPACITY OUTPUT:							
30% higher than the 1964 actual production level with additional 24,000 man-hours on the 1st shift and given sufficient supply of raw and intermediate materials. Product-mix is not flexible.							
Unit value of product: Market value f.o.b. before sales tax Unit value of material: Market price o.i.f.							
- V.2 (f), (g) and (j) are directly imported and delivered by road or sea. Freight rate is about 1% of c.i.f. cost. The other materials are domestically produced and delivered by road or railroad with freight rate %.							
VI. VALUE ADDED		TOTAL 1964 (Rs. million)		2.85		SELECTED CONVEYANCE	
1. Wages & salaries (before income tax)						- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 30,250 1/	
- Employees in direct production		.44				- Value added per employee: Rs. 8,620	
- Other employees		.44				- Annual wage per employee in direct production: Rs. 2,260	
2. Other expenditures for employees		-				- Variable input costs/gross production ratio: 94.0%	
3. Annual depreciation allowance		.38				- Gross profit/gross production ratio: 3.2%	
4. Rental paid		-				(at full capacity : 3.8%)	
5. Sales & other indirect taxes (less subsidies) (not included in total)		[ 3.007 ]				- Level of production at break-even point is approximately 43 % of the 1964 actual level.	
6. Other gross business income (before income tax)		1.59					
VII. EXPANSION: HISTORY & PLAN		Gross equip- or		Scrapped or			
1. <u>Recent Expansion</u>		sitium		sold			
From 1961 to 1964						2. <u>Future Plan :</u>	
a. Total Investment (Rs. million)		2.36		.21		a. Investment proposed for the period 1964 to 1972	
- Land		-		-		Total value (Rs. million)	
- Land improvements		-		-		10	
- Buildings		.24		-		Of which: - Mach. & equipment	
- Other construction work		.02		-		70 \$	
- Machinery & equipment		1.80		.19		- Land improv. & bldg.	
- Tools & instruments		-		-		25	
- Vehicles		.15		.02		- Land	
- Office furniture & fixtures		.15		-		-	
						- Others	
						5	
b. Corresponding increase:		From 1961 to 1964				b. Net increase in no. of employees envisaged for the same period:	
In no. of employees		296		331		- Direct production: 125	
In annual gross production (in value terms)		+ 1%				- Auxiliary: 50	
						c. Purpose: Introduction of rice bran oil, mahua oil, neem oil (refined) and other non-industrial oils; introduction of new process (solvent extraction); and largely balanced expansion of the existing capacity at the same location.	
VIII. SUPPLEMENT		Structure of liquid assets and short term liabilities (end of 1964, Rs. million.)					
		Cash on hand and in bank 0.23; Accounts receivable 3.97; Taxes payable 1.51; Accounts payable 3.37; Short term borrowings from commercial banks 2.24.					
V.4 Work performed by sub-contractors : detail.		A sub-contractor with 70 employees working solely for this establishment manufactures metal containers from materials supplied by this establishment. For the year 1964, they are 800 tons tin plate, 6.6 tone galvanized wire and 8 tons solder for 800,000 pieces of metal containers. These material costs are included in V.2. (1). The rate of commission per metal container is Rs. 0.23 .					
1/		The numerator is the 1964 replacement value of machinery as itemized in I.					

**MAJOR PRODUCTS:** Edible vegetable oils; also makes soap, lecithin and cosmetics. Capable of processing about 70,000 tons of vegetable seeds (soya, cotton seeds and copra) per annum on a 3-shift basis.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets I£ 12 million and employees 120 as of 1964. Founded in 1935.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE ( I£ 000 )</b>	<u>5,000</u>	<u>2,900</u>
1. Land (10 acres)	100	100
2. Land improvements	-	-
3. Buildings (total floor space 14,000 sq.m.)	1,000	100
4. Other construction works	-	-
5. Machinery & equipment	3,500	1,800
6. Tools & instruments	-	-
7. Vehicles	400	300
8. Office furniture & fixtures	-	-

**DETAIL OF I.5 (No.)**

	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Equipment for oil extraction	2-6	A	10	1,300
b. Equipment for peeling and pressing	2-10	A	10	1,000
c. Distillation equipment	2-6	A	10	400
d. Soap manufacturing system	10	A	10	300
e. Packaging equipment	2-30	A	10	500

**II. INVENTORY (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE ( I£ 000 )</b>	<u>900</u>	<u>-</u>
1. Direct production materials	500	-
2. Other input materials	250	-
3. Work in process	150	-
4. Finished products		

- Normal inventories of finished products 0.8 % of annual gross production

- Seasonal variations: None.

Capacity of electr. motors: 1,500 KW

Total load, capacity of trucks (3) 30 t

(a) and (c) were imported. For (b), (d) and (e), key components were imported but installation, fixtures and accessories are of local manufacture.

**EXTERNAL CONDITIONS:**

Transportation, public utilities and community facilities are excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	80	20	20
1. Direct production ( m. 80 f. 20 )	60	20	20
Annual total manhours (000)	(144)	(48)	(48)
a. Extraction	16	6	6
b. Refinery	10	8	8
c. Packaging	20	5	5
d. Soap shop	10	-	-
e. Miscellaneous	4	1	1
2. Auxiliary activities ( m. 15 f. 5 )	20	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	Other
3	1	30	86
<b>Management</b>			
3	-	7	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	-
<b>Semi-skilled</b>			
-	10	-	-
<b>Unskilled</b>			
-	-	10	80
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	-	-	-
<b>Semi-skilled</b>			
-	1	3	-
<b>Unskilled</b>			
-	-	-	6

- Average working hours per annum per direct production worker: 2,400 hours.

- Proportion of motors occupied: 80% on the 1st. shift and 60% on the 2nd. and 3rd. shifts.

- Conventional processes are employed. Degree of mechanization is high in (a) and fair in (b). Degree of automation is rated as high to fair in (a) but poor in (b).

Israel : 312/314 - (1)

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( IE 000 ) <u>18,715</u>				TOTAL VALUE OF CONSUMPTION ( IE 000 ) <u>16,900</u>			
<u>Product</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Value ( IE )</u>				
a. Edible oils	ton	7,000	900	1. <u>Energy &amp; water: total</u> <u>389</u>			
b. Oil cakes	"	32,000	290	Quantity Unit Summed ( IE )			
c. Soaps	"	1,500	700	- Electricity 000 kWh 3,000 31			
d. Lecithin	"	150	600	- Heavy crude oil ton 2,500 84			
e. Cosmetics (000 IE)		1,985	..	- Water 000 cu.m 500 <sup>a</sup> 150			
				* Of which 450 internally supplied.			
				2. <u>Direct production materials: total</u> <u>15,118</u>			
				a. Soya seeds ton 40,000 308			
				b. Cotton seeds " 6,000 175			
				c. Copra " 1,000 521			
				d. Various materials (000 IE) 1,227 ..			
				3. <u>Finishing materials: total</u> <u>393</u>			
				- Glass bottles (new addition) 000 pgs. 120 800			
				- Glass (for cosmetics) " 3,000 2,120			
				4. <u>Work performed by sub-contractors</u> ( )			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> <u>100</u>			
				6. <u>Material inputs for auxiliary activities</u> <u>40</u>			
				7. <u>Non-factor service inputs: total</u> <u>860</u>			
				Of which transport, insurance and storage services purchased separately 60			
<b>CAPACITY OUTPUT:</b>							
45% higher than the 1964 actual production level, given sufficient demand and additional annual man-hours of 125,000 each on the 2nd and the 3rd. shifts.							
Product - mix is <u>not</u> flexible							
Unit value of product: Market value f.o.b. before sales tax.							
Unit value of material: Market price c.i.f.							
- Product (d) is mostly exported; (a) and (b) are only partly exported.							
- Soya beans and copra are imported.							
<b>VI. VALUE ADDED TOTAL 1964 ( IE 000 ) <u>1,815</u></b>				<b>SELECTED CONVICIANTS</b>			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: IE 58,300			
- Employees in direct production } 1,000				- Value added per employee: IE 15,120			
- Other employees } 100				- Annual wage per employee IE 8,333			
2. Other expenditures for employees 100				- Variable input costs/gross production ratio: 88.5% 1/			
3. Annual depreciation allowance 300				- Gross profit/gross production ratio: 2.1%			
4. Rental paid 15				(at full capacity : 5.1%)			
5. Sales & other indirect taxes (less subsidies) (not included in total) [ 200 ]				- Level of production at break-even point is approximately 81 % of the 1964 actual level.			
6. Other gross business income (before income tax) 400							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u>				2. <u>Future Plan</u> : None.			
From 1959 to 1964				a. Investment proposed for the period 19 to 19			
a. Total Investment ( IE 000 ) <u>2,500</u>				Total value ( )			
- Land -				Of which: - Mach. & equipment \$			
- Land improvements -				- Land improv. & bldg.			
- Buildings 600				- Land			
- Other construction work -				- Others			
- Machinery & equipment 1,500				b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments -				- Direct production:			
- Vehicles } 400				- Auxiliary:			
- Office furniture & fixtures }				c. Purposes:			
b. Corresponding increase: From 1959 to 1964							
In no. of employees (direct prod. only) 120 100							
In annual gross production +66%							
<b>VIII. SUPPLEMENT</b>							
1/ Two-thirds of wages and salaries regarded as variable cost.							



Israel : 312/319 - (2)

**MAJOR PRODUCTS:** Vegetable oil refinery; also makes small quantities of soap and other oil products. Capable of processing 80,000 - 85,000 tons of oil seeds per annum on 3-shift operation.

**REPORTING UNIT:** An independent one establishment enterprise with total assets of 5.8 million and employees 128 as of 1964. Founded in 1950.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.*
<b>TOTAL BOOK VALUE</b> ( U 000 )	<u>8,950</u>	<u>7,400</u>
1. Land	800	800
2. Land improvements	-	-
3. Buildings	2,500	2,000
4. Other construction works	-	-
5. Machinery & equipment	5,500	4,500
6. Tools & instruments	-	-
7. Vehicles	150	100
8. Office furniture & fixtures	-	-
* Revalued in 1964		

**DETAIL OF I.5 (No.)****I. Oil extraction installation; continuous process, 300 tons per 24 hours.**

	Total Bk. value	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Feeding plant	300	2	A	10	360
b. Cylinder machine	105	1	A	10	105
c. Unclassified	1,500	2	A	10	1,800

**II. Peeling & pressing installation (for cotton & other materials); 80t per 24 hours.**

	Total Bk. value	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Peeling plant	54	10	A	10	150
b. Peeling plant	49	3	A	10	105
c. Pressing plant	72	16	A	10	195
(Subtotal)	(2,080)				(2,715)

**II. INVENTORIES**

(end of 1964) **Actual** **Normal**

TOTAL VALUE ( U 000 )	1,350	-
1. Direct production materials	800	-
2. Other input materials	250	-
3. Work in process	300	-
4. Finished products		

- Normal inventories of finished products 1.4% of annual gross production

- Seasonal variations: None.

Capacity of electr. motors: 1,650 KW

Total load, capacity of trucks: 20 t

" " " of railway: 400 t

Total length of railway track: 1 Km.

All machines itemised were imported;

I (a) from Belgium,

I (b) from Switzerland, and II

from U.S.A.

Average age of machinery is 3.4 years

**GENERAL CONDITIONS:**

Transportation, public utilities, community facilities are excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 128	92	18	18
1. Direct production (all male)	54	18	18
Annual total manhours (000)	(130)	(43)	(43)
a. Extraction	15	5	5
b. Refining and solidifying	8	7	7
c. Packaging	18	4	4
d. Soap production	7	-	-
e. Miscellaneous	6	2	2
2. Auxiliary activities ( m. 35 f. 3 )	38	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	
		Engl-negrs	Other
5	25	2	96
<b>Management</b>			
5	10	-	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	-
<b>Semi-skilled</b>			
-	5	-	-
<b>Unskilled</b>			
-	5	80	-
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	-	-	-
<b>Semi-skilled</b>			
-	2	-	-
<b>Unskilled</b>			
-	-	5	16

- Average working hours per annum per employee in direct production: 2,500 hours.

- Proportion of motors occupied: 80% on the 1st., shift and 60% on the 2nd., and the 3rd., shifts.

- Conventional processes are employed. Degree of mechanisation is high in (a) and fair in (b).

Degree of automation is fair in (a), outdated in (b) and non-existent in the rest.

Israel : 312/319 - (2)

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( I£ 000 ) <u>20,938</u>				TOTAL VALUE OF CONSUMPTION ( I£ 000 ) <u>18,858</u>			
Product	Unit	Quantity Produced	Unit Value ( I£ )			Quantity consumed	Unit value ( I£ )
a. Refined oil	ton	10,000	950	1. Energy & water: total			<u>680</u>
b. Oil oaks	"	38,000	285	- Water	000 cu.m.	500	150
c. Laundry soap	"	600	480	- Electricity	000 kWh.	4,100	33
d. Acids for poultry	"	300	500	- Heavy grade oil	ton	3,400	27
e. Lecithin	"	100	700	- Solar oil	"	100	100
f. Peels (scrap)	"	500	200	- Benzine	"	400	310
				2. Direct production materials: total			<u>16,898</u>
				a. Soya seeds	ton	47,000	315
				b. Cotton seeds	"	4,000	230
				c. Copra	"	1,100	520
				d. Caustic soda	"	170	495
				e. Sodium chloride	"	200	54
				f. Chlorine	"	150	250
				g. Others	(000 I£)	468	..
				3. Packaging materials: total			<u>140</u>
				- Glass bottles	000 doz.	280	190
				- Used glass bottles	(000 I£)	87	..
				4. Work performed by sub-contractors ( )			-
				5. Repairs & maintenance (materials & services purchased)			<u>60</u>
				- Parts	50		
				- Maintenance services	10		
				6. Material inputs for auxiliary activities			-
				7. Non-factor service inputs: total			<u>1,080</u>
				- Of which transport, insurance and storage services purchased separately	80		
CAPACITY OUTPUT:				SELECTED COEFFICIENTS (in 1964 replacement value)			
60% higher than the 1964 actual production level, given sufficient demand.				- Mach., equip., instruments & tools/per employee in direct production on 1st shift: I£ 133,000			
No additional labour input is required. 1/				- Value added per employee: I£ 16,250			
Unit value of product: Market value f.o.b. before sales tax.				- Annual wage per employee I£ 8,594			
Unit value of material: Market price c.i.f.				- Variable input costs/gross production ratio: 84.5% 2/			
- Part of refined oil and half of oil oaks are exported.				- Gross profit/gross production ratio: 2.2% 1/			
- Soya seeds and copra are imported, freight rats for soya seeds is about \$ 5 per ton.				- (at full capacity : 6.7% 3/ )			
- Most of containers are used glass bottles recollected; comparatively small amount is added for replacement.				- Level of production at break-even point is approximately 89 % of the 1964 actual level. 1/			
VI. VALUE ADDED TOTAL 1964 ( I£ 000 ) <u>2,080</u>				VII. EXPANSION: HISTORY & PLAN			
1. Wages & salaries (before income tax)				1. Recent Expansion			
- Employees in direct production } 1,100				From 1960 to 1964			
- Other employees } 100				a. Total Investment ( I£ 000 ) <u>1,500</u>			
2. Other expenditures for employees 100				- Land -			
3. Annual depreciation allowance 500				- Land improvements -			
4. Rental paid (land) 10				- Buildings 250			
5. Subsidies - 100 1/				- Other construction work -			
6. Other gross business income (before income tax) 470				- Machinery & equipment 1,200			
				- Tools & instruments -			
				- Vehicles } 50			
				- Office furniture & fixtures }			
				b. Corresponding increase: From 1960 to 1964			
				In no. of employees (direct prod. only) 100 90			
				In annual gross production ( I£ million ) 15 21			
				2. Future Plan			
				a. Investment proposed for the period 1966 to 1967			
				Total value ( I£ 000 ) <u>1,000</u>			
				Of which: - Mach. & equipment 50 \$			
				- Land improv. & bldg. 50			
				- Land -			
				- Others -			
				b. Net increase in no. of employees envisaged for the same period:			
				- Direct production: -			
				- Auxiliary: -			
				c. Purpose: Reconstruction and expansion			
VIII. SUPPLEMENT							
1/ The factory was partly destroyed by fire and out of operation in 1963 and is still on the way to recovery as of 1964. The subsidies were given in compensation for this. The gross profit / gross production-ratio if adjusted for the subsidies would become 1.8% instead.							
2/ All wages and salaries regarded as non-variable cost under the current conditions.							
3/ In defining a cost function, subsidies are regarded neither as a fixed nor as variable cost, but merged with the gross business income.							

**MAJOR PRODUCTS:** Edible vegetable oils, soap, detergents and cosmetics. Annual capacity outputs are circa 22,000 tons of edible oil together with 75,000 tons of oil cake; 13,000 tons of detergents, 7,000 tons of soap and 900 tons cosmetics, on the basis of 3-shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets IL 29 million and employees 680 as of 1964. Founded in 1924.

I. FIXED CAPITAL ASSETS (end of 1964)		Before deprec.	After deprec.	II. INVENTORIES (end of 1964)		Actual	Normal	
TOTAL BOOK VALUE (IL 000)		18,470	13,070	TOTAL VALUE (IL 000)		5,500	-	
1. Land (80,000 sq.m.)		570	570	1. Direct production materials		2,100	-	
2. Land improvements		-	-	2. Other input materials		900	-	
3. Buildings (total floor space 45,000 sq.m.)		3,500	2,900	3. Work in process	}	2,500	-	
4. Other construction works		-	-	4. Finished products				
5. Machinery & equipment		13,500	9,000	- Normal inventories of finished products 6.6 % of annual gross production				
6. Tools & instruments		-	-	- Seasonal variations: None.				
7. Vehicles		300	200	Capacity of electr. motors: 6,000 HP				
8. Office furniture & fixtures		600	400	" " " furnaces: 6,000 KW				
				Total load, capacity of trucks: 110 t				
				" length of railway tracks: 3 Km.				
				All the machines itemized, except (a), were imported.				
<b>DETAIL OF 1.5 (No.)</b>		<b>Avr. Age (yr.)</b>	<b>Oper. Cond.</b>	<b>Depr. rate (%)</b>	<b>GENERAL CONDITIONS:</b>			
a. Raw material storage equipment	5	A		10	Transportation, public utilities and community facilities are excellent.			
b. Oil extracting mills :								
- Pressing mills	30	B		10				
- Extraction plant	5-10	A		10				
c. Oil processing plant :								
- Automatic refining system	3	A		10				
- Solidifying machines	24	B		10				
- Bottle filling machines	3	A		10				
- Storage for finished products	30,50	A,B		10				
d. Detergent department :								
- Sulphonisation equipment	4	A		20				
- Spray driers	1	A		10				
e. Soap department :	40	A		10				
f. Cosmetics department :								
- Boiling & processing equipment	5,30	A,B		10				
- Packaging machines	5,30	A,B		10				

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				- Average working hours per annum per direct production worker : 2,300 hours.
TOTAL EMPLOYED	680	528	114	38	Univ. or higher	Sr. High sch. or equiv.	Other		
1. Direct production (all male)		228	114	38	Engl-neers	Other			- Proportion of motors occupied is 60 - 70% on each of the 3 shifts.
Annual total manhours (000)		(524)	(262)	(87)	TOTAL				
a. Oil manufacturing		114	57	19	Management				- Proportion of furnaces occupied is 30% on the 1st., and the 2nd., shifts.
					12	2	-	-	
b. Detergents, soaps and cosmetics		114	57	19	Direct Production				- Conventional processes are employed. Degree of mechanisation is high in both (a) and (b). Degree of automation is fair in (a). No automation in (b).
					Skilled				
					-		5	-	
					Semi-skilled			20	30
					Unskilled				325
					Auxiliary Activities				
					Skilled				
					3	1	4	-	
					Semi-skilled			40	-
					Unskilled				10
					-				228
2. Auxiliary activities ( m. 270 / r. 30 )		300	-	-					

IX. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( I£ 000 ) <u>37,806</u>				TOTAL VALUE OF CONSUMPTION ( I£ 000 ) <u>27,416</u>			
Product	Unit	Quantity Produced ( I£ )	Unit Value ( I£ )		Quantity consumed ( I£ )	Unit value ( I£ )	
a. Edible oil	ton	12,000	900	1. <u>Energy &amp; water: total</u>			<u>526</u>
b. Oil cakes	"	41,500	280	- Electricity	000 KWH	5,400	35
c. Detergents	"	7,000	900	- Crude oil	ton	5,200	53
d. Soaps	"	4,000	700	- Water	000 cu.m	235	260
e. Cosmetics	"	500	3,000	2. <u>Direct production materials: total</u>			<u>25,540</u>
f. Others	(000 I£)	4,786	..	a. Oil seeds (mainly soya)	ton	58,000	350
				b. Oils and fatty acids	"	3,300	800
				c. Chemicals and other materials (000 I£)		2,600	..
<p><b>CAPACITY OUTPUT:</b> 80% higher than the 1964 actual production level, given sufficient demand. No additional labour input is required. Presently the capacity of oil extraction dept. is not balanced with that of final products (hence the purchase of oils and fatty acids from outside). An investment of I£ 2 million thereon would increase the overall capacity by 150% of the 1964 production level. Product-mix is <u>not</u> flexible.</p>				<p>3. <u>Packaging materials: total</u> <u>50</u></p> <p>- Glass bottles (650e.c.) 000 pcs. 150 200</p> <p>- Wooden barrels " 10 2,000</p> <p>4. <u>Work performed by sub-contractors ( )</u> <u>-</u></p> <p>5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> <u>400</u></p> <p>6. <u>Material inputs for auxiliary activities</u> <u>100</u></p> <p>7. <u>Non-factor service inputs: total</u> <u>800</u></p>			
<p>Unit value of product: Market value f.o.b. before sales tax. Unit value of material: Market price o.i.f.</p> <p>- IV: (a) and (b) are partly exported.</p> <p>- V.2: Oil seeds, fatty acid and some of the chemicals are directly imported; approximate freight rates per ton of those materials are I£ 120,40 and 60, respectively.</p>				<p>3. <u>Selected coefficients</u></p> <p>- Mech., equip., instruments &amp; tools per employee in direct production on 1st shift: I£ 59,211</p> <p>- Value added per employee: I£ 15,279</p> <p>- Annual wage per employee I£ 8,824</p> <p>- Variable input costs/gross production ratio: 69.0% 1/</p> <p>- Gross profit/gross production ratio: 3.8%</p> <p>- (at full capacity : 15.7%)</p> <p>- Level of production at break-even point is approximately 88 % of the 1964 actual level.</p>			
<p>VI. VALUE ADDED TOTAL 1964 ( I£ 000 ) <u>10,390</u></p> <p>1. Wages &amp; salaries (before income tax)</p> <p>- Employees in direct production } 6,000</p> <p>- Other employees }</p> <p>2. Other expenditures for employees 2,000</p> <p>3. Annual depreciation allowance 1,000</p> <p>4. Rental paid -</p> <p>5. Sales &amp; other indirect taxes [ 950 ]</p> <p>(less subsidies) (not included in total)</p> <p>6. Other gross business income (before income tax) 1,390</p>				<p>VII. EXPANSION: HISTORY &amp; PLAN</p> <p>1. <u>Recent Expansion</u></p> <p>From 1962 to 1964</p> <p>a. Total Investment ( I£ 000 ) <u>5,050</u></p> <p>- Land -</p> <p>- Land improvements -</p> <p>- Buildings 700</p> <p>- Other construction work -</p> <p>- Machinery &amp; equipment 4,000 2/</p> <p>- Tools &amp; instruments -</p> <p>- Vehicles 100</p> <p>- Office furniture &amp; fixtures 250</p> <p>b. Corresponding increase: <u>From 1962 to 1964</u></p> <p>In no. of employees No increase.</p> <p>In annual gross production + 26%</p>			
<p>VIII. SUPPLEMENT</p> <p>1/ Labour cost is classified as fixed cost.</p> <p>2/ Of which 1,000 internally supplied.</p>				<p>2. <u>Future Plan</u></p> <p>a. Investment proposed for the period 1967</p> <p>Total value ( I£ 000 ) <u>2,000</u></p> <p>Of which: - Mech. &amp; equipment 75 \$</p> <p>- Land improv. &amp; bldg. -</p> <p>- Land -</p> <p>- Others 25</p> <p>b. Net increase in no. of employees envisaged for the same period:</p> <p>- Direct production: 0</p> <p>- Auxiliary: 0</p> <p>c. <u>Purposes:</u> Introduction of new processes.</p>			

**MAJOR PRODUCTS:** Rapessed oil. Annual capacity output is 5,000 tons of processed oil plus 3,500 tons of oil cake on one-shift operation.

**REPORTING UNIT:** A one-establishment enterpriss with total assets \$ 450 million and employees 37 as in 1964. Founded in late 1940's.

I. FIXED CAPITAL ASSETS (end of 1964)		Before deprec.	After deprec.	II. INVENTORIES (end of 1964)			
TOTAL BOOK VALUE (\$ million )		36.2	28.3	TOTAL VALUE (\$ million )	Actual	Normal	
1. Land ( 2,310 m <sup>2</sup> )		3.5	3.5	1. Direct production materials	31.7	-	20
2. Land improvements		-	-	2. Other input materials	-	-	-
3. Buildings (total floor space 1,386 m <sup>2</sup> )		29.4	24.0	3. Work in process	-	-	-
4. Other construction works		-	-	4. Finished products	24.9	-	+ 20
5. Machinery & equipment		2.6	.2	- Normal inventories of finished products 5.1 % of annual gross production			
6. Tools & instruments		-	-	- Seasonal variations: <u>High</u> <u>Low</u>			
7. Vehicles		.8	.5	Direct production materials	Aug.	Jul.	
8. Office furniture & fixtures		-	-	Finished products	Sept.	Dec.	
<b>DETAIL OF I.5 (No.)</b>		Total Mt. value	Avg. Age (Yr.)	Oper. rate	Depr. rate (%)	1964 replace value	
a. Oil extractor (1)		2.10	9	A	24	2.40	
b. Deodorising machins (1)		.20	8	A	22	.26	
c. Decolorizing equipment (1)		.18	7	A	22	.24	
d. Others		.10	7	A	10	.14	

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
TOTAL EMPLOYED m. 22		37	-	-	Univ. or higher	Sr. High sch. or equiv.	Other	Others
1. Direct production ( f. 8 )		30	-	-	Engl-ners			
Annual total manhours (000)		(58.6)	( )	( )	TOTAL	-	5	32
a. Preparation		3	-	-	Management : Included in auxiliary activities.			
b. Pressing		2	-	-	Direct Production			
c. Oil cake treating		10	-	-	Skilled	-	3	24
d. Deodorising		2	-	-	Semi-skilled	-	-	3
e. Decolorizing		5	-	-	Unskilled	-	-	-
f. Canning and bottle filling		8	-	-	Auxiliary Activities			
					Skilled	-	2	5
					Semi-skilled	-	-	-
					Unskilled	-	-	-
2. Auxiliary activities ( m. 6 f. 1 )		7	-	-	-	-	-	-
a. General affairs		2	-	-				
b. Sales		3	-	-				
c. Purchase		2	-	-				

Capacity of electr. motors:	36	KW
Total load, capacity of trucks:	1.5	t
All machines were domestically produced. Average age of machinery is 8.7 years.		
Vehicles were acquired relatively recently.		
<b>EXTERNAL CONDITIONS:</b> Public utilities and educational facilities, excellent. Transportation, health and recreational facilities, fair. Residential facilities, poor.		
- Actual hours worked per annum per direct production worker: 1,953 hours.		
- <u>Technological features:</u>		
Canning and bottle filling process employ a conveyor system, which is rated as excellent both in mechanization and in automation.		
- Relatively high skills are required for oil extracting (a) to (c).		

Japan : 312 - ( 1 )																																																												
<b>IV. ANNUAL PRODUCTION (1964)</b> TOTAL VALUE OF PRODUCTION ( ¥ million ) <u>585.9</u>			<b>V. INTERMEDIATE INPUTS (1964)</b> TOTAL VALUE OF CONSUMPTION ( ¥ million ) <u>511.5</u>																																																									
<table border="1"> <thead> <tr> <th>Product</th> <th>Unit</th> <th>Quantity</th> <th>Unit Price ( ¥ 000 )</th> <th>Unit Value ( ¥ 000 )</th> </tr> </thead> <tbody> <tr> <td>a. Rapeseed oil</td> <td>ton</td> <td>3,820</td> <td>130</td> <td></td> </tr> <tr> <td>b. Oil cake</td> <td>"</td> <td>2,790</td> <td>32</td> <td></td> </tr> </tbody> </table>			Product	Unit	Quantity	Unit Price ( ¥ 000 )	Unit Value ( ¥ 000 )	a. Rapeseed oil	ton	3,820	130		b. Oil cake	"	2,790	32		<table border="1"> <thead> <tr> <th></th> <th>Unit</th> <th>Quantity</th> <th>Unit Price ( ¥ 000 )</th> <th>Unit Value ( ¥ 000 )</th> </tr> </thead> <tbody> <tr> <td colspan="5"><b>1. Energy &amp; water: total</b> <u>1.1</u></td> </tr> <tr> <td>- Electricity</td> <td>000 KWH</td> <td>46.74</td> <td>5</td> <td></td> </tr> <tr> <td>- Gasoline</td> <td>kl.</td> <td>12.50</td> <td>55</td> <td></td> </tr> <tr> <td>- Water</td> <td>000 m<sup>3</sup></td> <td>12.19</td> <td>16</td> <td></td> </tr> <tr> <td colspan="5"><b>2. Direct production materials: total</b> <u>452.9</u></td> </tr> <tr> <td>a. Rapeseed</td> <td>ton</td> <td>7,762</td> <td>57.6</td> <td></td> </tr> <tr> <td>b. Chemicals and other materials</td> <td>¥ mil.</td> <td>5.8</td> <td>..</td> <td></td> </tr> </tbody> </table>				Unit	Quantity	Unit Price ( ¥ 000 )	Unit Value ( ¥ 000 )	<b>1. Energy &amp; water: total</b> <u>1.1</u>					- Electricity	000 KWH	46.74	5		- Gasoline	kl.	12.50	55		- Water	000 m <sup>3</sup>	12.19	16		<b>2. Direct production materials: total</b> <u>452.9</u>					a. Rapeseed	ton	7,762	57.6		b. Chemicals and other materials	¥ mil.	5.8	..	
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<b>CAPACITY OUTPUT:</b> 30% higher than the 1964 actual production level with no addition to manhours. In 1963, the production of rapeseed oil and oil cake amounted to 4,960 t and 3,627 t, respectively (the total value of production ¥ 760.9 million), which represents the full capacity output level. (Annual total man-hour of direct production was 61,300).			( During the year of 1963 when the production level was about 30% higher, the consumption of rapeseed was 10,090 tons.)																																																									
Unit value of product: Market price f.o.b. before sales tax Unit value of material: Market price o.i.f.			<b>3. Packaging materials: total</b> <u>1.3</u> Metal cans ( ¥ 64/can ) 11,583 cans Glass bottles ( ¥ 24/bottle ) 23,852 bottles																																																									
Rapeseed is delivered by road; freight rate 1.4 % of o.i.f. value.			<b>4. Work performed by sub-contractors ( )</b> <u>—</u> <b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> <u>3.7</u>																																																									
<b>VI. VALUE ADDED TOTAL 1964 ( ¥ million )</b> <u>71.4</u>			<b>6. Material inputs for auxiliary activities</b> <u>31.6</u> Welfare ¥ 2.3 million Management ¥ 29.3 million																																																									
1. Wages & salaries (before income tax) <sup>1/</sup> - Employees in direct production 12.3 - Other employees 4.2 2. Other expenditures for employees 1.3 3. Annual depreciation allowances 8.0 4. Rental paid - 5. Sales & other indirect taxes (less subsidies) - 6. Other gross business income (before income tax) 48.6			<b>7. Non-factor service inputs: total</b> <u>20.9</u> Of which transportation, insurance and storage (purchased separately) ¥ 5.5 million.																																																									
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>			<b>SELECTED CONFIGURATE (in 1964 replacement value)</b>																																																									
1. Recent Expansion: None From 19 to 19			- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 101,200 - Value added per employee: ¥ 2,010,000 - Annual wage per employee in direct production: ¥ 410,000 - Variable input costs/gross production ratio: 79.6% - Gross profit/gross production ratio: 8.3% - (at full capacity : 10.9% <sup>1/</sup> ) - Level of production at break-even point is approximately 58 % of the 1964 actual level.																																																									
e. Total Investment ( ) - Land - Land improvements - Buildings - Other construction work - Machinery & equipment - Tools & instruments - Vehicles - Office furniture & fixtures b. Corresponding increase: From 19 to 19 In no. of employees In annual gross production ( )			2. Future Plan : None a. Investment proposed for the period 19 to 19 Total value ( ) Of which: - Mach. & equipment \$ - Land improv. & bldg. - Land - Others b. Net increase in no. of employees envisaged for the same period: - Direct production: - Auxiliary: c. Purposes:																																																									
<b>VIII. SUPPLEMENT</b> <sup>1/</sup> The actual wages and salaries paid in 1963 for the same number of workers were only 3% higher than those in 1964., resulting in a gross profit before tax nearly 90% higher than the 1964 record.																																																												
<b>N.B.</b> Despite the relatively high capacity rating, the value of machinery and equipment of this enterprise is almost comparable to that of Japan 312-(2) and Japan 312-(3), which have such lower rated capacities. The so-called machine-embodied technology does not seem too different among these three factories. Better and intensive manning, and aggressive (and expensive as implied by V 6 and 7) management might account for the high performance level of this enterprise, relative to the following two cases.																																																												

**MAJOR PRODUCTS:** Rapeseed oil. Annual capacity output is 1,800 tons of processed oil on one shift operation.

**REPORTING UNIT:** One-establishment enterprise with total assets ¥ 265 million and employees 25 as of 1964. Founded in 1955.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( ¥ million )	34.8	25.5
1. Land ( 2,244 m <sup>2</sup> )	4.8	4.8
2. Land improvements	-	-
3. Buildings (total floor space 1,221 m <sup>2</sup> )	25.9	19.9
4. Other construction works	-	-
5. Machinery & equipment	3.4	.9
6. Tools & instruments	-	-
7. Vehicles	.8	-
8. Office furniture & fixtures	-	-

DETAIL OF 1.5 (No.)	Total bk. value ¥ mil.	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Oil extractor (1)	2.30	9	A	27	3.0
b. Deodorizing machine (1)	.30	"	"	24	.4
c. Decolorizing machine (1)	.15	"	"	21	.2
d. Others	.62	"	"	13	.8

**II. INVENTORIES**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> ( ¥ million )	27.7	+ 5.4
1. Direct production materials	20.8	-
2. Other input materials	-	..
3. Work in process	-	..
4. Finished products	6.9	+ 20
- Normal inventories of finished products 3.5 % of annual gross production		
- Seasonal variations: <u>High</u> <u>Low</u>		
Direct production materials	Aug.	Jul.
Finished products	Sept.	Dec.

Capacity of electr. motors: 18 KW

Total load, capacity of trucks: 1 t

All machines were domestically produced.

The operating conditions of machines are all excellent.

Most of the vehicles were purchased recently.

**EXTERNAL CONDITIONS:** Public utilities and educational facilities, excellent. Transportation, fair. Residential health and recreational facilities poor.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				- Actual hours worked per annum per direct production worker: 2,380 hours.
				Univ. or higher	Sr. High sch. or equiv.	Other	Others	
<b>TOTAL EMPLOYED</b>	25	-	-					
1. Direct production ( m. 14 f. 6 )	20							
Annual total manhours (000)	( 47.6 )	( )	( )					
a. Preparation of materials	4							
b. Pressing	3							
c. Oil cake treating	5							
d. Decolorizing	2							
e. Deodorizing	2							
f. Canning and bottle filling	4							
2. Auxiliary activities ( m. 3 f. 2 )	5							
a. Management	1							
b. Sales and purchase	2							
c. Office work	2							

- **Technological features:**  
Canning and bottle filling employ a conveyor system, which is highly mechanized and automated.

- Relatively high skills are required.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( ¥ million )			234.6	TOTAL VALUE OF CONSUMPTION ( ¥ million )			190.9
Product	Unit	Quantity Produced	Unit Value ( ¥ 000 )				
a. Rapeseed oil	ton	1,450	138.0	1. <u>Energy &amp; water: total</u> .5			
					Quantity con-	Unit value	
					(unit summed	( ¥ 000 )	
				- Electricity	000 KWH	23.0 4.27	
				- Liquid fuel	K.l.	5.1 55	
				- Water	000 m <sup>3</sup>	7.1 16	
b. Oil cake	ton	1,060	32.5	2. <u>Direct production materials: total</u> 168.7			
				a. Rapeseed	ton	2,840 57.9	
				b. Chemicals	¥ mil.	4.3 ..	
CAPACITY OUTPUT:				In 1963, when the production was 20% higher than in 1964, the annual consumption of rapeseed was 3,670 tons.			
Declared to be 2% higher than the 1964 actual production level with no addition to man-hours.				3. <u>Finishing materials: total</u> .9			
In 1963 the enterprise produced 1,750 tons of rapeseed oil and 1,380 tons of oil cake, with annual total man-hours of direct production workers 49,480				Metal cans ( ¥ 66/ can ) 10,000			
				Glass bottles ( ¥ 24/ bottle ) 10,000			
				4. <u>Work performed by sub-contractors</u> ( ) -			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> 11.1			
Unit value of product: Market price f.o.b. before sales tax				Parts and materials 8.2			
Unit value of material: Market price o.i.f.				Services purchases 4.9			
				6. <u>Material inputs for auxiliary activities</u> 3.9			
- Rapeseed is delivered by road; freight rate				Welfare 0.7;			
				Management 3.2			
				7. <u>Non-factor service inputs: total</u> 3.8			
				Of which transportation, insurance and storage (purchased separately) 1.6			
1.8 % of o.i.f. value.				VI. VALUE ADDED TOTAL 1964 ( ¥ million ) 43.7			
1. Wages & salaries (before income tax)				SELECTED COEFFICIENTS (in 1964 replacement value)			
- Employees in direct production 6.3				- Mach., equip., instruments & tools/per employee in direct production on 1st shift: ¥ 220,000			
- Other employees 2.3				- Value added per employee: ¥ 1,748,000			
2. Other expenditures for employees 1.4				- Annual wage per employee in direct production: ¥ 315,000			
3. Annual depreciation allowance 9.5				- Variable input costs/gross production ratio: 72.5%			
4. Rental paid .1				- Gross profit/gross production ratio: 10.2%			
5. Sales & other indirect taxes (less subsidies) -				- (at full capacity: 13.6%)			
6. Other gross business income 1/ 23.9				- Level of production at break-even point is approximately 63 % of the 1964 actual level.			
VII. EXPANSION: HISTORY & PLAN				Gross Scrapped or			
1. <u>Recent Expansion</u> : None				acqui- sition sold			
From 19 to 19							
e. Total Investment ( )				2. <u>Future Plan</u> : None			
- Land				a. Investment proposed for the period 19 to 19			
- Land improvements				Total value ( )			
- Buildings				Of which: - Mach. & equipment \$			
- Other construction work				- Land improv. & bldg.			
- Machinery & equipment				- Land			
- Tools & instruments				- Others			
- Vehicles				b. Net increase in no. of employees envisaged for the same period:			
- Office furniture & fixtures				- Direct production:			
				- Auxiliary:			
b. Corresponding increase: From 19 to 19				c. Purposes:			
In no. of employees							
In annual gross production ( )							
VIII. SUPPLEMENT							
1/ The gross profit / gross production ratio for 1963 (when the output was 20% higher than the 1964 level) was only 7%; the total cost of intermediates inputs being nearly 28% more than the 1964 value, and the total wages and salaries paid ¥ 9.6 million, the amount to be entered in II.6 was about ¥ 20 million for 1963.							



**MAJOR PRODUCTS:** Rapeseed oil. Annual capacity output is 1,200 tons (?) of processed oil on one shift operation. The capacity rating seems to be based on the existing manning. With a better management, the factory might be able to perform at a level comparable to Japan 312 - ( 2 ).

**REPORTING UNIT:** A one-establishment enterprise with total assets ¥ 140 million and employees 18 as in 1964. Founded in the mid 1940's.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( ¥ million )	34.4	25.7
1. Land ( 2,376 m <sup>2</sup> )	5.0	5.0
2. Land improvements	-	-
3. Buildings (total floor space 1,188 m <sup>2</sup> )	25.2	19.6
4. Other construction works	-	-
5. Machinery & equipment	3.3	1.0
6. Tools & instruments	-	-
7. Vehicles	.8	-
8. Office furniture & fixtures	-	-

**DETAIL OF I.5 (No.)**

	Total Bk. value bef. deprec.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Oil extractor (1)	2.25	9	A	27	3.0
b. Deodorizing machine (1)	.30	9	A	24	.4
c. Decolorizing machine (1)	.15	7	A	21	.2
d. Others	.63	4	A	14	.8

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE</b> ( ¥ million )	15.8	+ 5 %
1. Direct production materials	8.1	- 10
2. Other input materials	-	..
3. Work in process	-	..
4. Finished products	7.7	+ 20

- Normal inventories of finished products 5.4 % of annual gross production

- Seasonal variations: High Low  
 Direct production Aug. Jul.  
 materials  
 Finished products Sept. Dec.

Capacity of electr. motore: 14 KW  
 Total load, capacity of trucks: 1 t

All machines were domestically produced  
 Average age of machinery is 8.0 years.  
 Vehicles were purchased recently.

**GENERAL CONDITIONS:** Local transportation and public utilities, excellent. Long distance transportation and educational facilities, fair. Residential health and recreational facilities, poor.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	18	-	-
1. Direct production ( all male )	13	-	-
Annual total manhours (000)	(24.4)	( )	( )
a. Preparation of materials	2	-	-
b. Pressing	2	-	-
c. Oil cake treating	2	-	-
d. Decolorizing and deodorizing	3	-	-
e. Canning and bottle filling	4	-	-
2. <u>Auxiliary activities</u> ( m. 3 / f. 2 )	5	-	-
a. General affairs	2	-	-
b. Sales and purchase	3	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other
Engl-ners	Other	Others
TOTAL	-	18
<b>Management:</b> included in auxiliary activities		
<b>Direct Production</b>		
Skilled	-	13
Semi-skilled	-	-
Unskilled	-	-
<b>Auxiliary Activities</b>		
Skilled	-	2
Semi-skilled	-	3
Unskilled	-	-

- Actual hours worked per annum per direct production worker : 1,880 hours.

- Technological features:  
 Canning and bottle filling employ a highly mechanised and automated conveyor system.

- Relatively high skills are required for (a) to (c).

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( ¥ million ) <u>171.7</u>				TOTAL VALUE OF CONSUMPTION ( ¥ million ) <u>139.2</u>			
Product	Unit	Quantity Produced ( ¥ 000 )	Unit Value ( ¥ 000 )	1. Energy & water: total	Quantity consumed ( ¥ 000 )	Unit value ( ¥ 000 )	
a. Rapeseed oil	ton	1,064	135	- Electricity	000 KWH	17.2	5
				- Liquid fuel	K.l.	5.3	55
				- Water	000 m <sup>3</sup>	5.8	16
b. Oil cake	ton	880	32	2. Direct production materials: total			<u>125.0</u>
				a. Rapeseed oil	ton	2,000	17.0
				b. Chemicals and other materials (partly to be classified under item 6 below )	¥ mil.	9.8	..
<b>CAPACITY OUTPUT:</b> Declared to be only 10% higher than the 1964 actual production level with no addition to man-hours. However, the 1963 record shows that the production of rapeseed oil was 1,620 tons, oil cake 1,340 tons, the total value amounting to ¥ 262 million; the number of employees in direct production was 17; or total annual man-hours 33,640, (i.e., 38% higher than the 1964 record). (See VIII).				( The 1963 consumption of rapeseed was close to 3,000 t. )			
Unit value of product: Market price f.o.b. before sales tax Unit value of material: Market price c.i.f.				3. Packaging materials: total <u>2.1</u> Metal cans (¥ 66/pc.) 22,300 pcs. Glass bottles (¥ 25/pc.) 25,200 pcs.			
Rapeseed is delivered by road; freight rate				4. Work performed by sub-contractors ( ) <u>—</u>			
1.5% of c.i.f. value.				5. Repairs & maintenance (materials & services purchased) <u>6.0</u> Parts ¥ 0.2 million. Tools & supplies ¥ 5.2 million. Services purchased ¥ 0.6 million.			
VI. VALUE ADDED TOTAL 1964 ( ¥ million ) <u>32.5</u>				6. Material inputs for auxiliary activities <u>3.4</u> Welfare ¥ 0.5 million. Management ¥ 2.9 million.			
1. Wages & salaries (before income tax)				7. Non-factor service inputs: total <u>2.3</u> Of which transportation, insurance and storage (purchased separately) ¥ 1.8 million.			
- Employees in direct production 3.6				<b>SELECTED COEFFICIENTS</b>			
- Other employees 1.3				- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 254,000			
2. Other expenditures for employees .9				- Value added per employee: ¥ 1,806,000			
3. Annual depreciation allowance 8.7				- Annual wage per employee in direct production: ¥ 277,000			
4. Rental paid .1				- Variable input costs/gross production ratio: 74.2%			
5. Sales & other indirect taxes (less subsidies) -				- Gross profit/gross production ratio: 10.5%			
6. Other gross business income (before income tax) 18.0				- (at full capacity: 11.6%) 1/			
VII. EXPANSION: HISTORY & PLAN				- Level of production at break-even point is approximately 59% of the 1964 actual level.			
1. Recent Expansion: None				2. Future Plan: None			
From 19 to 19				a. Investment proposed for the period 19 to 19			
a. Total Investment ( )				Total value ( )			
- Land				Of which: - Mach. & equipment \$			
- Land improvements				- Land improv. & bldg.			
- Buildings				- Land			
- Other construction work				- Others			
- Machinery & equipment				b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments				- Direct production:			
- Vehicles				- Auxiliary:			
- Office furniture & fixtures				c. Purpose:			
Corresponding increase: From 19 to 19							
In no. of employees							
In annual gross production ( )							
VIII. SUPPLEMENT							
1/ Capacity output was assumed to be only 10% higher than the 1964 actual production level. Obviously, the rated capacity depends more on the existing labour than on the equipment. In 1963, the gross value of production was actually 52% higher (with additional 9,200 man-hours) than that in 1964; but the enterprise paid no more than ¥ 4.9 million wages and salaries (practically the same amount as in 1964), and enjoyed a profit before tax (concept corresponding to II. 6) of ¥ 49.4 million. Gross profit / gross production ratio was then close to 19%.							

An enterprise founded in 1946 and engaging in vegetable oil refinery. Annual capacity output is 3,600 t of refined oil on three shifts operation. Convenient access to market by railway and road, though located 400 km from the source of basic raw materials.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. billion)		328	465	9	7	89	88		
Buildings & land improvements		147	230	8	16	29	39		
Machinery & equipment		159	210						
Other capital assets		22	25						
<p>Major machinery crucial for determining the overall production capacity:</p> <p><u>Refined oil:</u> Refining press (3 shifts)  <u>Technical oil:</u> Extraction press (3 shifts)</p> <p>(25 % of machinery and equipment are of foreign origins.)</p>				<p>Retirements</p> <p>Calculated average age of fixed assets: <u>7.3</u> years</p> <p><u>Electric motors:</u>            Total installed capacity: <u>170</u> KW            Of which actually operated in 1963:            1st shift <u>100 %</u>; 2nd shift <u>87 %</u>; 3rd shift <u>82 %</u></p> <p><u>Technological features:</u>            Oil extraction by hydraulic and creeping presses and refining of oil with the boiler system. Mechanization and automation are not satisfactory but competing (fall short by about 40 % and 70 %, respectively, of the world standard).</p>					
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Tech.	Non.	Low	Others	Total
1. Factory workers:									
Total	100 persons	59	23	18				1	1
( 237 thous. manhrs.)		( 136 )	( 56 )	( 45 )					
- Drying and pressing		15	11	11					
- Extraction		3	3	3					
- Refinery		4	2	2					
- Bottling and filling		15	5	-				2	2
- Boiler room		2	2	2					
- Transport and other ancillary shops		20	-	-				114	114
2. Non-factory workers:		17 persons							
( 44 thous. manhours )									
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		IV. INTERMEDIATE INPUTS				
					Quantity	Value (Drs. Million)			
TOTAL actual revenue output 1963*			1,271		TOTAL actual consumption 1963				1,065
- Edible oil		3,308 t	1,100		1. Energy inputs: total				36
- Technical oil		194 t	47		- Electricity				5
- Oil cakes		1,637 t	42		- Brown coal				4,917 t
- Services rendered		..	54		- Liquid fuel				44 t
- Others		..	28		2. Major production materials: total				973
					- Pumpkin seed				956 t
					- Sunflower				798 t
					- Colza				39 t
					- Flax				160 t
					- Raw soy bean oil				3,414 t
					- Other raw oils				31 t
					3. Repairs & maintenance: total				10
					4. Other material & non-factor service inputs				46
					V. VALUE ADDED (1963) (Drs. Million)				
					TOTAL (except turnover tax)				194
					- Wages of factory workers				64
					- Salaries of non-factory workers				15
					- Depreciation				15
					- Interests paid				30
					- Other accumulation				70 1/2
					(Turnover tax)				( 12 )
VI. SUPPLEMENT		Future plans:		SELECTED COEFFICIENTS					
a. Balanced expansion of pressing and refinery.				- Mach. & equip. per factory worker on 1st shift: Drs. 3,559,000					
b. Regular overhauling.				- Value added per employee: Drs. 1,658,000					
				- Annual wage per factory worker: Drs. 640,000					
				- Variable input cost/gross production ratio: 80 %					
				- Gross accumulation/gross production ratio: 7.9 %					
				(at full capacity) 8.9 %					
1/ Of which Drs. 25 million are funds belonging to the enterprise.				- Level of production at break-even point: 60 % of the 1963 actual level.					
2/ Wages of factory workers are considered as fixed costs.									
3/ Gross accumulation includes 'interests paid'.									

An enterprise engaged in vegetable oil refinery (vegetable oils and fats, margarine and fatty acid). Founded in 1945. Capable of processing annually about 56,000 t of oil-bearing materials on 3-shift operation. Imported raw materials, such as raw soybean oil, various hydrogenated oils, palm, cotton, kernels, cocoa, copra, etc., account for 21% of the total material expenditures.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		1,460	1,739	-	-	106	838		
Buildings & land improvements		713	362	-	-	90	176		
Machinery & equipment		742	177	-	-	-	-		
Other capital assets		-	-	-	-	-	-		
<p>Calculated average age of fixed assets: 5.7 years</p> <p><b>Electric motors:</b> Total installed capacity: 2,380 KW Of which actually operated in 1963: 1st shift 100%; 2nd shift 46%; 3rd shift 46%</p> <p><b>Technological features:</b> Edible oil: Cleaning of raw materials, drying, husking, pressing-extraction, refining, hydrogenation and automatic bottling. Vegetable oil: Refining, hydrogenation and automatic bottling. Margarine: Melting of raw materials, preparation of chemicals, mixing crystallisation, continuous recrystallisation and automatic packaging.</p>				<p><b>Major machinery crucial for determining the overall production capacity:</b> - Raw oil: Presses, mills, extractors and driers (3 shifts) - Edible oil: Reservoir, pumps, filters, neutralizers and automatic bottling line (3 shifts). - Vegetable fat: Electrolyzers, autoclaves, etc. (3 shifts). - Margarine: Reservoir and homogenizers (3 shifts). (Part of machinery and equipment was imported).</p>					
II. LABOUR (1963)		TOTAL no. of employees: 714			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Low	Others	Total
1. Factory workers:									
Total	554 persons	358	132	64	6	1	-	3	10
	(98% thous. manhrs.)	(632)	(233)	(114)					
- Preparation of raw material		29	29	24					
- Production of raw oil		24	23	-					
- Production of refined oils		10	9	10					
- Vegetable fat		16	15	15					
- Margarine		16	15	-					
- Boiler room		78	14	14					
- Transport, laboratory and		185	27	1					
2. Non-factory workers:		160 persons							
		(390 thous. manhours)							
III. ANNUAL PRODUCTION & CAPACITY		Quantity			Value (Drs. Million)				
TOTAL actual revenue output 1963 *		8,564			6,763				
- Edible oil		16,812 t	5,228		76				
- Vegetable fat		5,053 t	1,608		62				
- Margarine		2,357 t	749		14				
- Green maize for fodder		17,965 t	459		5,898				
- Fatty acid		1,512 t	166		3,988				
- Oxygen **		121,861 m <sup>3</sup>	(26)		46 t				
- Others		..	354		913 t				
* Includes turnover tax on sold products.									
** Internally consumed.									
Capacity output:									
Edible oil		17,000 t	Rate of						
Vegetable fat		5,000 t	utilisation						
Margarine		2,700 t	is 98%						
Underutilization due to a demand for margarine which is not high enough.									
Number of workers on 1st shift required for full capacity operation will be 356.									
IV. INTERMEDIATE INPUTS		Quantity			Value (Drs. Million)				
TOTAL actual consumption 1963		6,763			76				
1. Energy inputs: total		76			62				
- Electricity		5,080 kwh			14				
- Brown coal		1,921 t			5,898				
2. Major production materials: total		5,898			3,988				
- Sunflower		51,130 t			3				
- Colza		46 t			64				
- Other oil bearing plants		913 t			1,013				
- Saw oil		3,356 t			210				
- Transportation services		..			164				
- Other services		..			456				
- Other products		..			41				
3. Repairs & maintenance: total		41			748				
4. Other material & non-factor service inputs		748							
V. VALUE ADDED (1963)		(Drs. Million)			1,722				
TOTAL (except turnover tax)		1,722			332				
- Wages of factory workers		145			77				
- Salaries of non-factory workers		77			334				
- Depreciation		334			834				
- Interests paid		834			79				
- Other accumulation (Turnover tax)		79							
VI. SUPPLEMENT		Future Plans.			SELECTED COEFFICIENTS				
a) Expansion of the existing capacities by 100%: Silos, extractors, driers, cleaning department, husking machines, presses, warehouses, auxiliary workshops, access roads, etc.					- Mach. & equip. per factory worker on 1st shift: Drs: 4,440,000			2/	
b) Construction of a modern continuous extraction.					- Value added per employee: Drs. 2,412,000				
1. Drs. 62 million are funds belonging to the enterprise.					- Annual wage per factory worker: Drs. 600,000				
2. The denominator is 175; i.e. excluding workers and employees of "transport and laboratory and other services".					- Variable input cost/gross production ratio: 74.3 %				
3. Gross accumulation includes "interests paid".					- Gross accumulation/gross production ratio: 13.8 % (at full capacity 14 %)				
					- Level of production at break-even point: 45 % of the 1963 actual level.				

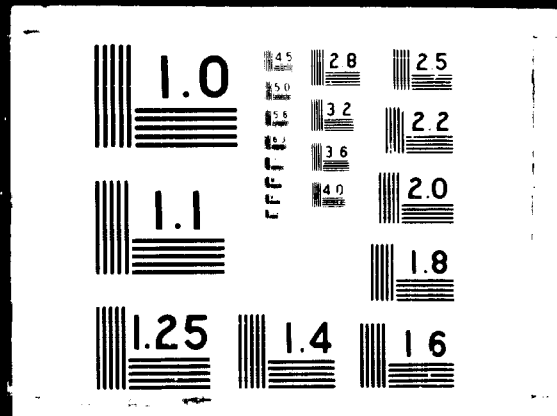


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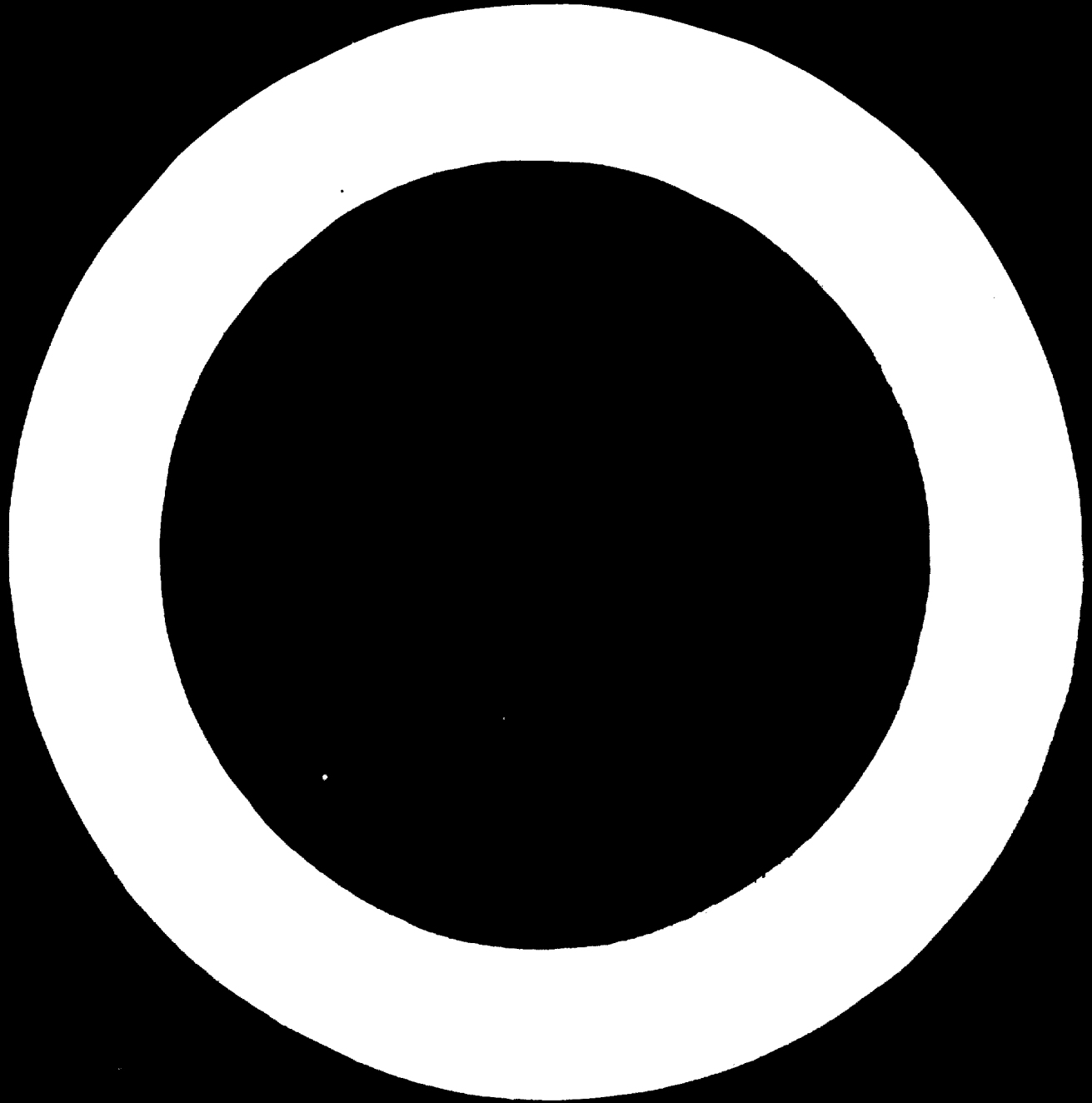
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An enterprise founded in 1946 producing vegetable oils and fats, margarine and other related products. Annual capacity output is 16,000 t of edible oils, 17,000 t of green maize and 9,000 t of margarine with three shifts. One-third of raw materials are imported. Major imported items are: soy bean, palm, cod-liver oil, fish oil, cotton oil and copra. Located about 250 km from the source of basic raw materials.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-62		
TOTAL (Drs. million)		1,995	2,230	84	432	393	414		
Buildings & land improvements		778	1,013	85	153	184	189		
Machinery & equipment		1,134	1,134						
Other capital assets		83	83						
<b>Major machinery crucial for determining the overall production capacity:</b>									
Edible oil: Mill presses and extractors (3 shifts).									
Edible oil: Tanks, pumps and filter presses (3 shifts).									
Solid fats: Electrolyser, tanker, pumps and autoclaves (3 shifts).									
Margarine: Tanks, homogenizers, coolers (3 shifts).									
Protein mixtures: Weighing machines, mixers with automatic dosing (3 shifts).									
(28 of machinery and equipment was imported).									
<b>II. LABOUR (1965)</b>		TOTAL no. of employees: 893			<b>Educational background of workers:</b>				
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Law	Others	Total
1. Factory workers:									
Total	704 persons	449	158	97	10	13	1	12	36
	(1,590 thous. manhrs.)	(958)	(406)	(226)		4			4
					2	12		45	59
								794	794
					<b>IV. INTERMEDIATE INPUTS</b>				
					Quantity		Value (Drs. Million)		
					TOTAL actual consumption 1965				
					6,929				
					1. Energy inputs: total				
					185				
					- Electricity				
					3,736 kwh				
					95				
					- Mazut				
					703 t				
					13				
					- Lignite coal				
					1,812 t				
					20				
					- Liquid fuel				
					432 t				
					57				
					2. Major production materials: total				
					5,954				
					- Sunflower				
					33,514 t				
					2,949				
					- Colza				
					126 t				
					12				
					- Raw oil				
					6,478 t				
					2,421				
					- Other products				
					572				
					3. Repairs & maintenance: total				
					100				
					4. Other material & non-factor service inputs				
					690				
<b>III. ANNUAL PRODUCTION &amp; CAPACITY</b>		Quantity		Value (Drs. Million)		<b>V. VALUE ADDED (1965) (Drs. Million)</b>			
TOTAL actual revenue output 1965 *				9,021		TOTAL (except turnover tax)			
						2,002			
- Edible vegetable oils		15,553 t		5,062		- Wages of factory workers			
						471			
- Technical oils		1,919 t		448		- Salaries of non-factory workers			
						190			
- Margarine products		5,805 t		2,287		- Depreciation			
						78			
- Mayonnaise		28 t		29		- Interests paid			
						284			
- Vegetable lard		1,712 t		660		- Other accumulation			
						979 1/2			
- Patty acid		629 t		69		(turnover tax)			
						(90)			
- Protein mixtures **		(3,601 t)		(172)					
- Husk		5,559 t		59					
- Green maize for fodder		16,289 t		407					
* Includes turnover tax on sold products.									
**Consumed for further process within the enterprise.									
<b>Capacity Output:</b>									
Edible oil		16,200 t		Overall rate of utilization is 83%.					
Technical oil		2,100 t							
Margarine products		9,300 t							
Green maize		17,000 t							
Patty acid		600 t							
Underutilization is due to insufficient demand for margarine and vegetable fat, an imbalance between capacities of various processes and shortage of fuel gas. The same number of workers are sufficient for the full utilization of the existing capacity on the 1st shift.									
<b>VI. SUPPLEMENT</b>		Future Plans - 10. increase of mechanization and automation.		<b>SELECTED COEFFICIENTS</b>					
a) A refinery with a capacity of 80t/24 hours is under construction and to be completed in 1966.				- Mach. & equip. per factory worker on 1st shift: Drs. 2,526,000 2/					
b) An oil bottling department with a capacity of 48,000 pc/24 hours and warehouse of bottles are being planned.				- Value added per employee: Drs. 2,242,000					
c) Reconstruction of the existing hydrogenation and margarine department will be started in 1966-1970.				- Annual wage per factory worker: Drs. 669,000					
d) Also, silos for seeds with a capacity of 30,000 t is under consideration.				- Variable input cost/gross production ratio: 74.0 %					
				- Gross accumulation/gross production ratio: 3/ 14.1 % (at full capacity 16.1 %)					
				- Level of production at break-even point: 45 % of the 1965 actual level.					
				2/ The denominator is 300, excluding the 'auxiliary shop' workers.					
				3/ Gross accumulation includes interests paid.					
1/ Drs. 404 million are funds belonging to the enterprise.									





France : 313 - (2)

**MAJOR PRODUCTS:** Varnishes. Annual capacity output is about 1,000 to 1,200 tons of various types of varnishes on one-shift operation.

**REPORTING UNIT:** A small enterprise with capital stock 150,000 francs and 49 employees as of 1964. Founded in 1927.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Fr. 000 )	1,234	663
1. Land	62	62
2. Land improvements	-	-
3. Buildings	576	392
4. Other construction works	-	-
5. Machinery & equipment )	463	150
6. Tools & instruments )	133	58
7. Vehicles	-	-
8. Office furniture & fixtures	-	-

**DETAIL OF I.5 (No.)**

	Total Bk. value def. depr.	Avr. Age (Yr.)	Oper. rate Cond.	Depr. rate (%)	1964 replace value
a. Continuous grinding mill (1)	40	1	A		
b. Cylindrical grinding mills (3)	108	2-5	A		
c. Monocylindrical grinding mills (6)	..	10	A		
d. Roller grinding machines (6)	..	10	A		
e. Mixers (40)	..	10	A		
f. Electric agitator (1)	..	10	A		
g. Centrifuges (2)	..	10	A		
h. Supercentrifuges (2)	..	10	A		
i. Filters (8)	..	10	A		
j. Laboratory equipment	..	10	A		

**II. INVENTORIES**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> (Fr. 000 )	443	..
1. Direct production materials	211	
2. Other input materials*	57	
3. Work in process	-	
4. Finished products	175	

- Actual inventories of finished products 2.7% of annual gross production

- Seasonal variations: ..

\* Packaging materials

Capacity of electr. motors: 120 KW

Total load, capacity of trucks: 15.5 t

- All machinery were domestically produced, except (a) which was imported.

**GENERAL CONDITIONS:** Transportation and public utilities are excellent; community facilities are fair.

**III. LABOUR**

(1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	49	-	-
1. Direct production (male & fem.)	37	-	-
Annual total manhours (000)	(104)	( )	( )
a. Varnish	4	-	-
b. Grinding	21	-	-
c. Conditioning	8	-	-
d. Storage	4	-	-
2. Auxiliary activities (male & fem.)	12	-	-
Management and administrative control	12	-	-

**EDUCATIONAL BACKGROUND**  
(No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	
		Engi-neers	Other
TOTAL	5	4	40
Management	5	4	-
Direct Production	-	-	4
Skilled	-	-	4
Semi-skilled	-	-	17
Unskilled	-	-	16
Auxiliary Activities	-	-	3
Skilled	-	-	3
Semi-skilled	-	-	-
Unskilled	-	-	-

- Actual hours worked per annum per direct production worker: 2,120 hours.

- Proportion of motors occupied: 95%.

- Mechanization, excellent in all shops; no automation involved.

- Skilled workers in direct production work on grinding machines.

IX. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( Fr. 000 ) approx. 6,400 (excluding sales tax)				TOTAL VALUE OF CONSUMPTION ( Fr. 000 ) 5,583			
		Quantity	Unit			Quantity	Unit
		used	Value			con-	value
			(Fr.000)			sumed	( Fr. )
						Unit	
Product		Unit					
a.	Alcohol varnish, type SF	ton	15	13.4-16.9			
b.	Alcohol varnish, type CHIEN	"	30	6.7-12.0			
c.	Alcohol varnish, type SUPER	"	202	12.0			
d.	Diluting agent	"	58	4.9			
e.	Special varnish & lacquer	"	565	7.8-16.2			
f.	Cellulosic varnish	"	29	8.5-13.1			
g.	Various special varnishes*	"	98.5	..			
* Black and green for school blackboards; special white for radiators; black and green for forged iron; vitrificators; water-proof products for cement; products for protection of zinc roofs.							
<b>CAPACITY OUTPUT:</b>				1. <u>Energy &amp; water: total</u> 27			
15% higher than the actual 1964 production level with additional 16,000 manhours. Efficient operation is also hindered by the inadequacy of factory space. Product-mix is flexible.				- Electricity 000 kWh 212 100			
				- Liquid fuel ton 40 150			
				2. <u>Direct production materials: total</u> 4,090			
				a. Natural rubber } Fr. 000 1,245 { 6-150/kg			
				b. Synthetic rubber } { 6-7/kg			
				c. Solvents } { 4-5/kg			
				d. Chemical products } " " 598 { 11/kg			
				e. Colourings } { 20-25/kg			
				f. Others (including materials used for auxiliary activities) " " 2,247 ..			
				3. <u>Processing materials: total</u> 209			
				Metal boxes (Fr. 1.5 to 3.0/box) and metal barrels (fr. 2.5 to 5.0/barrel).			
				4. <u>Work performed by sub-contractors</u> ( ) -			
				5. <u>Repairs &amp; maintenance</u> (materials & services purchased) 110			
				6. <u>Material inputs for auxiliary activities</u> : (included in 2)			
				7. <u>Non-factor service inputs: total</u> 1,152			
<b>VI. VALUE ADDED TOTAL 1964 ( Fr. 000 ) 812</b>				<b>SELECTED COEFFICIENTS</b>			
1. <u>Wages &amp; salaries (before income tax)</u> 692				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Fr. 12,500			
- Employees in direct production (..)				- Value added per employee: Fr. 16,573			
- Other employees (..)				- Annual wage per employee in direct production: Fr. 14,125			
2. <u>Other expenditures for employees</u> -				- Variable input costs/gross production ratio: 73.0% 2/			
3. <u>Annual depreciation allowances</u> 30				- Gross profit/gross production ratio: 1.4%			
4. <u>Rental paid</u> -				(at full capacity: 4.9%			
5. <u>Sales &amp; other indirect taxes (less subsidies) (not included in total)</u> [approx. 1,600]				- Level of production at break-even point is approximately 89% of the 1964 actual level.			
6. <u>Other gross business income (before income tax)</u> 90							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u>		Gross	Scrapped	2. <u>Future Plan</u>			
From 1961 to 1964		acqui-	or	a. <u>Investment proposed for the period 1967 to 1970</u>			
		sition	sold	Total value ( Fr. 000 ) 700 - 1,000			
a.	Total Investment ( Fr. 000 )	170	-	Of which: - Mach. & equipment 40 %			
-	Land	-	-	- Land improv. & bldg. 40			
-	Land improvements	-	-	- Land 10			
-	Buildings	-	-	- Others 10			
-	Other construction work	-	-	b. <u>Net increase in no. of employees envisaged for the same period:</u>			
-	Machinery & equipment	85	-	- Direct production: 3			
-	Tools & instruments	-	-	- Auxiliary: 1			
-	Vehicles	-	-	c. <u>Purpose:</u> Transfer of the factory to other location due to the probable expropriation of the present premises.			
-	Office furniture & fixtures	85	-				
b.	Corresponding increase:	From 1961	to 1964				
-	In no. of employees	No increase					
-	In annual gross production	+ 20%					
<b>VIII. SUPPLEMENT</b>							
1/ Total wage and salaries divided by the total number of employees.							
2/ One half of wages and salaries regarded as variable cost.							

Indis : 313 - (3)

**MAJOR PRODUCTS:** Paints and varnishes. Capable of producing about 2,000 kilolitre or Rs. 6.5 to 7 million of paints and varnishes on three shift operation.

**REPORTING UNIT:** Branch of a multi-establishment enterprise with total assets Rs. 50 million (net worth Rs. 20 million) and employees 5,200 as of 1964. This branch was founded in 1947. See VIII for other establishments in the enterprise.

**I. FIXED CAPITAL ASSETS** (end of 1964)

TOTAL BOOK VALUE ( )	Before deprec.		After deprec.	
	Total Bk. value bef. depr.	Avg. Age (Yr.)	Depr. rate (%)	1964 replace value
1. Land				
2. Land improvements				
3. Buildings				
4. Other construction works				
5. Machinery & equipment				
6. Tools & instruments				
7. Vehicles				
8. Office furniture & fixtures				
Not available (not separable from the total) (of the company)				
<b>DETAIL OF I.5 (No.)</b>				
a. Roll mills (4)	(1000 Rs.) 62	18	B 16	75
b. Runner mill (1)	13	18	" 14	18
c. Ball mills (24)	41	11	" 15	52
d. Paint mixers (3)	5	14	" 16	8
e. Power press (1)	11	4	A 15	13
f. Granite roller (1)	4	8	" 16	6
g. Varnish kettles (5)	6	12	B 16	7
h. Chrome plant (1)	1	16	" 14	2
i. Electric motors (6)	13	10	A 15	13
j. Capsuling machines (3)	6	7	" 16	8
	(total) (162)			(202)

**II. INVENTORIES**

(end of 1964)	Actual	Normal
TOTAL VALUE (Rs. million)	.98	+ 20 %
1. Direct production materials	.37	+ 20
2. Other input materials		
3. Work in process	-	
4. Finished products	.61	+ 20
- Normal inventories of finished products 21.9 % of annual gross production		
- Seasonal variations:		
	High	Low
	Aug. to Oct	Apr. to June
Finished goods	+ 25%	- 25%

Capacity of electr. motors: 204 KW

Total load, capacity of trucks: - t

(a),(b) and (f) were imported, (d) and (h) are internally made, and the rest were produced domestically. Average age of the itemized machinery is 14 years.

- In the late 1940's, the size of this establishment was about one-third of the present one.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities, fair.

**III. LABOUR** (1964 average)

TOTAL EMPLOYED 112	1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
	85	22	22	Univ. or higher	Sr. High sch. or equiv.	Other	Others
1. Direct production (all male)	217	48	48	Engi- ners	Other		
Annual total manhours (000)				TOTAL			
a. Paints section	39	12	12	4	8	14	146
b. Varnish section	10	7	7	<b>Management</b>			
c. Dry colour section	6	-	-	4	4	1	-
d. Chrome and resin section	5	3	3	<b>Direct Production</b>			
e. Repairs and maintenance	12	-	-	<b>Skilled</b>			
f. Stores	13	-	-	<b>Semi-skilled</b>			
				<b>Unskilled</b>			
				<b>Auxiliary Activities</b>			
				<b>Skilled</b>			
				<b>Semi-skilled</b>			
				<b>Unskilled</b>			
				<b>Others</b>			
2. Auxiliary activities (all male)	43	-	-	-	4	13	6
Managerial and technical control and laboratory.				-	-	-	-
				-	-	-	11

- Average working hours per annum per direct production worker: 2,427 hrs.

- Proportion of productive facilities occupied: For motors, 90% on the 1st shift and 70% on the 2nd and 3rd shifts. For furnaces, 95% on the 1st shift and 70% on the 2nd and 3rd shifts.

- Technological features

a): Crushing, mixing and dissolving.

b): Preparation of resin.

c): Crushing and mixing.

d): Preparation of resin.

- Degree of mechanization is fair in all the shops; automation is fair in (a) and (b) and poor in (c) and (d).

- Skilled workers in direct production are; fitters, turners, carpenters, welders, machine operators, electricians, etc.

India : 313 - (3)

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION (Rs. million)			3.33	TOTAL VALUE OF CONSUMPTION (Rs. million)			2.52
Product	Unit	Quantity Produced	Unit Value (Rs.)		Quantity consumed	Unit value (Rs.)	
a. Distemper	Ton	14.5	1,600	1. Energy & water: total	.05		
b. Stiff paint	"	140.0	2,200	- Electricity	000 kwh.	355.2	90
c. Ready-mixed paint	000 litres	600.0	3,500	- Coal	ton	350.0	55.40
d. Ready-mixed paint (red lead)	"	23.0	7,000	- Lubricating oil	000 litres	1.8	840
e. Aluminium paste	"	16.3	6,800	- Water	mill. litres	4.0	..
f. Natural varnish	"	65.0	2,000	2. Direct production materials: total	1.79		
g. Synthetic varnish	"	7.8	3,500	a. White lead	Ton	21	1,905
h. Varnish paint	"	5.0	4,250	b. Red lead	"	42	1,620
i. Natural enamel	"	11.0	4,000	c. Zinc oxide	"	49	1,755
j. Synthetic enamel	"	85.0	4,500	d. Titanium dioxide	"	60	2,285
k. Stoving and hammer finishes	"	.9	7,500	e. Off colour barytes	"	64	141
l. Bituminous black	"	14.0	1,000	f. Snow white barytes	"	131	230
				g. Whiting	"	13	154
				h. China clay	"	45	290
				i. Yellow ochre	"	29	240
				j. Natural lead oxide	"	202	435
				k. Carbon black	"	5	2,400
				l. Resin	"	77	1,350
				m. Linseed oil	"	314	1,700
				n. Castor oil	"	61	1,525
				o. Resin	"	58	5,050
				p. Mineral turpentine	000 litres	382	374
				q. Phthalic anhydride	"	12	313
				r. Other materials	000 Rs.	124	..
				3. Packaging materials: total	.52		
				194,198 tins (Rs.0.78 each); 59,326 metal drums and kegs (Rs.5.75 each); 20,240 wood crates (Rs.1.55 each)			
				4. Work performed by sub-contractors	-		
				5. Repairs & maintenance (materials & services purchased)	.03		
				6. Material inputs for auxiliary activities	-		
				7. Non-factor service inputs: total	.13		
				Transportation, insurance and storage (purchased separately) Rs. 110,000.			
CAPACITY OUTPUT: 100% higher than the 1964 actual production level with additional manhours 54,250 on the 1st shift, 12,000 on the 2nd shift, 12,000 on the 3rd shift. The underutilization is due to insufficient demand for the products and insufficient supply of raw and intermediate materials. Product-mix is flexible.							
Unit value of product: market value f.o.b. before sales tax							
Unit value of material: market price, c.i.f.							
- Direct production materials (d), (k) and (o) are imported and delivered by railroad, road and sea with freight rates (from the port to the factory) 5%, 7% and 4%, resp. The rest is domestically made and delivered either by railroad or by road. Freight rates 4% for (e), 25% for (i), 21% for (f), 7 to 5% for (a) to (c), (g) and (h), and 1% for (p).							
VI. VALUE ADDED TOTAL 1964 (Rs. million)			.81	SELECTED COEFFICIENTS			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 2,105 1/2			
- Employees in direct production			.21	- Value added per employee: Rs. 4,740			
- Other employees			.03	- Annual wage per employee in direct production: Rs. 1,627			
2. Other expenditures for employees			.01	- Variable input costs/gross production ratio: 77.2%			
3. Annual depreciation allowance			.06	- Gross profit/gross production ratio: 15.0%			
4. Rental paid			-	(at full capacity: 18.3%)			
5. Sales & other indirect taxes (less subsidies) (not included in total)			[.10]	- Level of production at break-even point is approximately 34 % of the 1964 actual level.			
6. Other gross business income (before income tax)			.50				
VII. EXPANSION: HISTORY & PLAN							
1. Recent Expansion				2. Future Plan : None			
From 1963 to 1965				a. Investment proposed for the period 19 to 19			
a. Total Investment ( 000 Rs. )			199	Total value ( )			
- Land			-	Of which: - Mach. & equipment			
- Land improvements			-	- Land improv. & bldg.			
- Buildings			73	- Land			
- Other construction work			-	- Others			
- Machinery & equipment			123	b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments			3	- Direct production:			
- Vehicles			-	- Auxiliary:			
- Office furniture & fixtures			-	c. Purposes:			
b. Corresponding increase:			From 1963 to 1965				
In no. of employees			156				
In annual gross production (Rs. million)			3.14				
VIII. SUPPLEMENT				Other establishments in the same enterprise			
Other establishments engage in the following activities (no. in parenthesis indicates no. of employees): Sugar refineries - See India 207-(2)-(1091); Hydrogenated vegetable oil - See India 312-(1)-(482); Soap (35); Oil mills (60); Lantern works (71); Torchworks (51); Gas and chemicals (186); Arc electrodes (800); Steel manuf. (1440); Distillery (554); Central Office (250).							
1/ The numerator is the total 1964 replacement value of machines itemised in I.							

India : 313-(4)

**MAJOR PRODUCTS:** Paints and varnishes. Annual capacity output estimated at 5,500 - 6,000 kilolitres or about Re. 30 million with three shifts.

**REPORTING UNIT:** A one-establishment enterprise with total assets Rs. 16 million (net worth Rs. 6 million) and 756 employees as of 1965. Founded in 1942.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( 000 Rs. )	<u>7,292</u>	<u>4,398</u>
1. Land	166	166
2. Land improvements	-	-
3. Buildings	2,653	2,042
4. Other construction works	-	-
5. Machinery & equipment	3,770	1,879
6. Tools & instruments	-	-
7. Vehicles	417	152
8. Office furniture & fixtures	285	159

**DETAIL OF I.5 (No.)**

	Total Bk. value ref. deprec.	Avr. Age (Yr.)	Depr. Oper. rate Cond. (%)	1965 replace. value	
a. Boilers and mixers (11)	3,020	2-25	A+B	10	3,325
b. Roller mills (8)					
c. Partition and storage tanks (6)					
d. Paint and varnish filters (5)					
e. Rotary pumps (5)					
f. Alkyd resin kettles (4)					
g. Ball mills (3)					
h. Paint testing machines (3)					
i. Reaction kettles (3)					
j. Roller coating machine (1)					
k. Other machine shop equipment					

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> ( 000 Rs. )	<u>6,738</u>	<u>-10</u> %
1. Direct production materials	3,414	-
2. Other input materials		
3. Work in process	762	-17
4. Finished products	2,562	-20

- Normal inventories of finished products 9.2 % of annual gross production

- Seasonal variations: . .

Capacity of electr. motors: 6,810 KW  
Total load, capacity of trucks: 10 t  
(c) and part of (d), (e), (i) and (k) were made domestically. All the rest were imported.

**EXTERNAL CONDITIONS:** Local transport and public utilities, excellent. Long distance transport and community facilities, fair.

**III. LABOUR**

(1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 756	463	201	92
1. Direct production ( all male )	343	151	73
Annual total manhours (000)	(884)	(355)	(181)
a. Paste paint section	48	24	9
b. Ready and mixed paint section	42	21	10
c. Red lead section	54	27	16
d. Enamels section	53	21	12
e. Varnishes resin section	51	27	15
f. Repairs and maintenance	42	21	7
g. Stores and dispatch	53	10	4
2. Auxiliary activities ( m. 187 f. 2 )	120	50	19
Managerial, technical and other activities			

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other		
Engi-ners				
Other				
<b>TOTAL</b>	3	28	110	615
<b>Management</b>	3	8	30	4
<b>Direct Production</b>				
Skilled	-	-	-	250
Semi-skilled	-	-	-	100
Unskilled	-	-	-	217
<b>Auxiliary Activities</b>				
Skilled	-	20	80	10
Semi-skilled	-	-	-	-
Unskilled	-	-	-	34

- Actual hours worked in 1965 per direct production worker: 2,504 hrs.

- Proportion of motors occupied: 70% on 1st shift, 40% on 2nd shift and 20% on 3rd shift.

- All shops are highly mechanized and automated.

- Skilled workers in direct production are machine operators, paint mixers, pump drivers, etc. Those in auxiliary activities are administrative assistant, sales and purchase assistants, accountants, etc.

India : 313-(4)

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION ( 000 Rs. ) 22,341				TOTAL VALUE OF CONSUMPTION ( 000 Rs. ) 16,537			
Product	Unit	Quantity Produced	Unit Value (Rs.)	1. Energy & water: total		Quantity consumed	Unit value (Rs.)
a. Paste paints	Ton	1,829	2,430	- Water	000 Kl	27	400
b. Resine	"	297	400	- Electricity	000 KWH	974	90
c. Ready and mixed paints	000 litre	133	3,500	- Petroleum	000 litre	66	800
d. Red lead	Litre	648	7	- Other fuel oil	"	638	150
e. Other paints and colours	000 litre	105	6,500	- Lubricating oil	"	5	1,550
f. Enamels	"	2,226	6,200	2. Direct production materials: total 11,069			
g. Varnishes	"	320	4,250	a. Zinc oxide	Ton	110	4,260
h. Others	000 Rs.	1,464	..	b. Titanium dioxide	"	331	500
<b>CAPACITY OUTPUT:</b>				3. Packaging materials: total 4,072			
40% higher than the 1965 actual production level without any addition to manhours. Underutilization was due to insufficient supply of raw materials. The proportions of production of (a), (c), (d) and (f) are changeable according to the pattern of demand.				176,000 tin cans (Rs. 2.33 each); 5,000 kegs (Rs. 28.1 each); 87,000 drums (Rs. 5.06 each); 3,784,000 metal cans (Rs. 0.85 each) consumable stores Rs. 635,000			
Unit value of product: Market value f.o.b. before sales tax				4. Work performed by sub-contractors ( ) -			
Unit value of material: Market price o.i.f.				5. Repairs & maintenance (materials) 111			
- IV.(a) to (h) are partly exported.				6. Material inputs for auxiliary activities 70			
- V.2.(b), (e), (f), (i), (k), (m) and (n) are directly imported and delivered by road and sea with freight rate 10% of c.i.f. Other production materials are domestically produced but have significant import contents. Delivery is by road and railroad and freight rate is 5%.				Printing and stationery			
VI. VALUE ADDED TOTAL 1965 ( 000 Rs. ) 5,804				7. Non-factor service inputs: total 960			
1. Wages & salaries (before income tax) 3,167				<b>SELECTED COEFFICIENTS</b> (in 1965 replacement value)			
- Employees in direct production (..)				- Mach., equip., instruments & tools/per employee in direct production on 1st shift: Rs. 12,200			
- Other employees (..)				- Value added per employee: Rs. 7,680			
2. Other expenditures for employees 250				- Annual wage per employee in direct production: Rs. 4,190 <sup>1/</sup>			
3. Annual depreciation allowance 571				- Variable input costs/gross production ratio: 68.9% <sup>3/</sup>			
4. Rental paid -				- Gross profit/gross production ratio: 8.1% (at full capacity: 14.7%)			
5. Sales & other indirect taxes (less subsidies) (not included in total) [1,120]				- Level of production at break-even point is approximately 74 % of the 1965 actual level.			
6. Other gross business income (before income tax) 1,616							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. Recent Expansion				2. Future Plan: None			
From 1963 to 1965				a. Investment proposed for the period 19 to 19			
a. Total Investment ( 000 Rs. ) 2,706 86				Total value ( ) %			
- Land -				Of which: - Mach. & equipment %			
- Land improvements -				- Land improv. & bldg.			
- Buildings 681 <sup>2/</sup>				- Land			
- Other construction work -				- Others			
- Machinery & equipment 1,811 <sup>2/</sup>				b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments 140 <sup>2/</sup>				- Direct production:			
- Vehicles 74 <sup>2/</sup>				- Auxiliary:			
- Office furniture & fixtures 74 <sup>2/</sup>				c. Purposes:			
b. Corresponding increase: From 1963 to 1965							
In no. of employees 628 756							
In annual gross production ( Rs. million) 17.98 22.34							
<b>VIII. SUPPLEMENT</b>				Structure of liquid assets and short term liabilities (end of 1965; 000 Rs.)			
Cash on hand and in bank 745				Taxes payable 857			
Accounts receivable 3,736				Accounts payable 4,214			
Loans and advances 372				Short term loans from commercial banks 3,319			
1/ Wage and salaries divided by the total number of employees							
2/ Of which 3% of buildings, 6% of machinery and tools, 8% of vehicles and 10% of furniture and fixtures are for simple repair and maintenance work.							
3/ Wages and salaries are excluded from variable cost.							

Israel : 313 - (1)

**MAJOR PRODUCTS:** Paints and thinners. Annual capacity is about 2,400 ton on the basis of 2 shifts operation. (Currently operating only one shift owing to insufficient demand)

**PRODUCING UNIT:** An independent one establishment enterprise with total assets I£ 4 million and employees 135 as of 1964. Founded in 1934.

I. FIXED CAPITAL ASSETS	End of 1963		End of 1964		II. INVENTORIES (end of 1964)	Actual	Normal
	After deprec.		After deprec.				
<b>TOTAL BOOK VALUE</b> ( I£ 000 )	1,030		970		<b>TOTAL VALUE</b> ( I£ 000 )	1,380	-7 %
1. Land (9,000 sq.m)	50		50		1. Direct production materials	540	-10
2. Land improvements	-		-		2. Other input materials	150	-10
3. Buildings (total floor space 2,900 sq.m)	285		250		3. Work in process	160	-
4. Other construction works	-		-		4. Finished products	530	-5
5. Machinery & equipment	560		560		- Normal inventories of finished products 10.5 % of annual gross production		
6. Tools & instruments	10		10		- Seasonal variations:		
7. Vehicles	75		60		<u>High</u> <u>Low</u>		
8. Office furniture & fixtures	50		40		(1): June, + 10%      March, - 10%		
	<b>Total</b>	<b>Avr. Age</b>	<b>Oper. Cond.</b>	<b>Depr. rate</b>	<b>1964 replace value</b>	(4): March, + 20%      June, - 10%	
<b>DETAIL OF I.5 (No.)</b>	<b>I£ value</b>	<b>(Yr.)</b>		<b>(%)</b>			
a. Armstrong-Keenomix machine	3	15	B	10%	9		
b. Triple roller mill (2) and mixer	6	20	B	10%	15		
c. Boiler (1)	7	9	B	10%	15		
d. Filling machines (2)	4	10	B	10%	14		
e. Ball mill (3)	43	14	B	10%	90		
f. Whirling machine (1)	10	15	B	10%	20		
g. Cooking machinery (2)	8	12, 19	B	10%	20		
h. Centrifuge (1)	5	14	B	10%	25		
i. Ball mill for nitrocellulose	9	14	B	10%	14		
( Subtotal )	95				222		

Capacity of electr. motors: 240 KW

Total load, capacity of trucks: - t

- All the machines itemized, except (g), were imported.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities are excellent.

III. LABOUR (1964 average)	1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				- Average working hours per annum per direct production worker: 2,031 hrs.
				Univ. or higher	Engr. or other	Sr. High sch. or equiv.	Other	
<b>TOTAL EMPLOYED</b> 135	131	2	2					
1. Direct production (n. 90 f. 4)	90	2	2					
Annual total manhours (000)	(181)	(5)	(5)					
a. Weighing	3	-	-					
b. Nitrocellulose	5	-	-					
c. Cooking	4	2	2					
d. Filling	18	-	-					
e. Barrel washing	6	-	-					
f. Storehouse	4	-	-					
g. General services in direct production	27	-	-					
h. Repair and maintenance	7	-	-					
i. Technical supervision	16	-	-					
2. Auxiliary activities (n. 31 f. 10)	41	-	-					
				<b>Management</b>				
				2	2	3	-	
				<b>Direct Production</b>				
				Skilled	-	2	8	- Proportion of motors occupied is 90% on the 1st shift.
				Semi-skilled	-	-	49	
				Unskilled	-	-	35	
				<b>Auxiliary Activities</b>				
				Skilled	2	6	6	- Conventional processes are employed. Degree of mechanization is fair in (b) and poor in (a), (c) and (d). Degree of automation is generally poor.
				Semi-skilled	-	-	-	
				Unskilled	-	-	20	

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)																																										
TOTAL VALUE OF PRODUCTION ( I£ 000 )		4,796		TOTAL VALUE OF CONSUMPTION ( I£ 000 )		2,935																																								
	Product	Unit	Quantity Pro- duced ( I£ )	Unit	Quantity con- sumed ( I£ )	Unit	Value ( I£ )																																							
a.	Paints	ton	1,719	2,600	- Electricity	000 Kwh	200 45																																							
b.	Thinners	ton	218	1,500	- Water	000 cu.m	5 200																																							
<p><b>CAPACITY OUTPUT:</b> 20% higher than the 1964 actual production level, given sufficient demand and additional manhours of 16,000 on the 1st shift and 48,000 on the 2nd shift. With an investment of I£ 120,000 on filling machines and boiler house now being planned for the year of 1966 the capacity will be further expanded to the level of 125% of the 1964 production.</p> <p>Unit value of product: Market value f.o.b. before sales tax. Unit value of material: Market price c.i.f.</p> <p>- Paints are partly exported and also used partly for painting the products for export.</p> <p>- Direct production materials (a), (b), (c) and (e) are imported; (d) contains a significant amount of import content. Freight rates for (a), (c) and (e) are: \$40, \$36 and \$20 per ton, respectively.</p>				<p><b>1. Energy &amp; water: total</b> 10</p> <p><b>2. Direct production materials: total</b> 2,212</p> <p>a. Pigments ton 200 3,000 b. Oils ton 300 1,300 c. Resins ton 800 500 d. Nitrocellulose ton 150 1,350 e. Solvents ton 500 750 f. Fillers ton 350 700</p> <p><b>3. Packaging materials: total</b> 400 - Metal containers (gallon cans) 000 pcs 1,720 220 - Paper products " 15 .. - Work performed by sub-contractors ( " ) .. <b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> 47</p> <p><b>6. Material inputs for auxiliary activities</b> 20</p> <p><b>7. Non-factor service inputs: total</b> 246 Of which transport, insurance and storage services, purchased separately 124</p>																																										
<p><b>VI. VALUE ADDED TOTAL 1964 ( I£ 000 )</b> 1,861</p> <p>1. Wages &amp; salaries (before income tax) - Employees in direct production 520 - Other employees 490 2. Other expenditures for employees 355 3. Annual depreciation allowance 70 4. Rental paid (buildings) 4 5. Sales &amp; other indirect taxes (less subsidies) - 6. Other gross business income (before income tax) 422</p>				<p><b>SELECTED COEFFICIENTS (in 1967 replacement value)</b></p> <p>- Mach., equip., instruments &amp; tools per employee in direct production on 1st shift: I£ 13,870 - Value added per employee: I£ 13,785 - Annual wage per employee in direct production: I£ 5,531 - Variable input costs/gross production ratio: 65.6% - Gross profit/gross production ratio: 8.8% (at full capacity: 13.1%) - Level of production at break-even point is approximately 75 % of the 1964 actual level.</p>																																										
<p><b>VI. EXPANSION: HISTORY &amp; PLAN</b></p> <p>1. <b>Recent Expansion</b> From 1962 to 1964</p> <table border="1"> <thead> <tr> <th></th> <th>Gross acquisition</th> <th>Scrapped or sold</th> </tr> </thead> <tbody> <tr> <td>a. Total Investment ( I£ 000 )</td> <td>357</td> <td>-</td> </tr> <tr> <td>- Land</td> <td>-</td> <td>-</td> </tr> <tr> <td>- Land improvements</td> <td>-</td> <td>-</td> </tr> <tr> <td>- Buildings</td> <td>73</td> <td>-</td> </tr> <tr> <td>- Other construction work</td> <td>-</td> <td>-</td> </tr> <tr> <td>- Machinery &amp; equipment</td> <td>270</td> <td>-</td> </tr> <tr> <td>- Tools &amp; instruments</td> <td>-</td> <td>-</td> </tr> <tr> <td>- Vehicles</td> <td>-</td> <td>-</td> </tr> <tr> <td>- Office furniture &amp; fixtures</td> <td>14</td> <td>-</td> </tr> <tr> <td>b. Corresponding increase:</td> <td>From 1962</td> <td>In 1964</td> </tr> <tr> <td>In no. of employees (direct prod. only)</td> <td>180</td> <td>94</td> </tr> <tr> <td>In annual gross production ( I£ 000 )</td> <td>3,900</td> <td>4,800</td> </tr> </tbody> </table>					Gross acquisition	Scrapped or sold	a. Total Investment ( I£ 000 )	357	-	- Land	-	-	- Land improvements	-	-	- Buildings	73	-	- Other construction work	-	-	- Machinery & equipment	270	-	- Tools & instruments	-	-	- Vehicles	-	-	- Office furniture & fixtures	14	-	b. Corresponding increase:	From 1962	In 1964	In no. of employees (direct prod. only)	180	94	In annual gross production ( I£ 000 )	3,900	4,800	<p>2. <b>Future Plan</b> during</p> <p>a. Investment proposed for the period/1966 Total value ( I£ 000 ) 120 Of which: - Mach. &amp; equipment 100 \$ - Land improv. &amp; bldg. - - Land - - Others -</p> <p>b. Net increase in no. of employees envisaged for the same period: - Direct production: .. - Auxiliary: ..</p> <p>c. Purpose: Selective expansion of existing capacity (especially filling machines and boiler house).</p>			
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<p><b>VIII. SUPPLEMENT</b></p>																																														



Israel : 313 - (2)

**MAJOR PRODUCTS:** Paints and thinners. Annual capacity is about 5,500 tons on 3 shifts operation. (Currently only one shift, except for varnish cooking).

**REPORTING UNIT:** An independent one establishment enterprise with total assets of 5 million and employees 175 as of 1964. Founded in 1936.

**I. FIXED CAPITAL ASSETS** (end of 1964)

**TOTAL BOOK VALUE** (IL 000)

1. Land
  2. Land improvements
  3. Buildings
  4. Other construction works
  5. Machinery & equipment
  6. Tools & instruments
  7. Vehicles
  8. Office furniture & fixtures
- \* Revalued in 1963

	Before deprec.	After deprec.
	3,245	2,783*

	3,245	2,783

**DETAIL OF I.5 (No.)**

		Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Balls milling machines (5)	3-25	A	10%	15	
b. Rollers milling machines (3)	1-3	A	10%	50	
c. Varnish kitchen installations	2	A	10%	200	
d. Mixers (5)	1-10	A	10%	15	

**II. INVENTORY**

(end of 1964)

**TOTAL VALUE** (IL 000)

	Actual	Normal
TOTAL VALUE (IL 000)	2,165	-
1. Direct production materials	2,165	-
2. Other input materials		
3. Work in process		
4. Finished products		

- Normal inventories of finished products .. % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: .. KW

Total load, capacity of trucks: - t

All the itemised machines are of foreign origins.

**INTERNAL CONDITIONS:** Transportation, public utilities and community facilities are excellent.

**III. LABOUR** (1964 average)

**TOTAL EMPLOYED** 175

1. Direct production (all male)

Annual total manhours (000)

a. Varnish cooking

b. Mixing shop

c. Colouring and finishing

d. Milling

e. Filling

f. Miscellaneous

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED	169	3	3
1. Direct production (all male)	90	3	3
Annual total manhours (000)	(216)	(7)	(7)

**EDUCATIONAL BACKGROUND** (No. of employees)

	Univ. or higher		Sr. High sch. or equiv.	
	Regi.	Other	Regi.	Other
TOTAL	8	2	25	140
Management	1	2	-	-
Direct Production	-	-	-	-
Semi-skilled	-	-	-	-
Unskilled	-	-	10	1
Auxiliary Activities	-	-	5	80
Semi-skilled	-	-	-	-
Unskilled	-	-	7	3
-	-	-	7	59

- Average working hours per annum per direct production worker: 2,400 hours.

- Proportion of motors occupied: 90% on the 1st shift.

- Conventional processes are employed. Degree of mechanization is high in (b), fair in (c) and (d), and poor in (e). No mechanization in the remaining shops.

No automation is involved.

2. Auxiliary activities (m. 40, f. 39) 79 - -

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( IE 000 )				8,713
Product	Unit	Quantity Produced	Unit Value ( IE )	
a. Building and industrial paints	ton	2,500	2,500	
b. Thinners	ton	600	1,500	
c. Ship paints	ton	750	2,000	
d. Others	IE 000	63	..	

**CAPACITY OUTPUT:** 50% higher than the 1964 actual production level, given sufficient demand. Additional manhours required: 30,000 each on the 2nd and on the 3rd shifts. With an investment of IE 100,000 on ball mills, the overall capacity would be raised to the level of 150% of the 1964 production. Product mix is flexible.

Unit value of product: Market value f.o.b. before sales tax.  
Unit value of material: Market price c.i.f.

- Products (a) to (b) all partly exported.
- All the detailed material inputs except for chalk and P.V.A. are imported. Average freight rate is \$5.0 per ton, approximately.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( IE 000 )				6,584
<b>1. Energy &amp; water: total</b>				43
		Quantity consumed	Unit value ( IE )	
- Electricity	000 Kwh	900	40	
- Solar oil and crude oil	( IE 000 )	3	..	
- Water	000 cu.m.	25	150	
<b>2. Direct production materials: total</b>				4,902
a. Titan	ton	460	1,500	
b. P.V.A.	ton	260	1,025	
c. Oils	ton	210	1,565	
d. Lithopone	ton	270	460	
e. Minium	ton	43	1,160	
f. Chalk	ton	320	320	
g. Others (including packaging materials)	(000 IE)	3340	..	
<b>3. Packaging materials: total (included in 2.g)</b>				..
<b>4. Work performed by sub-contractors ( )</b>				-
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>				79
<b>6. Material inputs for auxiliary activities</b>				68
<b>7. Non-factor service inputs: total</b>				1,492
Of which transport, insurance and storage services purchased separately.				392

**VI. VALUE ADDED TOTAL 1964 ( IE 000 )**

TOTAL 1964 ( IE 000 )		2,129
1. Wages & salaries (before income tax)		
- Employees in direct production	1,122	
- Other employees	150	
2. Other expenditures for employees	150	
3. Annual depreciation allowance	232	
4. Rental paid (land)	25	
5. Sales & other indirect taxes (less subsidies) (not included in total)	[ 1,000 ]	
6. Other gross business income (before income tax)	450	

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: ..
- Value added per employee: IE 12,166
- Annual wage per employee in direct production: IE 11,688
- Variable input costs/gross production ratio: 70%
- Gross profit/gross production ratio: 5.2% (at full capacity: 13.6%)
- Level of production at break-even point is approximately 84% of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

<b>1. Recent Expansion</b>		Gross acquisition	Scrapped or sold
From 1959 to 1964			
a. Total Investment ( IE 000 )	1,500	-	-
- Land	25	-	-
- Land improvements	-	-	-
- Buildings	400	-	-
- Other construction work	-	-	-
- Machinery & equipment	1,000	-	-
- Tools & instruments	-	-	-
- Vehicles	75	-	-
- Office furniture & fixtures	-	-	-
b. Corresponding increase:	From 1961 to 1965		
In no. of employees (direct prod only)	74	96	
In annual gross production	+ 160%		

- 2. Future Plan:** None
- a. Investment proposed for the period 19 to 19
- Total value ( )
- Of which: - Mach. & equipment \$
- Land improv. & bldg.
- Land
- Others
- b. Net increase in no. of employees envisaged for the same period:
- Direct production:
- Auxiliary:
- c. Purpose:

**VIII. SUPPLEMENT**

Japan : 313 - ( 1 )

**MAJOR PRODUCTS:** Oil paints, synthetic resin enamels and varnishes and thinners. Annual capacity output is about 6,000 tons of these products on one shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets ¥ 400 million and employees 103 as of 1966. Founded in 1937.

**I. FIXED CAPITAL ASSETS** (end of 1966)

TOTAL BOOK VALUE ( ¥ million )	Before deprec.	After deprec.
	94.9	59.0
1. Land	Rented	..
2. Land improvements		
3. Buildings (total floor space 3,120 m <sup>2</sup> )	43.4	32.6
4. Other construction works	.3	.3
5. Machinery & equipment	37.3	17.7
6. Tools & instruments		
7. Vehicles	10.6	5.8
8. Office furniture & fixtures	3.3	2.6

**DETAIL OF 1.5 (No.)**

	Total Bk value bef. depr.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1966 replace value
e. Rolls (3)	1.95	12, 14, 15	B	18.9	
b. Mixing tanks (2)	1.12	10	B		
c. Mixers (2)	1.27	2, 10	A, B		
d. Paint making machinery (floating system)	1.99	9	B		
e. Colloid mills (3)	1.95	3, 4, 9	A, B		
f. High speed rolls (3)	5.60	2, 6, 8	A, B		
g. Fell mill (1)	.77	6	B		
h. Dispenser (1)	.62	6	B		
i. Ovens (2)	1.36	6	B		
j. Ball mill (1)	2.28	3	A		
k. Grain mill (1)	1.46	1	A		

**II. INVENTORIES**

TOTAL VALUE ( ¥ million )	Actual (end of 1966)	Normal
	36.0	- 50 %
1. Direct production materials	12.0	- 55
2. Other input materials		
3. Work in process	3.8	- 15
4. Finished products	20.1	- 50
- Normal inventories of finished products 1.8 % of annual gross production		
- Seasonal variations:		
Item	High (Aug.)	Low (Jan.)
1&2	+40%	-50%
3	+20	-30
4	+50	-50

Capacity of electr. motors: 140 KW  
Capacity of other prime movers: 15 HP  
Total load, capacity of trucks: 12 t

All machines are domestically made.  
Average age of machinery (5% of total) is about 6 years.  
The last major expansion / replacement investment took place in 1959; the production capacity in years before 1959 was about one third of the present level.

**GENERAL CONDITIONS:**

Transportation, public utilities, community facilities, excellent, except for health and recreational facilities which are fair.

**III. LABOUR** (1966 average)

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED	103	--	--
1. Direct production ( m. 41 f. 7 )	48		
Annual total manhours (000)	(115)	( )	( )
e. Varnish shop	15		
b. Rolling shop	14		
c. Emulsion shop	5		
d. Colour mixing shop	6		
e. Container filling	7		
f. Internal transport	1		
2. Auxiliary activities ( m. 52 f. 3 )	55		
a. Management	8		
b. Development	10		
c. Testing	2		
d. Production control	3		
e. Sales and other clerical work.	32		

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Below
8	16	72	7
<b>Management</b>			
3	2	5	-
<b>Direct Production</b>			
<b>Skilled</b>			
2	-	19	-
<b>Semi-skilled</b>			
-	-	20	5
<b>Unskilled</b>			
-	-	-	2
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
3	14	25	-
<b>Semi-skilled</b>			
-	-	3	-
<b>Unskilled</b>			
-	-	-	-

- Annual working hours per direct production worker : 2,400 hours.

- Proportion of motors occupied : 70%.

**Technological features:**

b) Sand grind mill.

d) Gate mixer.

- Mechanisation is fair; no automation.

- **Skilled workers** in direct production concentrate in the reaction control process; those in auxiliary activities in product development, sales and other general management.

IV. ANNUAL PRODUCTION (1966)				V. INTERMEDIATE INPUTS (1966)			
TOTAL VALUE OF PRODUCTION ( ¥ million )				TOTAL VALUE OF CONSUMPTION ( ¥ million )			
623.6				486.2			
Product	Unit	Quantity Produced (000 g.)	Unit Value (000 ¥)			Quantity consumed (000 g.)	Unit value (000 ¥)
a. Oil paints	ton	626	96	1. <u>Energy &amp; water: total</u>		3.2	
b. Synthetic resin enamels and varnishes	"	4,209	115	- Electricity	000 KWH	318.9	7
c. Thinners for oil paints	"	278	41	- Liquid fuel	Negligible		..
d. Others	¥ mil.	138.1	..	- Water (drawn from a well and not recorded).			
				2. <u>Direct production materials: total</u>		412.9	
				a. Oils and fats	ton	807	130
				b. Natural resin	"	38	155
				c. White pigment titanium	"	421	180
				d. Carbon black	"	9	500
				e. Solvent	"	1,381	50
				f. Others	¥ million	152.8	..
<b>CAPACITY OUTPUT:</b>				3. <u>Packaging materials: total</u>		50.6	
20% higher than the 1966 actual production with no addition to manhours.				Metal containers (¥ 60/pc.) 692,000 pcs; paper and paper products (¥ 35/pc.) 159,000; glass bottles (¥ 9/pc.) 394,000.			
The underutilization is mainly due to seasonally insufficient demand. Product mix is <u>not</u> flexible.				4. <u>Work performed by sub-contractors</u>			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>		4.4	
				Parts and materials	3.6		
				Services purchased	.8		
				6. <u>Material inputs for auxiliary activities</u>			
				7. <u>Non-factor service inputs: total</u>		15.1	
Unit value of product: Market value f.o.b. before sales tax.							
Unit value of material: Market price c.i.f.							
				<b>RECEIVED CONTRIBUTIONS</b>			
VI. VALUE ADDED TOTAL 1966 ( ¥ million )				137.4			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 776,000			
- Employees in direct production				33.9			
- Other employees				32.7			
2. Other expenditures for employees				23.8			
3. Annual depreciation allowance				10.3			
4. Rental paid (land)				2.1			
5. Sales & other indirect taxes (less subsidies)				-			
6. Other gross business income (before income tax)				34.6			
				- Annual wage per employee in direct production: ¥ 705,000			
				- Variable input costs/gross production ratio: 7%			
				- Gross profit/gross production ratio: 5.6% (at full capacity : 9.1%)			
				- Level of production at break-even point is approximately 78 % of the 1966 actual level.			
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u>				2. <u>Future Plan</u>			
From 1964 to 1966				a. Investment proposed for the period 1967 to 19			
a. Total Investment ( ¥ million )				Total value			
- Land				¥ 50 million			
- Land improvements				Of which: - Mach. & equipment			
- Buildings				40			
- Other construction work				- Land improv. & bldg.			
- Machinery & equipment				60			
- Tools & instruments				- Land			
- Vehicles				-			
- Office furniture & fixtures				- Others			
b. Corresponding increase:				b. Net increase in no. of employees envisaged for the same period:			
From 1964 to 1966				- Direct production: 15			
In no. of employees				- Auxiliary: 15			
In annual gross production ( ¥ million )				c. Purposes: Introduction of new products and processes and largely balanced expansion of the existing capacity in the same location.			
86 103							
443 624							
<b>VIII. SUPPLEMENT</b>				<u>Structure of liquid assets and current liabilities ( ¥ million; end of 1966 )</u>			
Cash on hand and in bank				81.6			
Accounts receivable				216.2			
Other current assets				12.9			
Taxes payable				10.0			
Accounts payable				250.2			
Short term borrowing				63.0			
Allowances				11.0			

**MAJOR PRODUCTS:** Synthetic resin enamels and thinner for oil paints. Annual capacity output is estimated as 3,000 tons on one shift operation.

**REPORTING UNIT:** A small independent one-establishment enterprise with total assets ¥ 200 million and employees 80 as of 1964. Founded in 1948.

**I. FIXED CAPITAL ASSETS** (end of 1964)

TOTAL BOOK VALUE ( ¥ million )	Before deprec.	After deprec.
	54.20	33.48
1. Land (rented)	-	-
2. Land improvements	5.18	3.48
3. Buildings (total floor space 1,200 m <sup>2</sup> )	17.67	11.57
4. Other construction works	-	-
5. Machinery & equipment	20.83	11.86
6. Tools & instruments	-	-
7. Vehicles	7.84	5.43
8. Office furniture & fixtures	2.68	1.13

DETAIL OF I.5 (No.)	Total bk. value	Avr. Age	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Chilled roll (1)	1.75	6	B	9.5	2.50
b. Chilled roll (1)	.73	6	B	10.7	.14
c. Chilled roll (1)	2.54	4	B	13.5	2.70
d. Chilled roll (1)	1.53	4	B	13.0	2.00
e. Sand grill mill (1)	1.45	1	A	18.6	1.60
f. Gate mixer (1)	.55	6	B	10.0	1.60
g. Mixer (1)	.52	3	B	15.7	.72
h. Mixer (1)	.70	1	A	21.5	.84
i. Oven (1)	.51	6	B	10.0	1.50
j. Automatic charging machine (1)	1.51	1	A	20.4	1.70
k. Electric painting machine (1)	1.22	1	A	23.6	1.50

**II. INVENTORIES** (end of 1964)

TOTAL VALUE ( ¥ million)	Actual	Normal
	20.99	-20 %
1. Direct production materials	11.93	} -20
2. Other input materials	.28	
3. Work in process	1.25	
4. Finished products	7.52	

- Normal inventories of finished products 1.8 % of annual gross production

- Seasonal variations:

Seasonal high and low are + 20% and

- 30%, respectively, of the normal

level at the end of the year.

Capacity of electr. motors: 110 KW

Capacity of other prime movers: 150 HP

Total load, capacity of trucks: 10.5t

- All machines are domestically produced.

- Average age of machinery (62% of total) is 4 years.

- About one third of machines were installed during the current expansion programme.

**GENERAL CONDITIONS:**

Transportation, public utilities, excellent. Community facilities, fair.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	80	-	-
1. Direct production ( all male )	48	-	-
Annual total manhours (000)	(115)	( )	( )
a. Mixing	11	-	-
b. Rolling	27	-	-
c. Colour mixing	10	-	-
2. Auxiliary activities ( 24 f. 8 )	32	-	-
a. Management	7	-	-
b. Research	12	-	-
c. Production control	4	-	-
d. Purchase	2	-	-
e. Sales	7	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Engl-ness	Univ. or higher		Sr. High sch. or equiv.		Other	
	Other					
<b>TOTAL</b>	9	3	33	35	-	-
<b>Management</b>	3	3	-	1	-	-
<b>Direct Production</b>	4	-	15	20	-	-
<b>Skilled</b>	2	-	4	1	-	-
<b>Unskilled</b>	-	-	-	2	-	-
<b>Auxiliary Activities</b>	-	-	10	5	-	-
<b>Skilled</b>	-	-	4	3	-	-
<b>Semi-skilled</b>	-	-	-	-	-	-
<b>Unskilled</b>	-	-	-	3	-	-

- Annual working hours per direct production workers: 2,400 hours.

- **Technological features:**

b) Sand grind mill.

c) Gate mixer.

- Mechanisation is fair; no automation.

- **Skilled workers** in direct

production are engaged in material mixing and rolling machine operation.

Those in auxiliary activities are conducting production and quality control.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( ¥ million )				TOTAL VALUE OF CONSUMPTION ( ¥ million )			
340.6				253.3			
Product	Unit	Quantity Produced (000 ¥)	Unit Value (000 ¥)	1. <u>Energy &amp; water: total</u>	0.72		
a. Synthetic resin enamels	ton	818	179	- Electricity	000 KWH	126	5.7
b. Thinner for oil paints	"	2,151	69	2. <u>Direct production materials: total</u>	221.10		
c. Others	¥ mil.	45.8	..	a. Resin paint materials	ton	385	284.0
				b. Thinner materials	"	3,053	36.6
<b>CAPACITY OUTPUT:</b> Close to the 1964 actual production level. (The production of synthetic resin enamels can be increased by 5% with additional 2,400 manhours.) The capacity is constrained by mixers. An investment of ¥ 4.5 million is required to eliminate the bottle neck, which in turn would raise the capacity by 20% over the 1964 actual. Product-mix is flexible and optimal product-mix is; synthetic resin enamels (60%), paint thinner (30%) and others (10%).				3. <u>Finishing materials: total</u>			
Unit value of product: Market value f.o.b. before sales tax. Unit value of material: Market price c.i.f.				Metal cans (¥ 134/pc.) 172,000			
- Products are used for the production of exports.				4. <u>Work performed by sub-contractors ( )</u>			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>			
				Parts and materials ¥ 1.60 million Services purchased ¥ 3.43 million			
				6. <u>Material inputs for auxiliary activities</u>			
				7. <u>Non-factor service inputs: total</u>			
				Of which transport, insurance and storage purchased separately ¥ 1.48 million.			
<b>VI. VALUE ADDED</b> TOTAL 1964 ( ¥ million )				<b>SELECTED COEFFICIENTS</b> (in 1964 replacement value)			
87.3				- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 560,000			
1. Wages & salaries (before income tax)				- Value added per employee: ¥ 1,090,000			
- Employees in direct production 21.5				- Annual wage per employee in direct production: ¥ 448,000			
- Other employees 13.9				- Variable input costs/gross production ratio: 78%			
2. Other expenditures for employees 15.8				- Gross profit/gross production ratio: 7.9%			
3. Annual depreciation allowance 6.6				- Level of production at break-even point is approximately 63 % of the 1964 actual level.			
4. Rental paid (land .6; building 1.9) 2.5							
5. Sales & other indirect taxes (less subsidies) -							
6. Other gross business income (before income tax) 27.0							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u>				2. <u>Future Plan</u> : None			
From 19 61 to 19 65				a. Investment proposed for the period 19 to 19			
a. Total Investment ( ¥ million )		Gross acquisition	% of repair	Total value ( )			
- Land	22.50	-	-	Of which: - Mach. & equipment			
- Land improvements	-	-	-	- Land improv. & bldg.			
- Buildings	10.00	5		- Land			
- Other construction work	-	-	-	- Others			
- Machinery & equipment	7.34	10		b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments	-	-	-	- Direct production:			
- Vehicles	5.16	10		- Auxiliary:			
- Office furniture & fixtures	-	-	-	c. Purpose:			
b. Corresponding increase:	From 19 61 to 19 65						
In no. of employees	59	82					
In annual gross production ( ¥ million)	237	356					
<b>VIII. SUPPLEMENT</b>				Structure of liquid assets and current liabilities ( ¥ million; end of 1964).			
Cash on hand and in bank 73.7				Taxes payables .03			
Accounts receivable 54.8				Accounts payable 135.1			
Other current assets 10.5				Short-term borrowing from commercial banks 12.8			
				Allowances 4.9			

India	319 - (3)
<b>MAJOR PRODUCTS:</b>	Matches: Installed annual capacity is 1,300 - 1,400 million boxes (50 sticks / box) of matches on three shift operation.
<b>REPORTING UNIT:</b>	Another branch of the enterprise having establishments manufacturing matches, chemicals, paper and splints with total assets Re. 74.5 million. See India 319 - (1), (4) & (5) for its sister branches. This branch was founded in 1924.

I. FIXED CAPITAL ASSETS (end of 1964)		Before deprec.	After deprec.	II. INVENTORIES (end of 1964)		
<b>TOTAL BOOK VALUE</b> ( 000 Rs. )		5,473	1,700	<b>TOTAL VALUE</b> ( 000 Rs. )	4,062 + 56 %	
1. Land		179	179	1. Direct production materials	3,239 + 15	
2. Land improvements		-	-	2. Other input materials		
3. Buildings		1,710	107	3. Work in process	193 +402	
4. Other construction works		10	2	4. Finished products	630 +162	
5. Machinery & equipment	}	2,880	1,139			
6. Tools & instruments						
7. Vehicles			234	53		
8. Office furniture & fixtures			461	221		
		<b>Total</b>	<b>Avr. Depr. rate</b>	<b>1964 replace value</b>		
		<b>Mk. value</b>	<b>Age (Yr.)</b>	<b>Cond. (%)</b>		
<b>DETAIL OF 1.5 (No.)</b>						
a. Circular saw (1)	}			A	}	
b. Reciprocating saws (2)				"		
c. Peeling machines (9)				"		
d. Chopping machines (5)				B		
e. Splint driers (2)				"		
f. Polishing drums (3)				"		
g. Cleaning machines (3)				"		
h. Sieving machines (4)		4,000	25	A		5
i. Levelling machines (3)				"		6,000
j. Continuous machines (7)				B		
k. Inner box making machines (50)				"		
l. Outer box making machines (37)				"		
m. Box driers (4)				"		
n. Box closing machines (14)				"		
o. Others			"			
		(Rough estimate including the original value of the completely amortized items)				

Capacity of electr. motors: 786 KW  
 Capacity of prime movers: 250 HP  
 Total load, capacity of trucks: 6 t  
 Total length of railway tracks: .5 Km.

- Machines itemised were all imported.  
 - In this decade the establishment experienced two major expansions; one during 1955-56 involving an investment of Re. 0.3 million and the other from 1962 to 64 (see VII for the latter).

**EXTERNAL CONDITIONS:**

Transport, utilities and community facilities, excellent.

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				- Actual hours worked in 1964 per direct production worker : 2,710 hours.
<b>TOTAL EMPLOYED</b>	1,655	770	485	400	Univ. or higher	Sr. High sch. or equiv.	Others		
1. Direct production ( all male )		402	370	318	Engi-neers	Other			
Annual total manhours (000)		(956)	(985)	(1,025)	TOTAL				
a. Peeling section		92	91	75	16	12	47	1580	
b. Box making		108	96	80	<b>Management</b>				
c. Box closing		35	30	24	16	4	-	-	
d. Dipping section		50	50	48	<b>Direct Production</b>				
e. Box filling		42	40	39	<b>Skilled</b>				
f. Band rolling		35	33	32	<b>Semi-skilled</b>				60
g. Frictioning and packing		40	30	20	<b>Unskilled</b>				245
					<b>Auxiliary Activities</b>				785
					<b>Skilled</b>				
					<b>Semi-skilled</b>				8
					<b>Unskilled</b>				12
									35
									130
									291
2. Auxiliary activities ( all male )	368	115	82						
a. Maintenance & plant service		54	51	32					
b. Stores and transport		44	32	27					
c. General supporting activities in factory		42	32	23					
d. Managerial & technical control		228	-	-					

g) Side painting on boxes and gross packing of boxes.

- Mechanization is excellent in all shops.  
 Automation is generally fair, except in (a) which is rated as poor.

- Skilled operative workers are machine operators in various departments, turners, fitters, electricians and boiler attendants.

- **Technological features:**  
 a) Peeling of wood into veneers for boxes and splints.  
 b) Manufacture of boxes.  
 c) Classing of inner and outer boxes.  
 e) Filling sticks in boxes.  
 f) Fixing of exoise band roll and labelling.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( 000 Rs. ) 25,287				TOTAL VALUE OF CONSUMPTION ( 000 Rs. ) 12,015			
Product	Unit	Quantity Produced	Unit Value (Rs.)			Quantity consumed	Unit value (Rs.)
a. Matches (in boxes of 50 sticks)	million	1,218	20,761	1. <u>Energy &amp; water: total</u>		283	
				- Electricity	000 KWH	1,875	90
				- Coal	ton	2,690	42
				- Coke	"	27	41
				2. <u>Direct production materials: total</u>		11,188	
				a. Wood	000 cu.m.	31	139,500
				b. Match paper	ton	603	1,855
				c. Amorphous phosphorus	"	23	6,969
				d. Potassium chlorate	"	412	1,296
				e. Glue	"	89	3,708
				f. Potassium dichromate	"	8.5	2,741
				g. Sulphur	"	38.2	509
				h. Black manganese	"	22.8	416
				i. Glass powder	"	109	188
				j. Paraffin wax	"	457	848
				k. Starohee	"	281	406
				l. Umber	"	91	211
				m. Antimony sulphids	"	8.1	2,222
				n. Alum	"	8.1	451
				o. Consumable stores	000 Rs.	4,105	..
				3. <u>Finishing materials: total</u>		30	
				6 tons kraft paper (Rs. 1,773/ton)		1,202	
				wooden cases (Rs. 15.7/ case)			
				4. <u>Work performed by sub-contractors ( )</u>			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>		471	
				6. <u>Material inputs for auxiliary activities</u>		27	
				Stationery and printing	Rs.	18,000	
				Administration, etc.	Rs.	9,000	
				7. <u>Non-factor service inputs: total</u>		16	
				Transportation, insurance and storage (purchased separately)	Rs.	6,000	
<b>CAPACITY OUTPUT:</b>							
10% higher than the 1964 actual production level with additional man-hours of 40,000 on 1st. shift, 25,000 on 2nd. shift and 10,000 on 3rd. shift.							
<b>Unit value of product: Market value f.o.b. before sales tax</b>							
<b>Unit value of material: Market price c.i.f.</b>							
- V. 2. o) is domestically produced with significant import contents and is delivered by railroad. Freight rates is 2% of c.i.f. values. The rest are all of domestic origins and delivery is by railroad and road. Freight rates are 7% for a), 4% for e), 3% for d) and 2% for the others.							
<b>VI. VALUE ADDED TOTAL 1964 ( 000 Rs. ) 13,272</b>				<b>SELECTED COEFFICIENTS (in 1954 replacement value)</b>			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools/per employee in direct production on 1st shift: Rs. 14,900			
- Employees in direct production		3,390		- Value added per employee: Rs. 8,019			
- Other employees		2,458		- Annual wage per employee in direct production: Rs. 3,110			
2. Other expenditures for employees		56		- Variable input costs/gross production ratio: 59%			
3. Annual depreciation allowance		887		- Gross profit/gross production ratio: 25.6% 1/			
4. Rental paid		-		- (at full capacity : 27.1% 1/)			
5. Sales & other indirect taxes (less subsidies) (not included in total)		2,709		- Level of production at break-even point is approximately 38% of the 1964 actual level.			
6. Other gross business income (before income tax)		6,481					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u>			Gross acquisition	% of simple repair.	2. <u>Future Plan:</u>		
From 1962 to 1964					a. Investment proposed for the period 1968 to 1971		
a. Total Investment ( 000 Rs. )		716			Total value ( 000 Rs. )	230	
- Land		16			Of which: - Mach. & equipment	75	\$
- Land improvements		-			- Land improv. & bldg.	25	
- Buildings		282		3	- Land	-	
- Other construction work		-			- Others	-	
- Machinery & equipment		283		5	b. Net increase in no. of employees envisaged for the same period:	- Direct production: 230	
- Tools & instruments		-			- Auxiliary: 70		
- Vehicles		43		2	c. <u>Purpose:</u> Introduction of book matches and largely balanced expansion of existing capacity in the same location.		
- Office furniture & fixtures		93		3			
b. Corresponding increase:			From 1962	to 1964			
In no. of employees		1,630	1,655				
In annual gross production (Rs. million)		18.5	25.3				
<b>VIII. SUPPLEMENT</b>				1/ Not adjusted for the imputable overhead cost of the central offices. (The central office has 75 employees; annual wages and salaries Rs. 120,000 and other operating costs Rs. 75,000 in 1964).			
<b>[CORRIGENDA]</b>							
India 319 - (1) (Vol 1)							
1) Section I --- the footnots introduced by asterisk relates to the "before deprec." column for FIXED CAPITAL ASSETS and not to the values of the itemised machinery and equipment.							
2) Section IV --- the footnote explaining "gross box" should read: each "gross box" contains 12 packs each of which in turn contains a dozen 50 - stick boxes.							



India : 319 - ( 4 )

**MAJOR PRODUCTS:** Matches: Installed annual capacity is 1,170 million booklets (50 sticks each) of matches on two shift operation.

**REPORTING UNIT:** Sister branch of India 319 - (1), (3) and (5); established in 1924.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( 000 Rs. )	5,871	2,761
1. Land	182	182
2. Land improvements	-	-
3. Buildings	1,795	1,118
4. Other construction works	10	2
5. Machinery & equipment )	3,121	1,157
6. Tools & instruments	-	-
7. Vehicles	274	74
8. Office furniture & fixtures	489	229

**DETAIL OF I.5 (No.)**

	Total Bk. value bef. depr.	Avr. Age (Yr.)	Oper. Cond.	1964 replace value
a. Circular saws (2)	9.9	35	B	30
b. Reciprocating saws (4)	29.1	33	"	32
c. Peeling machines (10)	47.0	32	"	450
d. Chopping machines (7)	31.5	28	A	138
e. Splint driers (2)	170.0	31	"	350
f. Polishing drums (2)	30.0	25	B	80
g. Cleaning machines (3)	10.5	26	"	24
h. Sieving machines (4)	43.2	24	"	72
i. Levelling machines (5)	93.3	2	"	110
j. Continuous machines (3)	313.5	22	"	1,800
k. Inner box making machines (40)	120.0	24	"	600
l. Outer box making machines (35)	50.0	20	"	350
m. Box driers (4)	600.0	18	"	1,000
n. Box closing machines	300.0	19	"	627
<b>TOTAL</b>	1,848.0			5,663

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> ( 000 Rs. )	5,851	+ 11 g
1. Direct production materials	5,140	+ 11
2. Other input materials	71	- 35
3. Work in process	640	+ 16
4. Finished products		

- Normal inventories of finished products 3.3% of annual gross production

- Seasonal variations: None.

Capacity of electr. motors: 1,540 KW

Total load, capacity of trucks: 7 t

Total length of railway tracks: .5 Km.

- Machines itemized (60% of total) were all imported.

- Average age is 21 years. Some old machines are already completely amortised.

**GENERAL CONDITIONS:**

Transportation, electricity and electricity, community facilities, excellent. Water, fair.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED 1949</b> n. 1388	1,151	798	-
1. Direct production ( f. 29 )	819	598	-
Annual total manhours (000)	(1,970)	(866)	( )
a. Peeling	210	120	
b. Box making	200	115	
c. Box closing	65	50	
d. Dipping	82	71	
e. Box filling	70	65	
f. Band rolling	92	90	
g. Frictioning and packing	100	87	
2. Auxiliary activities ( all male )	332	200	-
a. Maintenance	70	65	
b. Plant service	70	43	
c. Stores and transport	70	40	
d. General factory auxiliary	58	52	
e. Managerial and technical control	64		

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Other
Engl- ngram			
<b>TOTAL</b>	17	4	1,918
<b>Management</b>	17	4	-
<b>Direct Production</b>			
Skilled	-	2	60
Semi-skilled	-	-	317
Unskilled	-	-	1,038
<b>Auxiliary Activities</b>			
Skilled	-	6	10
Semi-skilled	-	2	120
Unskilled	-	-	373

- Actual hours worked in 1964 per direct production worker: 2,000 hours

- Proportion of motors occupied 97% on 1st shift and 86% on 2nd shift.

**Technological features:**

a) Feeling of wood into veneers for boxes & splints.

d) Formation of heads on the splints by dipping in solution.

f) Fixing of exoiss band roll and labelling.

g) Sand painting and gross packing of boxes.

- Mechanisation is excellent in a), b), f) and g) and fair in c) and d).

Automation is generally fair except in a) which is rated as poor.

- Skilled workers in direct production are machine operators in various shops, turners, fitters, electricians, boiler attendants, etc.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( 000 Rs. )		22,557		TOTAL VALUE OF CONSUMPTION ( 000 Rs. )		10,656	
Product	Unit	Quantity Produced (000Rs.)	Unit Value (Rs.)			Quantity consumed (Rs.)	Unit value (Rs.)
a. Booklets of safety matches (50 sticks each): ordinary and deluxe	million	1,004	21.2	1. Energy & water: total		1,433	
				- Lubricating oil	K.L.	17.7	1.14
				- Electricity	000 KWH	23,423	47.40
				- Firewood	ton	1,421	17.60
				- Fuel oils	K.L.	1,766	139.30
				- Water	000 K.L.	396.6	8,691.30
				2. Direct production materials: total			
				a. Wood	cu.m.	10,053	238
				b. Match paper	ton	572	1,950
				c. Potassium chloride	"	2,707	438
				d. Splints	"	4,652	558
				e. Hide pickers	"	498	594
				f. Amorphous Phosphorus	"	25	7,169
				g. Potassium dichromate	"	9.5	2,586
				h. Sulphur	"	39.6	490
				i. Zinc oxide	Kg.	197	2
				j. Black manganese	ton	14.6	319
				k. Glass powder	"	105	206
				l. Paraffin wax	"	421	897
				m. Starches	"	287	425
				n. Hydrochloric acid	"	158	237
				o. Beta Naphthol	"	2.9	4,656
				p. Barium chloride	"	5	2,648
				q. Consumable stores	000 Rs.	292	..
				3. Packaging materials: total			51
				14tone kraft paper (RS. 2,114/ton.)			
				34,500 wooden cases (RS. 0.625/case)			
				4. Work performed by sub-contractors ( )			--
				5. Repairs & maintenance (materials & services purchased)			430
				Materials consumed Rs. 310,000			
				Services purchased Rs. 120,000			
				6. Material inputs for auxiliary activities			34
				Stationery & printing Rs. 21,000			
				Audit etc. Rs. 13,000			
				7. Non-factor service inputs: total			17
				Transportation, insurance and storage (purchased separately) Rs. 6,000			
CAPACITY OUTPUT:				SELECTED COEFFICIENTS (in 1964 replacement value)			
10% higher than the 1964 actual production level with additional man-hours of 120,000 on 1st shift and 90,000 on 2nd shift.				- Mach., equip., instruments & tools/per employee in direct production on 1st shift: Rs. 8,460			
Product mix is flexible.				- Value added per employee: Rs. 6,106			
Unit value of product: Market value f.o.b. before salestax				- Annual wage per employee in direct production: Rs. 3,035			
Unit value of material: Market price c.i.f.				- Variable input costs/gross production ratio: 64.2%			
Wood is of domestic origin and delivered by road with freight rate 5% of c.i.f. value.				- Gross profit/gross production ratio: 21.1% 1/			
				- (at full capacity : 22.4% 1/			
				- Level of production at break-even point is approximately 41% of the 1964 actual level.			
VI. VALUE ADDED TOTAL 1964 ( 000 Rs. ) 11,901				VII. EXPANSION: HISTORY & PLAN			
1. Wages & salaries (before income tax)				1. Recent Expansion			
- Employees in direct production 4,300				From 1962 to 1964			
- Other employees 2,020				a. Total Investment ( 000 Rs. ) 936			
2. Other expenditures for employees 172				- Land 19 -			
3. Annual depreciation allowance 644				- Land improvements - -			
4. Rental paid (plant and machinery) 10				- Buildings 369 2			
5. Sales & other indirect taxes (less subsidies) (not included in total) [1,760]				- Other construction work - -			
6. Other gross business income 1/ 4,755				- Machinery & equipment 332 5			
				- Tools & instruments - -			
				- Vehicles 92 1			
				- Office furniture & fixtures 124 1			
				b. Corresponding increase: From 1962 to 1964			
				In no. of employees 1,920 1,949			
				In annual gross production (Rs. million) 21.5 22.6			
				2. Future Plan :			
				a. Investment proposed for the period 1966 to 1968			
				Total value ( Rs. million ) 1			
				Of which: - Mach. & equipment 65 %			
				- Land improv. & bldg. 30			
				- Land -			
				- Others 5			
				b. Net increase in no. of employees envisaged for the same period:			
				- Direct production: 205			
				- Auxiliary: 71			
				c. Purpose: Introduction of book matches and largely balanced expansion of existing capacity in the same location.			
VIII. SUPPLEMENT							
1/ Not adjusted for the imputable overhead cost of the central office (The central office has 75 employees; annual wages and salaries Rs. 120,000 and other operating costs Rs. 75,000 in 1964).							

**MAJOR PRODUCTS:** Matches : Installed annual capacity is about 640 million booklets and boxes on three shift operation.

**REPORTING UNIT:** Another sister branch of India 319 - (1), (3) and (4). The parent enterprise has in addition to these four match manufacturing establishments, two establishments producing chemicals, one producing paper products, and one manufacturing splint; all have own branch accounts.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( 000 Rs. )	<u>5,716</u>	<u>2,765</u>
1. Land	179	179
2. Land improvements	-	-
3. Buildings	1,770	1,077
4. Other construction works	10	2
5. Machinery & equipment	2,880	1,139
6. Tools & instruments		
7. Vehicles	234	53
8. Office furniture & fixtures	644	315

**DETAIL OF I.5 (No.)**

	Total Bk. value bef. deprec.	Avr. Age (Yr.)	Depr. rate (%)	1964 replac. value	
a. Circular saws (2)	1,560	20	B	6	1,950
b. Reciprocating saws (3)					
c. Peeling machines (8)					
d. Chopping machines (6)					
e. Splint driers (2)					
f. Polishing drums (2)					
g. Cleaning machines (4)					
h. Sieving machines (3)					
i. Levelling machines (5)					
j. Continuous machines (7)					
k. Inner box making machines (45)					
l. Outer box making machines (36)					
m. Box driers (4)					
n. Box closing machines (10)					

**II. INVENTORIES** (end of 1964)

	Actual	Normal
<b>TOTAL VALUE</b> ( 000 Rs. )	<u>2,700</u>	<u>+ 8</u>
1. Direct production materials	2,252	+ 9
2. Other input materials		
3. Work in process	321	+29
4. Finished products	127	-55

- Normal inventories of finished products % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 950 KW  
Capacity of prime movers 120 HP  
Total load, capacity of trucks: 6 t

Machines itemised were all imported. Prior to the 1962 - 64 expansion (see VIII), no significant new investment had been undertaken for nearly 10 years.

**EXTERNAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	758	646	609
1. Direct production ( f. 15 )	471	458	448
Annual total manhours (000)	( 950 )	( 960 )	( 968 )
a. Peeling	90	90	90
b. Box making	98	98	98
c. Box closing	45	42	41
d. Dipping	65	63	62
e. Box filling	42	42	40
f. Band rolling	56	48	42
g. Frictioning & packing	75	75	75
2. Auxiliary activities ( all male )	287	188	161
a. Managerial & technical control	90	-	-
b. Auxiliary activities in factory	75	73	53
c. Maintenance & plant service	63	63	61
d. Stores & transport	59	52	47

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
16	14	50	1,933
16	8	-	-
-	-	-	145
-	-	-	445
-	-	-	787
6	23	26	-
-	27	110	-
-	-	-	420

- Actual hours worked in 1964 per direct production worker : 2,087 hours.

- Proportion of motors occupied: 97% on 1st shift and 9% on 2nd. and 3rd. shifts.

**Technological features:**

- a) Peeling of wood into veneer for boxes and splints.  
d) Formation of heads on the splints by dipping in solution.  
e) Filling sticks in boxes  
f) Fixing of excise band roll and labelling.

g) Side painting on boxes and gross packing of boxes.

- Mechanization is excellent in c), d) and f) and fair in the rest. Automation is generally fair except in b) and g) which are rated poor.

- Skilled workers in direct production are machine operators in various departments, turners, fitters, electricians and boiler attendants.

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IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( 000 Re. )		15,749		TOTAL VALUE OF CONSUMPTION ( Re. 000 )		7,815	
Product	Unit	Quantity Produced	Unit Value (Rs.)				
a. Safety matches (boxes or booklets)	million	530	29,572	1. <u>Energy &amp; water: total</u> 130			
b. Others	000 Re.	76	..	Quantity Unit consumed (Rs.)			
The total value of production declined by some 28% from Rs. 21.6 million (782 million boxes & booklets) in 1963.				Lubricating oil K.L. 17.5 1,091 - Electricity 000 KWH 379 229 Firewood ton 82 40 Charcoal " 10 116.9 Petroleum K.L. 23 813 2. <u>Direct production materials: total</u> 6,731			
CAPACITY OUTPUT: 20% higher than the 1964 actual level with additional manhours of 15,000 on 1st shift and 10,000 each on 2nd and 3rd shifts.				a. Wood 000 cu.m 17.7 161,500 b. Match paper ton 510 1,988 c. Splinte " 2,994 600 d. Amorphous phosphorus " 21.6 7,979 e. Potassium chlorate " 393 123 f. Glue " 91.6 3,668 g. Potassium dichromate " 8.1 2,786 h. Sulphur " 39.5 541 i. Black manganese " 16.8 400 j. Glass powder " 111.7 304 k. Paraffin wax " 342.2 852 l. Starohee " 276 374 m. Rodamin powder Kg. 12 46 n. Consumable stores 000 Re. 38 ..			
Unit value of product: Market value f.o.b. before sales tax Unit value of material: Market price o.i.f.				* 489 million labels (Re. 629/million) 480 3. <u>Packaging materials: total</u> 480 1.5 tone kraft paper (Re. 1,779/ton); 52 wooden cases (Re. 16 each); 117 tone water proof packing (Re. 1,443/ton); (** cont.) 4. <u>Work performed by sub-contractors</u> - 5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> 417 Materials Re. 348,000 Services Re. 69,000 6. <u>Material inputs for auxiliary activities</u> 25 Stationery and printing Re. 19,000 Administration etc. Re. 6,000 7. <u>Non-factor service inputs: total</u> 32 Transportation, storage and insurance (purchased separately) Re. 16,300			
- V 2: Production materials are all of domestic origin and delivery is by road and railroad. Freight rates are 1% for b); 2% for d), j), k) and m); 2% for e), h) and l); 3% for c) and f); 3% for i); 5% for a) and 6% for g).				VI. VALUE ADDED TOTAL 1964 ( 000 Re. ) 7,934 1. Wages & salaries (before income tax) - Employees in direct production 2,400 - Other employees 1,756 2. Other expenditures for employees 75 3. Annual depreciation allowance 316 4. Rental paid - 5. Sales & other indirect taxes (less subsidies) (not included in total) [1,613] 6. Other gross business income 1/ 3,387 (before income tax)			
VII. EXPANSION: HISTORY & PLAN				SELECTED COEFFICIENTS (in 1964 replacement value)			
1. <u>Recent Expansion</u>				- Mech., equip., instruments & tools per employee in direct production on 1st shift: Re. 6,940 - Value added per employee: Re. 3,940 - Annual wage per employee in direct production: Re. 1,740 - Variable input costs/gross production ratio: 61.8% - Gross profit/gross production ratio: 21.5% 1/ - ( at full capacity : 24.5% 1/ - Level of production at break-even point is approximately 44 % of the 1964 actual level.			
From 19 62 to 19 64 a. Total Investment ( 000 Re. ) 716 - Land 16 - - Land improvements - - - Buildings 282 6 - Other construction work - - - Machinery & equipment 283 5 - Tools & instruments - - - Vehicles 43 3 - Office furniture & fixtures 93 2 b. Corresponding increase: From 19 62 to 19 64 In no. of employees 1,997 2,013 In annual gross production (Rs. million) 15.45 15.75				2. <u>Future Plan</u> : None a. Investment proposed for the period 19 to 19 Total value ( ) Of which: - Mech. & equipment \$ - Land improv. & bldg. - Land - Others b. Net increase in no. of employees envisaged for the same period: - Direct production: - Auxiliary: c. Purposes:			
VIII. SUPPLEMENT				The parent company (with 8 establishments and central office) has the following, B/S position as at the end of 1964 : ( Re. million)			
Current assets: Inventories 20 Cash 16 Accounts receivable 10 Fixed assets total: 26				Current liabilities: Accounts payable 17 Net worth: Common stock 28 Retained earnings 30			
1/ Before adjusting for the overhead cost of the central office.							

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**MAJOR PRODUCTS:** Pharmaceutical products (vitamin-tablets, -injectables and -capsules, antibiotics, ointments, etc. Also makes milk powder, syrups and medicinal foods. Capacity revenue output amounts to some Rs. 160 million annually on three shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets Rs. 130 million (net worth Rs. 100 million) and 3,000 employed as of 1965. Founded in 1949.

**I. FIXED CAPITAL ASSETS** (end of 1965)

TOTAL BOOK VALUE (Rs. million)	Before deprec.	After deprec.
	47.42	28.09
1. Land	1.67	1.67
2. Land improvements	-	-
3. Buildings	15.55	12.75
4. Other construction works	-	-
5. Machinery & equipment	24.94	11.91
6. Tools & instruments	-	-
7. Vehicles	1.65	.44
8. Office furniture & fixtures	3.61	1.32
	Total	Avr. Depr. 1965
	Rk. value	Age Oper. rate
	ref. dem. (Tr.)	Cond. (\$)
		replac. value

**DETAIL OF 1.5 (No.)**

- a. Reaction vessels and ancillary equipment
- b. Distillation columns and sub-assemblies
- c. High vacuum equipment
- d. Tank farm and pumping equipment
- e. Tableting machines
- f. Filling machines
- g. Blending machines
- h. Packing machines
- i. Printing and labelling machines
- j. Roller drier
- k. Dairy equipment
- l. Freeze drying machine
- m. Sterilising equipment
- n. Steam generating, refrigeration and air conditioning, water, compressed air, vacuum and gas services equipment

25	1	10
	to	to
	17	30
		27.5

**II. INVENTORIES**

(end of 1965)	Actual	Normal
TOTAL VALUE (Rs. million)	32.90	-14 %
1. Direct production materials	14.48	-22.2
2. Other input materials		
3. Work in process	6.62	-15
4. Finished products	11.80	-4.4

- Normal inventories of finished products 8.5 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 2,540 KW

Total load, capacity of trucks: .. t

Machinery and equipment were all imported.

**GENERAL CONDITIONS:** Transportation, gas, electricity, health and recreational facilities, excellent. Water, fair. Residential and educational facilities, poor.

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED 3,000	1110	955	935
1. Direct production ( n. 2,050 f. 595 )	885	880	880
Annual total manhours (000)	(2,116)	(2,119)	(2,116)
a. Tablet dept.	115	110	110
b. Ampoule dept.	100	100	100
c. Capsulation dept.	95	95	95
d. Antibiotic blending dept.	85	85	85
e. Antibiotic filling dept.	50	50	50
f. Milk food manufacturing dept.	90	90	90
g. Pharmaceutical manufacturing dept.	65	65	65
h. Bacteriology dept.	95	95	95
i. Packing dept.	105	105	105
j. Analytical dept.	85	85	85
2. Auxiliary activities ( n. 284 f. 71 )	225	75	55
Administration and managerial control	225	75	55

EDUCATIONAL BACKGROUND (No. of employees)			
Univ. or higher	Sr. High sch. or equiv.	Other	Other
12	53	1,610	1,325
<b>Management</b>			
12	53	-	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	270	-
<b>Semi-skilled</b>			
-	-	1,115	-
<b>Unskilled</b>			
-	-	-	1,260
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	-	95	-
<b>Semi-skilled</b>			
-	-	130	-
<b>Unskilled</b>			
-	-	-	65

- Actual hours worked in 1965 per direct production worker: 2,400 hrs.

- Mechanisation and automation are generally fair.

- Skilled workers in direct production are mechanics, laboratory assistants, boiler attendants, electricians, etc. Those in auxiliary activities are in administration, accounts, purchase, sales, stores, etc.

IV. ANNUAL PRODUCTION (1965)			V. INTERMEDIATE INPUTS (1965)		
TOTAL VALUE OF PRODUCTION ( Rs. million )			TOTAL VALUE OF CONSUMPTION ( Rs. million )		
133.50			74.87		
Product	Unit	Quantity Produced (000 Rs.)	Quantity consumed	Unit	Value (Rs.)
a. Vaccines	million c.c.	340	500		
b. Corticosteroid	Re. million	1.45	..		
c. Vitamin A	..	1.20	..		
d. Calcium semnosides	..	.06	..		
e. Multi-vitamin tablets	million	272.70	30		
f. Other tablets	..	391.30	50		
g. Vitamin injectables	million c.c.	43.40	330		
h. Other injectables	..	3.90	970		
i. Ointments	Ton	63.70	140		
j. Vitamin capsules	million	563.50	60		
k. Milk powder	Ton	2,252.30	8		
l. Syrups	million cc	561.60	3		
m. Antibiotics	mill. vials	16,450.70	..		
n. Medicinal foods	Ton	1,875.60	5		
o. Whole milk powder	..	9.00	7		
p. Others (incl. antibiotics and by-products)	Rs. million	10.79	..		
CAPACITY OUTPUT: 20% higher than the 1965 actual production level with additional manhours of 75,000 on 1st shift and 275,000 on 2nd shift. Underutilisation was due to insufficient supply of imported raw materials. Product mix among vaccines, tablets and capsules is readily changeable.			1. <u>Energy &amp; water: total</u> (includes 49,000 ou.m. coal gas at Rs.0.2/ou.m.)		
Unit value of product: market value f.o.b. before sales tax Unit value of material: market price c.i.f.			2. <u>Direct production materials: total</u>		
- Antibiotics is partly exported.			a. Ergot Ton 2.53 93,300		
- Organic and inorganic chemicals and others (V21) are partly imported and partly produced domestically, and delivered by road, rail and sea with freight rates ranging from 1 to 10% of c.i.f. value. The other production materials are all of domestic origin and delivered by road with freight rate of 1%.			b. Essential oils .. .50 28,900		
			c. Gum Acacia .. 7.75 9,030		
			d. Gum Tragacanth .. 4.25 10,350		
			e. Organic chemicals Rs. million 7.77 ..		
			f. Inorganic chemicals .. 1.57 ..		
			g. Milk Ton 11,887 660		
			h. Sugar .. 310 1,280		
			i. Others Rs. million 28.76 ..		
			3. <u>Packaging materials: total</u> 17.21		
			71,000 metal containers (Rs. 0.62 each); 339 other metal products (Rs. 80 each); 18 ton paper products (Rs. 4,520/ton); 31,135,000 glass containers (Rs. 0.1 each); 343,000 wooden boxes (Rs. 4.25 each); 5,319,000 ampoules (Rs. 0.03 each); 312,500 polyethylene bags (Rs. 0.03 ea); 5,944,000 tins (Rs. 0.81 each); and others Rs. 7.50 mill.		
			4. <u>Work performed by sub-contractors</u> ( ) -		
			5. <u>Repairs &amp; maintenance</u> (materials & services purchased) .33		
			Parts and materials		
			6. <u>Material inputs for auxiliary activities</u> 1.31		
			Of which printing and stationery Rs. 260,000		
			7. <u>Non-factor service inputs: total</u> 7.07		
			Of which transportation, insurance and storage (purchased separately) Rs. 360,000		
VI. VALUE ADDED TOTAL 1965 ( Rs. million ) 58.63			SELECTED COEFFICIENTS		
1. Wages & salaries (before income tax) 19.29			- Mach., equip., per employee in direct production on 1st shift: Rs. 31,100 <sup>2/</sup>		
- Employees in direct production (..)			- Value added per employee: Rs. 19,500		
- Other employees (..)			- Annual wage per employee in direct production: Rs. 6,420 <sup>3/</sup>		
2. Other expenditures for employees .68			- Variable input costs/gross production ratio: 60.7% <sup>4/</sup>		
3. Annual depreciation allowance (incl. royalties) 2.91			- Gross profit/gross production ratio: 26.6% (at full capacity: 28.5%)		
4. Rental paid Rs. 130,000) .28			- Level of production at break-even point is approximately 32 % of the 1965 actual level.		
5. Sales & other indirect taxes (less subsidies) (not incl. in total) [.23]					
6. Other gross business income (before income tax) 35.47					
VII. EXPANSION: HISTORY & PLAN			Gross Scrapped acqul- or sition sold		
1. <u>Recent Expansion</u>			2. <u>Future Plan</u>		
From 1963 to 1965			a. Investment proposed for the period 1967 to 1970		
a. Total Investment ( Rs. million ) 6.69 1.18			Total value ( Rs. million ) 15		
- Land .19 -			Of which: - Mach. & equipment 60 %		
- Land improvements - -			- Land improv. & bldg. 30		
- Buildings 2.00 <sup>1/</sup> .08			- Land 5		
- Other construction work } 3.27 <sup>1/</sup> .41			- Others (vehicles) 5		
- Machinery & equipment } 3.27 <sup>1/</sup> .41			b. Net increase in no. of employees envisaged for the same period:		
- Tools & instruments } .52 <sup>1/</sup> .17			- Direct production: 175		
- Vehicles .52 <sup>1/</sup> .17			- Auxiliary: 250		
- Office furniture & fixtures .71 <sup>1/</sup> .52			c. Purposes: Introduction of new processes (automation and mechanization) and largely balanced expansion of existing capacity in the same location and in a new locality.		
b. Corresponding increase: From 1963 to 1965					
In no. of employees 2,600 3,000					
In annual gross production (Rs. million) 113.08 133.50					
VIII. SUPPLEMENT			Structure of liquid assets and short term liabilities		
			(Rs. million; end of 1965)		
Cash on hand and in bank 31.4			Taxes payable 6.9		
Accounts receivable 7.6			Accounts payable 11.9		
Consumables .5					
Deferred revenue expenditure .1					
Loans and advances 11.1					
1/ Of which 5% of buildings and other construction works, 7% of machinery, equipment and hand tools, 1.5% of vehicles					
2/ Using the 1965 replacement value for numerator.			( and 1% of furniture and fixtures are for simple repair and maintenance work.		
3/ Wages and salaries divided by total number of employees.					
4/ Three-fourths of wages and salaries are regarded as variable cost.					

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**MAJOR PRODUCTS:** Pharmaceutical products (vitamins, hormones, injectables, tinctures, galenicals, etc.) Annual capacity revenue output is about Rs. 10 million on one shift operation.

**REPORTING UNIT:** An old one-establishment enterprise with total assets of Rs. 7 million (net worth Rs. 3 million) and 575 employees as of 1964. Founded in 1910.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.*
<b>TOTAL BOOK VALUE</b> ( 000 Rs. )	<u>3,132</u>	<u>1,131</u>
1. Land	233	233
2. Land improvements	-	-
3. Buildings	1,260	516
4. Other construction works	-	-
5. Machinery & equipment	968**	168
6. Tools & instruments	223**	33
7. Vehicles	70	23
8. Office furniture & fixtures	356	164

\* As on the end of March 1965

\*\* exclude the completely amortized items

Avr. Depr.  
Age Oper. rate  
(Yr.) Cond. (%)

**DETAIL OF 1.5 (No.)**

- a. Grinding machinery
- b. Fruit pulping machinery
- c. Tablet and pill making machinery
- d. Machine shop equipment
- e. Bhansa manufacturing machinery
- f. Ayurvedic packing machinery
- g. Bottling machinery
- h. Liquid filling machinery
- i. Research laboratory equipment
- j. Analytical laboratory equipment

17 B 10 us.  
3.5 million

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> ( 000 Rs. )	<u>2,460</u>	<u>+ 3 %</u>
1. Direct production materials	972	+ 20
2. Other input materials		
3. Work in process	91	- 9
4. Finished products	1,397	- 6

- Normal inventories of finished products 14.7 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 570 KW

Total load, capacity of trucks: - t

Part of machinery a), b), c), e) to h) and i) were domestically made; the rest imported.

Many machines, still in fair operating condition, have already completely amortized and are not reflected in the book value before depreciation.

**GENERAL CONDITIONS:** Local transport and public utilities, excellent. Long distance transport and community facilities, fair.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	575	-	-
1. Direct production ( m. 432 f. 46 )	484		
Annual total manhours (000)	(1,333)	( )	( )
a. Machine shop	17		
b. Biological dept.	63		
c. Bontea dept.	36		
d. Asava dept.	26		
e. Tablet and pills dept.	27		
f. Non-spirituous dept.	48		
g. Extraction and grinding dept.	30		
h. Parts and supplies dept.	44		
i. Warehouse	44		
j. Packing and dispatching	49		
k. Ayurvedic packing dept.	30		
l. Bottles dept.	36		
m. Analytical dept.	22		
2. Auxiliary activities ( m. 85 f. 10 )	95		
(Technical and managerial control)			

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
Engi-neers			
TOTAL	2	30	516
<b>Management</b>	2	30	-
<b>Direct Production</b>			
Skilled	-	-	17
Semi-skilled	-	-	196
Unskilled	-	-	267
<b>Auxiliary Activities</b>			
Skilled	-	27	-
Semi-skilled	-	-	-
Unskilled	-	-	36

- Actual hours worked in 1964 per direct production worker: 2,777 hrs.

- Proportion of motors occupied: 95% on 1st shift.

- Degree of mechanisation and automation is generally fair.

- Skilled workers in direct production are turners, fitters, electricians, boiler operators, welders, etc. Those in auxiliary activities are in administration, accounts, sales, purchase, etc.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION ( 000 Rs. )		5,769		TOTAL VALUE OF CONSUMPTION ( 000 Rs. )		5,914	
Product	Unit	Quantity Produced	Unit Value (000 Rs.)		Quantity consumed	Unit Value (Rs.)	
a. Liver extract - parental	mill. c.c.	1.63	87.73	1. <u>Energy &amp; water: total</u> (includes 10t coke (Rs.99.4/t); 9t charcoal (Rs.197/t); 450 l lubricating oil (Rs.1/-) and 44,240 cu.m. coal gas (Rs.0.13/cu.m.))	155		
b. Liver extract - oral	Ton	1.09	17.00	- Water	mill. litres	63.8	400
c. Hormones	mill. c.c.	.68	100.25	- Electricity	000 kwh	288.7	120
d. Vitamin tablets	million	25.65	16.76	- Firewood	Ton	130.0	72
e. Other tablets	"	84.76	14.92	- Petroleum	000 litres	36.8	800
f. Tinctures and galenicals	000 litres	251	6.67	- Other fuel oils	"	405.1	110
g. Injectable vitamins	mill. c.c.	3	107.17	2. <u>Direct production materials: total</u>			3,240
h. Other injectables	"	18.25	20.21	a. Crude drugs and extracts	Ton	310	2,309
i. Patent and proprietary medicines	000 Rs	198	..	b. Animal glands and extracts	kg.	40	62.2
j. Ayurvedic medicines	"	3,879	..	c. Organic chemicals and solvents	000 Rs.	1,210	..
k. Ointment	Ton	12.90	5.00	d. Inorganic chemicals and solvents	"	410	..
l. Syrup	Ton	36.30	2.50	e. Vitamins	"	150	..
m. Pills, allopathic	million	3.84	8.33	f. Hormones	"	100	..
n. Powder, allopathic	Ton	9.40	5.10	g. Antibiotics	"	78	..
o. Plaister	"	12.67	4.80	h. Milk powder	kg.	570	5
p. Disinfectant	000 litres	2.58	30.60	i. Vegetable oils	Ton	16	27,701
<b>CAPACITY OUTPUT:</b> 15% higher than the 1964 actual production level without additional manhours. Underutilization was due to occasionally insufficient demand for the products and occasionally inefficient supply of raw and intermediate materials.				j. Cotton	kg.	1,376	4.5
Unit value of product: market value f.o.b before sales tax Unit value of material: market price c.i.f.				k. Consumable stores	000 kg.	21	..
- Direct production materials are all of domestic origin and are delivered by road and railroad. Freight rates applied on c.i.f. value are from 2 to 5%.				l. Others	"	45	..
				3. <u>Packaging materials: total</u>			1,822
				(see VIII for detail)			
				4. <u>Work performed by sub-contractors</u> ( )			-
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>			136
				Plant and machinery, permanent factory stores, etc.			
				6. <u>Material inputs for auxiliary activities</u>			141
				Expenses for laboratory, employees' welfare and administration			
				7. <u>Non-factor service inputs: total</u>			420
				Transportation, insurance and storage services (purchased separately) Rs. 102,000			
<b>VI. VALUE ADDED</b>		TOTAL 1964 ( 000 Rs. ) 2,855		<b>SELECTED COEFFICIENTS</b>			
1. Wages & salaries (before income tax)		2,023		- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 7,300 1/2			
- Employees in direct production		(..)		- Value added per employee: Rs. 4,965			
- Other employees		(..)		- Annual wage per employee in direct production: Rs. 3,518 2/3			
2. Other expenditures for employees		175		- Variable input costs/gross production ratio: * 59.5%			
3. Annual depreciation allowance		107		- Gross profit/gross production ratio: 0.2%			(at full capacity: 10.7%)
4. Rental paid		7		- Level of production at break-even point is approximately 85 % of the 1964 actual level.			
5. Sales & other indirect taxes (less subsidies) (not included in total)		[ 50 ]		* Wages and salaries are excluded from variable costs.			
6. Other gross business income (before income tax)		543					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>		Gross acquisition		2. <u>Future Plan</u> : None			
1. <u>Recent Expansion</u>				a. Investment proposed for the period 19 to 19			
From 1963 to 1964				Total value ( )			
a. Total Investment ( 000 Rs. )		83	% of repair	Of which: - Mach. & equipment %			
- Land		-	-	- Land improv. & bldg.			
- Land improvements		-	-	- Land			
- Buildings		-	-	- Others			
- Other construction work		12	5	b. Net increase in no. of employees envisaged for the same period:			
- Machinery & equipment		22	10	- Direct production:			
- Tools & instruments		-	-	- Auxiliary:			
- Vehicles		35	7	c. Purposes:			
- Office furniture & fixtures		14	5				
b. Corresponding increase:		From 1963	to 1964				
In no. of employees		503	575				
In annual gross production (Rs. million)		7.96	8.77				
<b>VIII. SUPPLEMENT</b>		Structure of liquid assets and short-term liabilities (end of 1964; 000 Rs.)		Detail of packaging materials			
Cash on hand and in bank		113			Unit	Quantity	Unit Value (Rs.)
Marketable securities and bonds		1,211		-Metal containers	1000 Nos.	353	300
Accounts receivable		1,748		-Other metal products	Nos.	98	1.1
(taxes payable)		(51)		-Paper/paper products	Ton	5	2,829
(accounts payable)		(48)		-Glass materials	1000 Nos.	3,935	140
(short term loans, secured)		(767)		-wooden materials	"	92	3,420
(short term loans, unsecured)		(525)		-ampoules	"	3,624	23.7
				-Others	000 Rs.	749	..
1/ Using the 1964 replacement value for numerator.							
2/ Wages and salaries divided by total number of employees.							



India : 319 - ( 8 )

**MAJOR PRODUCTS:** Pharmaceutical products (ambramycin, synthomyocetin, etc. in ointment, tablet, syrup, etc.). Annual capacity revenue output is about Re. 6 million on one shift operation.

**REPORTING UNIT:** A one-establishment enterprise with total assets Rs. 7 million (net worth Rs. 3.5 million) and 157 employees as of 1965. Founded in 1962.

**I. FIXED CAPITAL ASSETS**

	end of 1964 After deprec.	end of 1965 After deprec.
<b>TOTAL BOOK VALUE</b> ( 000 Rs. )	<u>3,416</u>	<u>3,303</u>
1. Land	136	136
2. Land improvements	13	12
3. Buildings	1,126	1,135
4. Other construction works	-	331
5. Machinery & equipment	1,441	1,405
6. Tools & instruments	700	284
7. Vehicles	-	-
8. Office furniture & fixtures	-	-

**DETAIL OF 1.5 (No.)**

Eppenbach colloid mill; Granulator (manesty, rotogram, oscillating); Autonomous sterile powder fractionating unit; Demineralization powder; Heat set equipment; Naphta tank; Ampoules washing machine; Filling and closing machines for capsules; Sealing machines; Tablet making machines; Workshop machinery; Boiler and gas plant; Powder mixing machine; Sugar coating machines; Vertical high pressure steriliser; Dribble roller mill; Stainless steel syrup sieving apparatus; Bottle washing machine; Sapphire sterilization furnaces.

**II. INVENTORIES**

(end of 1965)	Actual	Normal
<b>TOTAL VALUE</b> (000 Rs. )	<u>2,255</u>	<u>+ 16</u>
1. Direct production materials	1,244	- 4.2
2. Other input materials	508	+ 1.2
3. Work in process	363	+110.4
4. Finished products	140	- 1.4

- Normal inventories of finished products 1.9 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 55 KW

Total load, capacity of trucks: - t

- Some of the machines were imported.

- More than three-fourths of machinery and equipment were installed at the initiation of the enterprise (hence the average age about four years).

- Operating conditions of machinery and equipment is excellent.

- Annually depreciated by 8 %.

**GENERAL CONDITIONS:**

Transportation and public utilities, excellent.  
Community facilities, fair.

**III. LABOUR**

(1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	151	-	-
1. Direct production ( male 17 / fem. 44 )	83	-	-
Annual total manhours (000)	( 200 )	( )	( )
a. Tablets	22	-	-
b. Ointment	14	-	-
c. Syrup	14	-	-
d. Capsules	18	-	-
e. Syringes	15	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

	Univ. or higher		Sr. High sch. or equiv.	
	Engl- BASIC	Other	Engl- BASIC	Other
<b>TOTAL</b>	-	22	42	87
<b>Management</b>	-	17	-	-
<b>Direct Production</b>	-	-	12	-
<b>Skilled</b>	-	-	-	22
<b>Semi-skilled</b>	-	-	-	49
<b>Unskilled</b>	-	-	-	-
<b>Auxiliary Activities</b>	-	-	-	-
<b>Skilled</b>	-	5	30	-
<b>Semi-skilled</b>	-	-	-	-
<b>Unskilled</b>	-	-	-	16

- Actual hours worked in 1965 per direct production worker: 2,410 hours.

- Proportion of motors occupied 81 % on the first shift.

- Mechanisation and automation are generally fair.

- Skilled workers in direct production are turners, millers, welders, fitters, electricians, boiler operators etc. Those in auxiliary activities are engaged in administration, accounts, sales, purchase, stores, etc.

2. **Auxiliary activities** ( male 50 / fem. 6 )

Administration and managerial control

**IV. ANNUAL PRODUCTION (1965)**

TOTAL VALUE OF PRODUCTION ( 000 Rs. )			
4,789			
Product	Unit	Quantity produced	Unit Value (Rs.)
a. Tablets; Delta Fluorine, Sulphamycetins	000 No.	6,000	170.0
b. Ointment; Ambramycine 1%, Synthomycetine 1%	kg	928	156.3
c. Syrup; Synthomycetine, Ambrain-phenicol, Petiron 12 Exhilir	kg	37,250	44.15
d. Capsules; Ambrasynth, Synthomycetine	000 No.	6,522	273.8
e. Drops; Synthomycetine, Ear drops	kg	791	245.0

**CAPACITY OUTPUT:**

25% higher than the 1965 actual production level with no additional manhours, given sufficient demand for the products. Product mix is flexible. In 1962, when commercial production was first started, production was about Rs. 3 million, a.o. of employees 85.

Unit value of product: market value f.o.b. before sales tax  
Unit value of material: market price o.i.f.

Vitamins are directly imported and delivered by sea with freight rate of 10%. Organic and inorganic chemicals are domestically produced but have significant amount of imports. The others are of domestic origin. All direct production materials except vitamins are delivered by railroad with approx. 5% freight rate.

**V. INTERMEDIATE INPUTS (1965)**

TOTAL VALUE OF CONSUMPTION ( 000 Rs. )			
2,334			
1. Energy & water: total	Quantity	Unit	Value
	consumed	(Rs.)	
- Water	000 litres	15,120	..
- Electricity	000 kWh	112	145.80
- Petroleum	litres	31,200	..84
- Fuel oil	"	31,220	..22
- Lubricating oil	"	330	1.23
<b>2. Direct production materials: total</b>			<b>1,641</b>
a. Crude drugs and extracts	kg	99	7.14
b. Organic chemicals	000 Rs.	70	..
c. Inorganic chemicals	000 Rs.	18	..
d. Vitamins	000 Rs.	1,044	..
e. Empty gelatine cups	000 Nos.	10,043	24.00
f. Consumable stores	000 Rs.	25	..
g. Others	000 Rs.	236	..
<b>3. Packing materials: total</b>			<b>526</b>
230,000 metal cans (Rs. 0.15 each); 4,000 wooden crates (Rs. 6.329 each); 1,212,320 glass bottles, vials, phials (Rs. 0.12 each); 588,000 ampules (Rs. 0.05 each); 1,271,000 P.P. caps (Rs. 35/000); 6,37 kg wooden wools (Rs. 0.81/kg) and others Rs. 242,000.			
<b>4. Work performed by sub-contractors ( )</b>			<b>-</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>			<b>30</b>
Parts and materials			
<b>6. Material inputs for auxiliary activities</b>			<b>10</b>
Stationery and postage			
<b>7. Non-factor service inputs: total</b>			<b>20</b>
Transportation, insurance and storage services (purchased separately) Rs. 32,000.			

**VI. VALUE ADDED TOTAL 1965 ( 000 Rs. )**

1. Wages & salaries (before income tax)	616
- Employees in direct production	(..)
- Other employees	(..)
2. Other expenditures for employees	472
3. Annual depreciation allowance	163
4. Royalties	80
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	1,124

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift:	Rs. 5,170
- Value added per employee:	Rs. 10,330
- Annual wage per employee in direct production:	Rs. 4,000 $\frac{1}{2}$
- Variable input costs/gross production ratio:	45.3% $\frac{1}{2}$
- Gross profit/gross production ratio:	33.2% $\frac{1}{2}$
- (at full capacity: 29.5% $\frac{1}{2}$ )	
- Level of production at break-even point is approximately 56% of the 1965 actual level.	

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition	
	From 1964 to 1965	% of repair
a. Total Investment ( 000 Rs. )	464	
- Land	40	-
- Land improvements	-	-
- Buildings	113	3
- Other construction work	-	-
- Machinery & equipment	447	10
- Tools & instruments	-	-
- Vehicles	164	7
- Office furniture & fixtures	-	-
b. Corresponding increase:	From 1964	to 1965
In no. of employees	113	151
In annual gross production ( 000 Rs. )	4,280	4,789

**2. Future Plan: None**

a. Investment proposed for the period 19 to 19	
Total value ( )	
Of which: - Mach. & equipment	%
- Land improv. & bldg.	
- Land	
- Others	
b. Net increase in no. of employees envisaged for the same period:	
- Direct production:	
- Auxiliary:	
c. Purposes:	

**VIII. SUPPLEMENT****Structure of liquid assets and short term liabilities**

(end of 1965; 000 Rs.)

Cash in hand and in bank	155	Accounts payables	617
Accounts receivable	1,015	Short term borrowing	682
Loans and advances	300		

1/ Total wages and salaries divided by total no. of employees.  
2/ Variable cost excludes wages and salaries.

**MAJOR PRODUCTS:** Pharmaceutical products: (brucine, ephedrine, strychnins, etc.) Annual capacity output is about 19 tons of these products, amounting to Rs. 3.2 million on full three shift-operation.

**REPORTING UNIT:** A one-establishment enterprise with total assets of Rs. one million (net worth Rs.  $\frac{1}{2}$  million) and 95 employees as of 1965. Founded in 1955.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. thous. )	<u>557.7</u>	<u>234.0</u>
1. Land	17.0	17.0
2. Land improvements	-	-
3. Buildings	51.1	24.7
4. Other construction works	-	-
5. Machinery & equipment	322.4	149.9
6. Tools & instruments	12.5	7.7
7. Vehicles	37.0	23.3
8. Office furniture & fixtures	17.7	11.4

DETAIL OF I.5 (No.)	Total bk. value bef. depr.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1965 replace value
a. Boilers (2)	29	5	B	10	132
b. Drug extraction plant (4)	35	5	A	"	
c. Tanks (37)	21	6	B	"	
d. Pans (19)	26	5	B	"	
e. Pumps (17)	4	5	B	"	
f. Extraction plants (2)	5	4	A	"	

**II. INVENTORIES** (end of 1965)

	Actual	Normal
<b>TOTAL VALUE</b> (Rs. thous.)	<u>618.7</u>	<u>-18.5</u>
1. Direct production materials	460.3	-24
2. Other input materials	35.8	+33
3. Work in process	-	..
4. Finished products	122.6	-13

- Normal inventories of finished products 5.3 % of annual gross production

- Seasonal variations: None.

Capacity of electr. motors: 80 KW

(d) was produced and assembled by own productive facilities; (e) produced domestically. All the rest imported. Average age of the itemised machinery (37% of total) is 5 years.

Soon after the initiation of the enterprise, the production line was substantially expanded with an investment of Rs. 120,000 during 1958-60. As of 1965, the second phase of the general expansion was completed involving an investment of Rs. 88,500. (see VII.)

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, all excellent.

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 95	<u>38</u>	<u>29</u>	<u>28</u>
1. Direct production (all male)	<u>26</u>	<u>24</u>	<u>24</u>
Annual total manhours (000)	<u>(66.3)</u>	<u>(66.3)</u>	<u>(66.3)</u>
a. Strychnins and ephedrine shops *	16	16	16
b. Packaging	4	4	4
c. Laboratory	6	4	4
* Only one of the two shops work at a time. The same workers work for both shops.			
2. Auxiliary activities (all male)	12	5	4
Managerial and auxiliary activities (incl. repair and maintenance)	2	5	4

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
3	6	18	68
<b>Management</b>			
3	-	6	-
<b>Direct Production</b>			
-	6	-	8
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	-	60
<b>Auxiliary Activities</b>			
-	-	4	-
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	8	-

- Actual hours worked per

annum per direct production

worker 2,690 hours.

- Proportion of motors

occupied: 60%, 5% and 5%

for 1st, 2nd and 3rd shift,

respectively.

- **Technological features:**

Not divulged.

- Mechanisation, generally fair; automation generally poor

- **Skilled workers** in direct production are chemists

and machine operators. Those in auxiliary activities

are repairs and maintenance workers, accountants,

sales assistants, etc.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION ( Rs. thous. ) 2,001.6				TOTAL VALUE OF CONSUMPTION ( Rs. thous. ) 1,606.9			
Product	Unit	Quantity Produced	Unit Value (Rs.)			Quantity consumed	Unit value (Rs.)
a. Strychnine	Kg.	2,607	118	1. <u>Energy &amp; water: total</u>		132.0	
b. Brucine	Kg.	6,140	136	- Electricity	000 KWH	112.00	110
c. Ephedrine	Kg.	3,291	132	- Coal	ton	1,820	65
d. Others	Rs. thous.	424.6	..	- Petroleum	000 lit.	1.49	960
				2. <u>Direct production materials: total</u>		1,352.2	
				a. Medicinal plants (nux vomica, etc.) and crude drugs	000 Rs.	1,277.30	..
				b. Benzene	"	70.15	..
				c. Others	"	4.71	..
<b>CAPACITY OUTPUT:</b>				3. <u>Packaging materials: total</u>		10.8	
60% higher than the 1965 actual production level with additional man-hours 26, 24 and 24 thousand on 1st, 2nd and 3rd shift, respectively. Underutilization is mainly due to an overall insufficient demand. Product-mix is <u>not</u> flexible.				4. Metal containers (Rs. 3/No.)	1,540		
Unit value of product: Market value f.o.b. before sales tax				5. Wooden materials (Rs. 2.7/No.)	3,000		
Unit value of material: Market price c.i.f.				6. <u>Material inputs for auxiliary activities</u>		30.7	
- Products (a) to (c) are mostly directly exported.				Consumables stores and spare parts			
- Production materials are domestically produced with very little import contents. Freight rate is 5%. Transportation by railroad and by roads.				7. <u>Non-factor service inputs: total</u>		24.7	
				Transportation, insurance and storage services	Rs. 13,300		
				Communications, advertising and other business services	Rs. 11,400		
<b>VI. VALUE ADDED TOTAL 1965 ( Rs. thous. ) 394.7</b>				<b>SELECTED COEFFICIENTS</b>			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 12,880 (Rs. 13,720) <sup>1/</sup>			
- Employees in direct production		88.2		- Value added per employee Rs. 4,155			
- Other employees		79.6		- Annual wage per employee in direct production: Rs. 1,192			
2. Other expenditures for employees		48.5		- Variable input costs/gross production ratio: 81.4%			
3. Annual depreciation allowance		56.2		- Gross profit/gross production ratio: 5.9%			
4. Rental paid (buildings)		12.5		(at full capacity : 8.9%)			
5. Sales & other indirect taxes (not included in total)		[ 60.3 ]		- Level of production at break-even point is approximately 70 % of the 1965 actual level.			
6. Other gross business income (before income tax)		109.7					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>2. Future Plan</b>			
1. <u>Recent Expansion</u>				a. Investment proposed for the period 1967 to 1968			
From 1962 to 1965				Total value ( Rs. thousand)	500		
a. Total Investment ( Rs. thous. )	Gross acquisition	Scrapped or sold		Of which: - Mach. & equipment	80	\$	
- Land	-	-		- Land improv. & bldg.	-		
- Land improvements	-	-		- Land	-		
- Buildings	10.2	-		- Others (working capital)	20		
- Other construction work	-	-		b. Net increase in no. of employees envisaged for the same period:			
- Machinery & equipment	52.7	-		- Direct production: 30			
- Tools & instruments	-	-		- Auxiliary: -			
- Vehicles	20.0	-		c. Purposes: Introduction of new products (alkaloids); introduction of new processes in conjunction with modernisation of the production line.			
- Office furniture & fixtures	5.6	-					
b. Corresponding increase:	From 1962	to 1965					
In no. of employees	61	95					
In annual gross production ( Rs. thous. )	862	2,002					
<b>VIII. SUPPLEMENT</b>				Structure of liquid assets of the establishment (end of 1965; Rs. thousand).			
Cash on hand and in bank		23.9		Taxes payable		3.5	
Accounts receivables		39.0		Accounts payables		170.0	
				Short-term loans from commercial banks		500.0	

1/ The numerator is the 1964 replacement value.

**MAJOR PRODUCTS:** - Soaps of various kinds; also make and sell intermediate products (glycerine, fatty acids, etc.) Annual capacity output (on three shift operation) is some 2,600 t. of soaps and 6,700 t. of glycerine, fatty acid and natural oils; the establishment operated at full capacity in 1965.

**REPORTING UNIT:** - A one-establishment enterprise, founded in 1928, with total assets of Rs. 33 million (net worth Rs. 9 million) and employees 617 as in 1965.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. thous.)	18,265	11,195
1. Land (total acreage : 5)	159	159
2. Land improvements	-	-
3. Buildings	4,951	4,274
4. Assets under construction	1,011	1,011
5. Machinery & equipment	10,075	6,494
6. Tools & instruments	93	63
7. Vehicles	1,106	593
8. Office furniture & fixtures	870	601

**DETAIL OF I.5 (No.)**

	Total Bk value bef. deprec.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (\$)	1964 replace value
a. Solvent extraction plant		2	A		
b. Fatty acid distillation plant		2	"		
c. Cochran boiler		2	"		
d. Soap kettle and pumps		11	B		
e. Crutches and drier		14	"		
f. Ammonia refrigeration plant	Rs. 10 million	14	"	1%	Rs. 11 million
g. Soap finishing plant		13	"		
h. Glycerine distillation unit		21	"		
i. Glycerine bleacher		21	"		
j. Water cooling plant		10	..		
k. Acid boiling plant		10	B		
l. Filter presses		10	"		
m. Miscellaneous		-	-		

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Rs. thous.)	11,577	- 39 %
1. Direct production materials	5,405	- 50
2. Other input materials	1,428	+ 6
3. Work in process	1,198	- 29
4. Finished products	3,546	- 42

- Normal inventories of finished products 4.4% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 825 KW  
Cap. of other prime movers: 75 HP  
Total load, capacity of trucks: 42 t

All machines were imported.  
Average age of the plant is considered as somewhere around 10 years, but in the last 4 years the plant was greatly expanded.  
In earlier years (1930's and 1940's), the enterprise was one - fifth in size in terms of its production level.

**GENERAL CONDITIONS:** Long distance transport facilities, fair; other transportation, public utilities and community facilities, excellent.

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 617	392	152	73
1. Direct production (498 male)	317	123	58
Annual total manhours (000)	(790)	(307)	(145)
a. Fat splitting department	58	24	11
b. Glycerine department	15	7	2
c. Drying, milling, plodding and stamping department	62	20	9
d. Packing department	53	24	8
e. Boiler house	39	15	6
f. Stores and general	57	17	13
g. Laboratory and product warehouse	33	16	9
2. Auxiliary activities ( m. 115 f. 4 )	75	29	15
Managerial and auxiliary	75	29	15

**EDUCATIONAL BACKGROUND** (No. of employees)

Engi- neers	Other	Sr. High sch. or equiv. Other	
		Univ. or higher	Sr. High sch. or equiv. Other
<b>TOTAL</b>	54	112	449
<b>Management</b>			
2	25	15	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	53	42
<b>Semi-skilled</b>			
-	-	31	89
<b>Unskilled</b>			
-	-	-	283
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	29	13	-
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	-	35

- Actual hours worked per annum per direct production worker : 2,494 hours.

- Proportion of motors occupied: 80%, 65% and 45% for 1st, 2nd and 3rd shift, respectively.

- **Technological features:**  
(a) High pressure splitting.  
(b) Evaporation and distillation.

- Mechanisation and automation fair except for milling, plodding and stamping which is rated as poor.

- **Skilled workers** in direct production are engaged in fat splitting, drying, milling, plodding, stamping, packing, boiler maintenance, testing, etc. Those in auxiliary activities are administration, accounts, sales, purchase and stores, etc.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)																																																																																																																																																																																															
TOTAL VALUE OF PRODUCTION (Rs. thous. ) 47,049				TOTAL VALUE OF CONSUMPTION (Rs. thous. ) 38,067																																																																																																																																																																																															
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Accounts receivable	4,571	Accounts payable	3,407																																																																																																																																																																																																
Loans and advances	2,396	Secured loans	11,220																																																																																																																																																																																																

**MAJOR PRODUCTS:** Laundry and toilet soap. Annual capacity output is 1,400 tons with one-shift operation.

**REPORTING UNIT:** A small one-establishment enterprise with total assets of Rs. 650,000 (net worth Rs. 425,000) and employees 78 as of 1965. Founded in 1919.

**I. FIXED CAPITAL ASSETS (end of 1965)**

TOTAL BOOK VALUE (Rs. thous. )	Before deprec.	After deprec.
	227	161
1. Land (450 sq. meters)	35	35
2. Land improvements	-	-
3. Buildings	150	100
4. Other construction works	-	-
5. Machinery & equipment	15	5
6. Tools & instruments	-	-
7. Vehicles	27	21
8. Office furniture & fixtures	-	-

**DETAILS OF I.5 (No.)**

	Total Bk. value bef. depr.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1965 replace value
a. Stamping machines (2)		6	B	15	
b. Cutting machines (4)	10.0	6	B	"	11.5
c. Pans (10)		5	B	"	

**II. INVENTORIES (end of 1965)**

TOTAL VALUE (Rs. thous. )	Actual	Normal
	120	-0%
1. Direct production materials	100	± 0
2. Other input materials		
3. Work in process	-	..
4. Finished products	20	± 0

- Normal inventories of finished products 1.3% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: .. KW

All machines were domestically produced.

During the 1950's and earlier years, the production of this factory was around 300 tons per annum, with a total number of employees about 30.

**GENERAL CONDITIONS:** Transportation, public utilities and residential facilities, excellent. Recreational and educational facilities, fair.

**III. LABOUR (1965 average)**

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED	78	-	-
1. Direct production ( all male )	69	-	-
Annual total manhours (000)	(187)	( )	( )
a. Fat splitting department	17	-	-
b. Glycerine department	13	-	-
c. Drying, milling and plodding	14	-	-
d. Packing department	13	-	-
e. Laboratory	12	-	-
2. Auxiliary activities ( all male )	9	-	-
Auxiliary services	9	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	Others
Engrs	2	9	67
TOTAL	0	2	9
Management	-	1	2
Direct Production	-	-	5
Skilled	-	-	27
Semi-skilled	-	-	-
Unskilled	-	-	37
Auxiliary Activities	-	-	-
Skilled	-	1	2
Semi-skilled	-	2	1
Unskilled	-	-	-
	-	-	2

- Actual hours worked per annum per direct production worker: 2,710 hours.

- **Technological features:** Soap making by neutralisation of fatty acid.

- Mechanisation and automation are generally poor.

- **Skilled workers:** in direct production are engaged in drying, milling, plodding, stamping, etc., of soap produced. Those of auxiliary services are: administrators, salesmen, purchasers, accountants, etc.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION ( Re. thous. )				TOTAL VALUE OF CONSUMPTION ( Re. thous. )			
1,599				1,215			
Product	Unit	Quantity Produced	Unit Value ( Re. )	1. Energy & water: total		Quantity consumed	Unit value ( Rs. )
a. Laundry soap	ton	750	1,372	19			
b. Toilet soap	ton	183	2,940	- Electricity (not available)			
c. Others	Rs.000	32	..	- Wood	ton	150	125
				- Water (drawn from the own tube well)			
				2. Direct production materials: total			
				1,152			
				a. Coconut oil	ton	27.0	4,250
				b. Palm oil	"	20.0	2,770
				c. Mutton tallow	"	55.0	1,780
				d. Cotton seed oil	"	96.0	2,150
				e. Linseed oil	"	27.0	2,450
				f. Mowha oil	"	28.0	2,660
				g. Rice bran oil	"	16.0	3,000
				h. Caustic soda	"	52.0	300
				i. Perfumes	"	3.5	78,000
				j. Others	Rs.000		..
				3. Packaging materials: total			
				15			
				Paper and paper products	ton	10.0	1,500
				4. Work performed by sub-contractors ( )			
				-			
				5. Repairs & maintenance (materials & services purchased)			
				-			
				6. Material inputs for auxiliary activities			
				3			
				Stationery and printing			
				7. Non-factor service inputs: total			
				26			
CAPACITY OUTPUT:				SELECTED COEFFICIENTS			
50% higher than the 1965 actual production level with sufficient supply of raw and intermediate materials and labour (additional 80,000 man-hours on 1st shift). Product - mix is flexible.				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 2,170 (Rs. 2,500) <sup>1/</sup>			
Unit value of product: Market value f.o.b. before sales tax				- Value added per employee: Rs. 4,920			
Unit value of material: Market price c.i.f.				- Annual wage per employee Re: 1,538 <sup>2/</sup>			
- None of the products are directly exported.				- Variable input cost./gross production ratio: 79.2% <sup>3/</sup>			
- All materials are domestically produced with very little import contents; freight rate 3%; transportation by railroad.				- Gross profit/gross production ratio: 14.9% (at full capacity : 16.9%)			
				- Level of production at break-even point is approximately 29 % of the 1965 actual level.			
VI. VALUE ADDED TOTAL 1965 ( Re. thous. )				384			
1. Wages & salaries (before income tax)				120			
- Employees in direct production				( .. )			
- Other employees				( .. )			
2. Other expenditures for employees				18			
3. Annual depreciation allowance				8			
4.							
5. Sales tax (not included in total)				[ 27 ]			
6. Other gross business income (before income tax)				238			
VII. EXPANSION: HISTORY & PLAN				Gross % of acquisition repair			
1. Recent Expansion				From 1963 to 1965			
a. Total Investment ( Re. thous. )				36			
- Land				-			
- Land improvements				-			
- Buildings				20			
- Other construction work				-			
- Machinery & equipment				10			
- Tools & instruments				}			
- Vehicles				6			
- Office furniture & fixtures				}			
b. Corresponding increase:				From 1963 to 1965			
In no. of employees				56 78			
In annual gross production ( Rs. thous. )				1,090 1,599			
2. Future Plan : None.				a. Investment proposed for the period 19 to 19			
				Total value ( )			
				Of which: - Mach. & equipment			
				- Land improv. & bldg.			
				- Land			
				- Others			
				b. Net increase in no. of employees envisaged for the same period:			
				- Direct production:			
				- Auxiliary:			
				c. Purposes:			
VIII. SUPPLEMENT				Structure of liquid assets of the establishment (end of 1965; Rs. thousand).			
Cash on hand and in bank				30			
Accounts receivable				339			
Taxes payable				60			
Accounts payable				165			
1/ The numerator is the 1965 replacement value.							
2/ Total wages and salaries divided by the total number of employees.							
3/ Two-thirds of wages and salaries are regarded as variable costs.							



**MAJOR PRODUCTS:** Medicines: capable of producing annually I£ 3.6 million worth of medicines on three-shift operation (actual operation in one shift).

**REPORTING UNIT:** An independent one-establishment enterprise with total assets I£ 2 million and employees 65 as of 1964. Founded in 1950.

I. FIXED CAPITAL ASSETS (end of 1964)						II. INVENTORY (end of 1964)		
TOTAL BOOK VALUE (000 I£)	Before deprec.	After deprec.				TOTAL VALUE (000 I£)	Actual	Normal
	450	191				389	-	£
1. Land (5,000 sq.m.)	-	-				1. Direct production materials	233	-
2. Land improvements	-	-				2. Other input materials	36	-
3. Buildings (total floor space: 2,000 sq.m.)	160	92				3. Work in process	120	-
4. Other construction works	-	-				4. Finished products	-	-
5. Machinery & equipment	233	60				- Normal inventories of finished products 10.1% of annual gross production		
6. Tools & instruments	-	-				- Seasonal variations: None		
7. Vehicles	57	41				Capacity of electr. motors: 40 HP		
8. Office furniture & fixtures	-	-				Capacity of electr. furnaces 15 KW		
						Total load, capacity of trucks: t		
						(a), (b) and (c) were domestically produced and the rest were imported; (d) from U.S.A. and (k) from Germany. Average age of machinery itemized is 10 years.		
						<b>GENERAL CONDITIONS:</b>		
						Transportation, public utilities and community facilities, excellent.		
DETAIL OF I.5 (No.)								
	Total bk. value (000)	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value (000)			
<u>Granulation dept.</u>								
a. Mixers (2)	..	14	A	10	..			
b. Drying ovens (2)	..	14	"	"	..			
c. Wet material mixer (1)	..	14	"	"	..			
d. Hammer mill, 5 HP 7,000 rpm.(1)	\$4.0	10	"	"	\$4.0			
<u>Tableting dept.</u>								
e. Tableting machines, 36 punches 2 HP (1)	\$3.3	2	"	"	\$3.3			
f. Tableting machines, 18 punches 2 HP (1)	\$3.3	2	"	"	\$3.3			
<u>Coated tablets dept.</u>								
g. Rotary drums for tablet preparation(4)	..	10	"	"	..			
h. Glazing sprayer (1)	..	10	"	"	..			
<u>Ampoules dept.</u>								
i. Washing & sterilization eqpt.	..	10	"	"	..			
j. Drying oven (1)	..	10	"	"	..			
k. Filling machine, cap. 12,000 - 15,000 ampoules per hour (1)	\$2.2	2	"	"	\$2.2			

III. LABOUR (1964 average)						EDUCATIONAL BACKGROUND (No. of employees)				- Actual hours worked per annum per direct production worker: 2,200 hrs.
TOTAL EMPLOYED	1st shift	2nd shift	3rd shift	Univ. or higher	Engi- ners	Sr. High sch. or equiv.	Other			
65	35			3	3	19	40			
1. Direct production ( m. 17 f. 18 )	35			3	3	19	40	- Proportion of productive facilities occupied: 50% for motors and 100% for furnaces on 1st shift.		
Annual total manhours (000)	(77)	( )	( )					- Conventional process is employed in all shops. Fair degree of mechanization and automation.		
a. Tablets manufacturing	6									
b. Coated tablets	3									
c. Ampoules	5									
d. Bottle filling	10									
e. Miscellaneous	11									
						<b>Direct Production</b> Skilled - - - - Semi-skilled - - - - Unskilled - - - - <b>Auxiliary Activities</b> Skilled - - - - Semi-skilled - - - - Unskilled - - - - - 3 7 17				
2. Auxiliary activities ( m. 22 f. 8 )	30									

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( 000 I£ ) <u>1,192</u>				TOTAL VALUE OF CONSUMPTION ( 000 I£ ) <u>514</u>			
	Product	Unit	Quantity Unit Pro- Value duced ( I£ )			Quantity Unit com- value sumed ( I£ )	
a.	Tarocetil	000 tablets	4,000 16.6	1. <u>Energy &amp; water: total</u>		<u>13</u>	
b.	Alnass	100 c.c.	3,000 13.0	- Electricity	000 kwh	150	40
c.	Streptoral	100 c.c.	16,000 3.2	- Solar oil	ton	60	98
d.	Rokal	000 tablets	1,000 35.0	- Water	000 cu.m.	10	130
e.	Other various medicines not specifiable by kind	000 I£	1,000 ..	2. <u>Direct production materials: total</u>		<u>339</u>	
				a. Chloropromazine	kg.	500	110
				b. Alcohol	"	5,000	3.5
				c. Others	000 I£	266	..
<b>CAPACITY OUTPUT:</b>				3. <u>Pharmacia materials: total</u> <u>1</u>			
200% higher than the 1964 actual production level given sufficient demand and additional 50,000 manhours each on the 2nd and 3rd shifts.				50,000 pcs. 10 c.c. bottles (I£ 11.5/000)			
				30,000 pcs. 100 c.c. bottles (I£ 16.5/000)			
				4. <u>Work performed by sub-contractors</u> ( ) <u>-</u>			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> <u>14</u>			
Unit value of product: Market value f.o.b. before sales tax				6. <u>Material inputs for auxiliary activities</u> <u>10</u>			
Unit value of material: Market price c.i.f.				7. <u>Non-factor service inputs: total</u> <u>137</u>			
- Most of the raw materials are imported and delivered by sea.				Transportation, insurance and storage (purchased separately) I£ 29,000			
<b>VI. VALUE ADDED</b>				<b>REMOVED CONVEYANCE</b>			
TOTAL 1964 ( 000 I£ ) <u>578</u>				- Mach., equip., per employee in direct production on 1st shift: I£ 6,657 (9,710 1/)			
1. Wages & salaries (before income tax)				- Value added per employee: I£ 10,431			
- Employees in direct production 260				- Annual wage per employee in direct production: I£ 7,429			
- Other employees 90				- Variable input costs/gross production ratio: 51.4%			
2. Other expenditures for employees 50				- Gross profit/gross production ratio: 21.0%			
3. Annual depreciation allowance 20				(at full capacity: 39.4%) 2/			
4. Rental paid (land I£ 4,000; buildings I£ 4,000) 8				- Level of production at break-even point is approximately 57 % of the 1964 actual level.			
5. Sales & other indirect taxes (less subsidies) -							
6. Other gross business income (before income tax) 250							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u> <u>None</u>				2. <u>Future Plan</u> <u>None</u>			
From 19 to 19				a. Investment proposed for the period 19 to 19			
a. Total Investment ( )				Total value ( )			
- Land				Of which: - Mach. & equipment %			
- Land improvements				- Land improv. & bldg.			
- Buildings				- Land			
- Other construction work				- Others			
- Machinery & equipment				b. Net increase in no. of employees envisaged for the same period: - Direct production:			
- Tools & instruments				- Auxiliary:			
- Vehicles				c. Purposes:			
- Office furniture & fixtures							
b. Corresponding increase: <u>From 19 to 19</u>							
In no. of employees							
In annual gross production ( )							
<b>VIII. SUPPLEMENT</b>							
1/ Excluding miscellaneous workers from the denominator.							
2/ Assuming three-shift operation (which is unlikely, though).							

**MAJOR PRODUCTS:** Medicines. Capable of producing annually IE 3.7 million worth of medicines if operated on three shifts.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets IE 1.1 million and employees 95 as of 1964. Founded in 1935.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE (000 IE )</b>	<b>512</b>	<b>371</b>
1. Land (rented)	-	-
2. Land improvements	-	-
3. Buildings	214	152
4. Other construction works	-	-
5. Machinery & equipment	194	136
6. Tools & instruments	10	10
7. Vehicles	57	46
8. Office furniture & fixtures	37	27

DETAIL OF I.5 (No.)	Total Bk value bef. depr. (000)	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value (000)
	a. Pill framing machines (2)	..	1-5	A	10
b. Pill framing machines (2)	..	16	"	"	\$3.0
c. Pill framing machines (6)	..	20-30	"	"	..
d. Ointment preparing machine (1)	..	8	"	"	\$3.0
e. Press (1)	..	5	"	"	\$3.0
f. Powder mixer (1)	\$2.0	10	"	"	\$2.0
g. Milling machine (1)	\$2.3	10	"	"	\$2.6
h. Sterilization freezer (1)	\$9.0	10	"	"	\$10.0
i. Ampoule filling machine (1)	D.M. 10.0	10	"	"	D.M. 10.0
j. Ampoule filling machine (1)	\$2.0	10	"	"	\$2.15
k. Ampoule washing machine (1)	\$1.65	10	"	"	\$1.65
l. Cachet filling machine (1)	\$4.0	1	"	"	\$4.0
m. Strip packaging machine (1)	D.M. 12.0	4	"	"	D.M. 15.0

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE (000 IE )</b>	<b>343</b>	<b>-</b>
1. Direct production materials	169	-
2. Other input materials	74	-
3. Work in process	48	-
4. Finished products	52	-

- Normal inventories of finished products 3.1% of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 200 HP

Total load, capacity of trucks: - t

Machines itemised were all imported; (b) from U.S.A., (d) England, (h) Italy and (l) Holland. The rest with the exception of (c) were from Germany. Average age of machinery is over 7 years.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	<b>95</b>	<b>-</b>	<b>-</b>
1. Direct production ( m. 11 )	56	-	-
Annual total manhours <sup>f</sup> (000)	(128.8)	( )	( )
a. Pills dept.	5	-	-
b. Ointments & syrups dept.	2	-	-
c. Powders dept.	1	-	-
d. Synthetics & chemicals	8	-	-
e. Sterilization dept.	5	-	-
f. Packaging dept.	35	-	-
2. Auxiliary activities ( m. 19 )	39	-	-
( f. 20 )			
a. Management & administration	39	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	Others
8	4	10	73
<b>Management</b>			
-	2	-	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	-
<b>Semi-skilled</b>			
3	-	1	-
<b>Unskilled</b>			
-	-	4	48
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	-	-	-
<b>Semi-skilled</b>			
5	2	-	-
<b>Unskilled</b>			
-	-	5	25

- Actual hours worked per annum per direct production worker: 2,300 hrs.

- Proportion of productive facilities occupied: on the 1st shift 60-65% for motors, 100% for furnaces.

**Technological features:**

d): Extraction of hormones & extracts & fabrication of steroid.

Conventional process is employed in all shops.

- Mechanization is excellent

in (d), poor in (a), (b) & (c) and outdated in (f).

Automation is excellent in (d) and outdated in (a).

There is no automation in (b), (c) and (f).

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( 000 I£ )		1,715	
Product	Unit	Quantity Produced	Unit Value ( I£ )
a. Adinol ointment	tubes	100,000	.69
b. Betroidit	24 tablets	27,000	4.20
c. Dexamycin	100 cc bot	19,000	2.75
d. Filvit	cachet	30,000	1.75
e. Marzin	20 tablets	50,000	1.15
f. Neuralgan	"	50,000	.55
g. Nogest	"	37,000	3.10
h. Oragest	"	50,000	3.00
i. Pretinzon	"	30,000	1.85
j. Sylen	"	15,000	2.40
k. H.M.G.	Kg.	2.5	13,000
l. Others	000 I£	954	..

**CAPACITY OUTPUT:**

220% higher than the 1964 actual level given sufficient demand and additional 60,000 manhours each on the 2nd and 3rd shifts. It is not desired to change the present product-mix.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- H.M.G. is mostly exported.
- Direct production materials (a), (b) & (c) are directly imported and delivered by inland water and sea with freight rate 5% of c.i.f. value.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( 000 I£ )		983	
1. Energy & water: total	5		
	Quantity consumed	Unit	Unit value ( I£ )
- Electricity	000 kwh	100	45
- Solar oil			
- Mazut			negligible
2. Direct production materials: total	552		
a. Hormones I	kg.	20	\$525-3,150
b. Vitamins	"	600	380
c. Hormones II	ampoule	8,000	\$ 3
d. Others	000 I£	204	..
3. Packaging materials: total	199		
4. Work performed by sub-contractors ( )	-		
5. Repairs & maintenance (materials & services purchased)	34		
6. Material inputs for auxiliary activities	26		
7. Non-factor service inputs: total	167		
Transportation, insurance and storage (purchased separately) I£ 10,000			

**VI. VALUE ADDED TOTAL 1964 ( 000 I£ ) 732**

1. Wages & salaries (before income tax)	
- Employees in direct production	285
- Other employees	216
2. Other expenditures for employees	26
3. Annual depreciation allowance (incl. royalties)	50
4. Rental paid (land) I£ 7,000)	17
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	138

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: I£ 3,640
- Value added per employee: I£ 7,700
- Annual wage per employee in direct production: I£ 5,090
- Variable input costs/gross production ratio: 60.7%
- Gross profit/gross production ratio: 8.1% (at full capacity: 25.1%)
- Level of production at break-even point is approximately 79% of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion		Gross acquisition	
From 1962 to 1964			
a. Total Investment ( 000 I£ )		100	
- Land		-	
- Land improvements		-	
- Buildings		5	
- Other construction work		-	
- Machinery & equipment		80	
- Tools & instruments		5	
- Vehicles		-	
- Office furniture & fixtures		10	
b. Corresponding increase:		From 1962	to 1964
In no. of employees (direct prod.)		50	56
In annual gross production ( I£ million )		1.2	1.7

**2. Future Plan**

- a. Investment proposed for the period 1966 to 1967
- | Total value ( 000 I£ ) | 300 |
|------------------------|-----|
| Of which:              |     |
| - Mach. & equipment    | 19  |
| - Land improv. & bldg. | 66  |
| - Land                 | -   |
| - Others               | 15  |
- b. Net increase in no. of employees envisaged for the same period:
- Direct production: -
  - Auxiliary: -
- c. Purposes:
- Introduction of steroids for research and introduction of new processes for the fabrication of steroids.

**VIII. SUPPLEMENT**

Israel : 319 - (4)

**MAJOR PRODUCTS:** Powdered soap, sulphonic acid and various types of detergents. With an investment of I£ 600,000 on sulphonation shop envisaged for 1965/66, annual capacity output will be : 7,000 t sulphonic acid (of which 30 % for internal use), 5,000 t powdered soap and 1,700 t various detergents (3-shift operation).

**REPORTING UNIT:** An enterprise with total assets I£ 4 million and employees 42 as of 1964. Founded in 1936.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (I£ 000 )		704
1. Land		
2. Land improvements		317
3. Buildings	..	
4. Other construction works		
5. Machinery & equipment		387
6. Tools & instruments		
7. Vehicles		
8. Office furniture & fixtures		

**DETAIL OF I.5 (No.)**

	Total Bk. value I£. 000.	Avg. Age (Yr.)	Oper. rate Cond. (%)	1964 replac. value
a. Sulphonization plant	200	7	A 10-12%	500
b. Spray drier	360	6	A 10-12%	500

- The sulphonic acid plant was built in 1957. Prior to that expansion the levels of employment and output were approximately 50 % and 17 %, respectively, of those in 1964.

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (I£ 000 )	622	1 000
1. Direct production materials	400	+ 100
2. Other input materials	40	-
3. Work in process	-	..
b. Finished products	180	-

- Normal inventories of finished products 4.7 % of annual gross production

- Seasonal variations: None.

Capacity of electr. motors: 60 HP  
Capacity of electr. furnaces 50 kW  
Total load, capacity of trucks: - t

- All machines are foreign makes.

**INTERNAL CONDITIONS:**

Transportation, public utilities and community facilities are excellent.

**III. LABOUR**

(1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED:</b> 42	40	1	1
1. Direct production (all male )	23	1	1
Annual total manhours (000)	(55)	(2)	(2)
a. Sulphonization	3	1	1
b. Drying	5	-	-
c. Heavy powdere	1	-	-
d. Liquids and ointments	2	-	-
e. Miscellaneous	8	-	-
f. Technical management	4	-	-

- Due to the limited capacity of sulphonization, the other shops cannot be operated on three shifts.

2. Auxiliary activities (m. 1; f. 16) 17 - - -

**EDUCATIONAL BACKGROUND**  
(No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
1	14	27	
<b>Management</b>			
1	-	-	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	-
<b>Semi-skilled</b>			
-	10	10	
<b>Unskilled</b>			
-	-	5	
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	3	-	
<b>Semi-skilled</b>			
-	1	-	
<b>Unskilled</b>			
-	-	12	

- Average working hours per annum per direct production workers: 2,376 hours.

- Proportion of motors occupied: 95 % on the first shift, 40 % on the second and the third. Proportion of electrical furnaces occupied: 95 % on the first shift only.

- Conventional processes are employed. Degree of mechanisation and automation is high in (a) to (d).

IV. ANNUAL PRODUCTION (1964)			
TOTAL VALUE OF PRODUCTION ( I£ 000 )		5,288	
Product	Unit	Quantity Produced	Unit Value ( I£ )
a. Spray dried powders	ton	2,960	692
b. Heavy powders	ton	751	647
c. Sulphonic acid (100%)	ton	3,536*	791
d. Concentrated detergents	ton	212	680
e. Liquid detergents	ton	336	937
f. Ointment detergents	ton	270	583
g. Solid detergents	ton	90	1,506
h. Colour removing detergents	ton	50	1,620

\* Of which 1,110 t internally consumed and not included in the total.

**CAPACITY OUTPUT:**

10% higher than 1964 actual production level, given sufficient demand and additional manhours 55,000 each on the second and the third shifts. Presently the sulphonation shop constitutes a constraining factor; an investment of I£ 600,000 in this shop would increase the output of sulphonic acid by 100%, and that of spray dried powder by 33% over the 1964 actual levels.

Unit value of product: Market value f.o.b. before sales tax  
 Unit value of material: Market price c.i.f.

- IV: About one half of (c) is exported. (a), (d) and (h) are partly exported.
- V.2: Major direct production materials (a) to (i) are all imported; approximate average freight rates are 10 per ton.

V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF CONSUMPTION ( I£ 000 )		4,246	
1. Energy & water: total	15		
	Quantity consumed	Unit value	( I£ )
- Electricity	000 kWh	360	40
- Liquid fuel	(negligible)		
- Water	000 cu.m.	10	100
2. Direct production materials: total	3,333		
a. Dodecyl benzene	ton	2,800	465
b. Sodium carbonate	ton	1,790	110
c. Phosphates	ton	350	550
d. Sodium sulphate	ton	1,200	137
e. Sodium perborate	ton	200	1,051
f. Ethanolamine	ton	80	1,205
g. Sodium silicate	ton	320	204
h. Fatty acid	ton	120	1,200
i. Carboxyl methyl cellulose	ton	90	1,333
j. Others	000 I£	896	..
3. Packaging materials: total (iron drums etc.)	176		
4. Work performed by sub-contractors ( See VIII)	115		
5. Repairs & maintenance (materials & services purchased)	57		
6. Material inputs for auxiliary activities	63		
Laboratory	17		
Others	46		
7. Non-factor service inputs: total	405		
Of which transport, insurance and storage services purchased separately	93		

VI. VALUE ADDED		TOTAL 1964 ( I£ 000 )	1,042
1. Wages & salaries (before income tax)			
- Employees in direct production		425	
- Other employees		111	
2. Other expenditures for employees		233	
3. Annual depreciation allowance		171	
4. Rental paid (buildings)		0	
5. Sales & other indirect taxes (less subsidies) (not included in total)		[15]	
6. Other gross business income (before income tax)		94	

**SELECTED COEFFICIENTS** in 1964 replacement value

- Mach., equip., instruments & tools/per employee in direct production on 1st shift: I£ 47,800
- Value added per employee: I£ 24,800
- Annual wage per employee in direct production: I£ 17,000
- Variable input costs/gross production ratio: 78.5%
- Gross profit/gross production ratio: 1.8% (at full capacity: 10.6%)
- Level of production at break-even point is approximately 9% of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN			
1. Recent Expansion		Gross acquisition	Scrapped or sold
From 1962 to 1965			
a. Total Investment ( I£ 000 )		600	-
- Land		-	-
- Land improvements		-	-
- Buildings		70	-
- Other construction work		-	-
- Machinery & equipment	}	-	-
- Tools & instruments		-	-
- Vehicles		530	-
- Office furniture & fixtures		-	-
b. Corresponding increase:		From 1962	to 1965
In no. of employees (direct prod. only)		29	25
In annual gross production ( I£ 000 )		3,500	5,500

**2. Future Plan**

a. Investment proposed for the period 1965 to 1966

Total value ( I£ 000 )	600
Of which:	
- Mach. & equipment	100
- Land improv. & bldg.	-
- Land	-
- Others	-

b. Net increase in no. of employees envisaged for the same period:

- Direct production: 5 - 10
- Auxiliary: 0

c. Purpose: Expansion of the sulphonation shop.

**VIII. SUPPLEMENT** Work performed by subcontractors: A subcontractor with a long-term contract made certain types of detergent; the materials used were partly self-supplied and partly supplied by this enterprise.

An enterprise, founded in 1922, manufacturing soaps and other laundry & toilet preparations for local markets. Annual capacity output is 31,000 t of powdered and oake soap on three shifts; other cosmetic products account for 15 % of the total revenue. 30 % of materials (fats, raw phosphates, dodecyl-benzol, etheric oils and other miscellaneous chemicals) are imported. Located 300 - 400 km from the source of basic raw materials.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)		1,856	2,210	Gross expenditures	109	73	141	903		
Buildings & land improvements		533	700	Retirements	95	135	131	264		
Machinery & equipment		1,249	1,400	Calculated average age of fixed assets: 6.2 years						
Other capital assets		14	50	<b>Electric motors:</b>						
				Total installed capacity: 880 KW						
				Of which actually operated in 1963:						
				1st shift 100 %; 2nd shift 91 %; 3rd shift 81 %						
				<b>Technological features:</b>						
				The conventional method of production of soaps: Continuous cooling and finishing with equipment of "MAZZONI". Production of powdered soap is mechanized and automated (rated at 70 %) but packaging is manually operated.						
<b>Major machinery crucial for determining the overall production capacity:</b> (40 % of foreign origin)										
<b>Soaps:</b> Equipment for the refinery of fats, chemical processing, of soap, finishing, and packaging. Of medium size; not sufficiently mechanized (3 shifts).										
<b>Powdered soap:</b> Equipment for the preparation of raw materials, classification and homogenization of powdered soap and packaging. Of medium size; up-to-date, mechanized and automated (2 or 3 shifts).										
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:					
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Low	Others	Total	
1. Factory workers:					Univ. or higher	4	7	4	3	18
Total 1,634 persons		733	400	50	Tech. Higher sch.	-	8	-	-	8
(2,604 thous. manhrs.)		(1,620)	(876)	(108)	Secondary sch.	29	35	-	37	101
- Soap		207	112	16	Primary school	-	-	-	1,373	1,373
- Powdered soap		428	232	26	IV. INTERMEDIATE INPUTS					
- Other products		23	12	-	Quantity		Value (Drs. Million)			
- Maintenance and others		81	44	8	TOTAL actual consumption 1963					
2. Non-factory workers: 311 persons					1. Energy inputs: total					
(700 thous. manhours)					- Electricity					
					- Brown coal					
					2. Major production materials: total					
					- Caustic soda					
					- Calcined soda					
					- Tallow					
					- Other fats for soap					
					- Palmnut oil					
					- Sodium tripoliphosphate					
					- Sodium sulphate					
					- Sodium perborate					
					- Luocol 2					
					- Jugopon					
					- PVC-paste					
					- Perfumes					
					- Ivopon					
					- Miscellaneous chemicals					
					- Cardboard for packaging					
					3. Repairs & maintenance: total					
					4. Other material & non-factor service inputs (of which 751 services)					
					V. VALUE ADDED (1963) (Drs. Million)					
					TOTAL (except turnover tax)					
					- Wages of factory workers					
					- Salaries of non-factory workers					
					- Depreciation					
					- Interests paid					
					- Other accumulation					
					(Turnover tax)					
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		SELECTED COEFFICIENTS					
TOTAL actual revenue output 1963*			8,221		- Mech. & equip. per factory worker on 1st shift: Drs.					
- Laundry soap		6,119 t	1,224		- Value added per employee: Drs.					
- Toilet soap		2,225 t	928		- Annual wage per factory worker: Drs.					
- Powdered soap		16,721 t	4,749		- Variable input cost/gross production ratio:					
- Detergents		211 t	36		- Gross accumulation/gross production ratio:					
- Cosmetic creams		23 t	75		(at full capacity)					
- Powders		12 t	23		- Level of production at break-even point:					
- Toilet oil		7 t	12		1/ Of which Drs. 280 mill. are funds belonging to enterprise.					
- Tooth paste		210 t	337		2/ Gross accumulation includes 'interests paid'.					
- Water cologne		7 t	21							
- Other cosmetic preparations		37 t	106							
- Other laundry and cleaning preparations		4,902 t	418							
- Pharmacol glycerine		41 t	44							
- Technical glycerine		262 t	248							
* Includes turnover tax on sold products.										
Capacity output:										
Soap of various kinds		11,000 t	Average rate of							
Powdered soap		20,000 t	utilisation 82 %.							
- Full utilization of the existing capacity on the 1st shift can be achieved without substantial addition to the present labour force.										
VI. SUPPLEMENT		Future plans:								
a) Introduction of new products from fate and synthetic raw materials.										
b) Introduction of a continuous process for sulphonation.										
c) Expansion of the capacity for powdered soap.										
d) Raising of the degree of mechanization and automation up to the world level.										
e) Overhauling of the power generating shop and the cosmetic shop.										

An old enterprise, founded in 1837, producing soaps, detergents, toilet creams and oils. Annual capacity output is 1,000 t of caked and powdered soap, and some 500 t of cosmetic preparations on 3-shift operation. One-fifth of materials are imported. Major imported items are: tallow, other fats and coconut oil. Located near a large shopping centre, 3 km away from the sources of basic raw materials.

I. FIXED CAPITAL (end of 1965)	Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)			
			1953-54	1955-57	1958-60	1961-65
TOTAL (Drs. million)	637	725				
Buildings & land improvements	232	340				
Machinery & equipment	342	371				
Other capital assets	13	15				
Major machinery crucial for determining the overall production capacity:			Gross expenditures: 32      49      64      158			
Soaps: Boiler for cooking of soaps (3 shifts).			Retirements: 32      40      29      79			
Powdered soaps: J.M. equipment (3 shifts).			Calculated average age of fixed assets: 8.2 years			
3% of machinery and equipment was imported.			Electric motors: Total installed capacity: 452 KW Of which actually operated in 1965: 1st shift 94 %; 2nd shift 89 %; 3rd shift 89 %			
			Technological features: Production of soaps in open boiler rooms and finishing on equipment "Massoni". Production of powdered soap on the equipment JMK (West Germany). The degree of mechanization and automation is considered as rather unsatisfactory (falls short by about 60% and 15%, respectively, of the world standard.).			

II. LABOUR (1965)		TOTAL no. of employees: 372		
		1st shift	2nd shift	3rd shift
1. Factory workers:				
Total	201 persons	175	78	8
	(576 thous. manhrs.)	(334)	(168)	(24)
- Soaps		32	27	6
- Powdered soaps		28	26	-
- Cosmetic preparations		33	2	-
- Maintenance, transport and others		82	23	2
2. Non-factory workers:		111		
		(249 thous. manhours)		

Educational background of workers:					
	Techn.	Elem.	Low	Others	Total
Univ. or higher	5	1	-	-	6
Tech. Higher sch.	-	1	-	-	1
Secondary sch.	5	4	1	9	19
Primary school	-	-	-	346	346

IV. INTERMEDIATE INPUTS		Quantity	Value (Drs. Million)
TOTAL actual consumption 1965			1,789
1. Energy inputs: total			53
- Electricity		902 mwh	15
- Brown coal		4,962 t	38
2. Major production materials: total			1,573
- Caustic soda		485 t	39
- Calcined soda		1,231 t	43
- Coconut oil		316 t	92
- Tallow		1,355 t	235
- Other fats		1,144 t	183
- Dodecyl benzol sulphate		458 t	72
- Tripoli sulphate		345 t	59
- Sodium sulphate		364 t	16
- Water glass		471 t	19
- Alcohol		17 t	12
- Other chemicals		1,556 t	269
- Etheric oil		21 t	137
- Packaging		..	356
- Others		..	52
3. Repairs & maintenance: total			22
4. Other material & non-factor service inputs (services)			141

III. ANNUAL PRODUCTION & CAPACITY		
	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1965*		2,764
- laundry soap	3,946 t	765
- toilet soaps	462 t	205
- bathing soaps	19 t	7
- other soaps	13 t	12
- powdered soap	2,951 t	767
- detergents	44 t	13
- toilet creams	159 t	475
- toilet oil	8 t	34
- toothpaste and powder	8 t	19
- water colognes	14 t	61
- other cosmetic products	68 t	241
- shoe polish	5 t	5
- Parquet paste	51 t	16
- glycerine	99 t	92
- others	..	52

\* Includes turnover tax on sold products.

Capacity output:		
Soaps	4,384 t	Overall rate of utilization: 66%
Powdered soaps	5,480 t	
Cosmetics	45 t	
Glycerine	130 t	

Underutilization due to insufficient demand for powdered soap and cosmetics; insufficient supply of raw materials. Number of workers on 1st shift could be reduced to 142 even for full capacity operation.

V. VALUE ADDED (1965)		(Drs. Million)
TOTAL (except turnover tax)		644
- Wages of factory workers		146
- Salaries of non-factory workers		110
- Depreciation		28
- Interests paid		67
- Other accumulation		293
(Turnover tax)		(331)

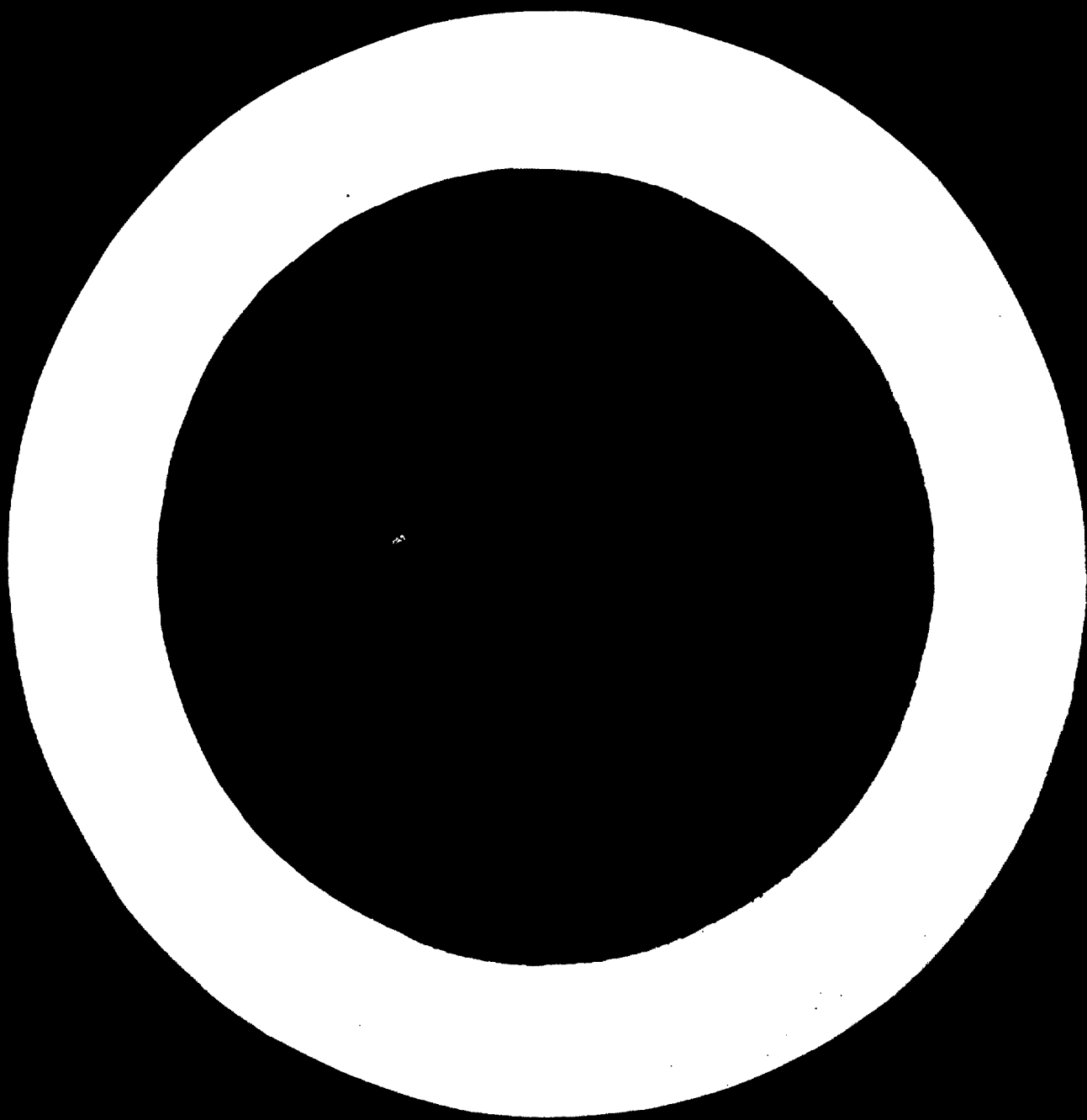
VI. SUPPLEMENT		Futures Plans
a)		Introduction of new detergents and cosmetics of aerosol type.
b)		Introduction of a process for high dissolution of fats.
c)		Mechanization of packaging of soaps and powdered soap and internal transportation.
d)		Expansion of capacity for toilet soaps by 3,400 tons.
e)		Of which Drs. 1.9 million are funds belonging to the enterprise.
f)		Denominator is 193; i.e. excludes the workers in "maintenance, transport and others".

SELECTED COEFFICIENTS		2/
- Mach. & equip. per factory worker on 1st shift:	Drs. 1,917,000	
- Value added per employee:	Drs. 1,731,000	
- Annual wage per factory worker:	Drs. 559,000	
- Variable input cost/gross production ratio:	3/	67 %
- Gross accumulation/gross production ratio:	4/	14.8 %
(at full capacity)		20.5 %
- Level of production at break-even point:	5/	56 % of the 1965 actual level.
3/		wages and salaries are considered as fixed costs.
4/		Gross accumulation includes interests paid.



An enterprise, founded in 1904, manufacturing soaps, cosmetics and glycerine. Annual capacity output is about 14,000 t of soaps of various kinds and 295 t of glycerine. 30 % of raw materials are imported. Major imported items are: tallows, coconut oil, phosphates, dodecil benzol, etheric oil, dyes and other chemicals. Located some 400 km from the source of basic raw materials.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		807	980	-	31	116	417		
Buildings & land improvements		289	420	58	76	83	142		
Machinery & equipment		518	560						
Other capital assets		-	-						
<b>Major machinery crucial for determining the overall production capacity:</b>									
<b>Soaps:</b> Equipment for the refinery of fats, chemical processing of soap, finishing and packaging of medium size (3 shifts).									
<b>Powdered soap:</b> Preparation of raw materials, equipment for classification and homogenization of powdered soap of small capacity (3 shifts).									
<b>Glycerine:</b> Distillation equipment (3 shifts).									
(40 % of machinery and equipment were imported.)									
<b>II. LABOUR (1963)</b>		TOTAL no. of employees: 448			<b>Educational background of workers:</b>				
		1st shift	2nd shift	3rd shift	Techn. Econ.	Law	Others	Total	
1. Factory workers:									
Total	289 persons	142	109	38	9	1	1	12	
	(584 thous. manhrs.)	(336)	(252)	(96)	-	3	2	5	
- Soap		70	57	18	19	21	-	12	
- Powdered soap		56	42	13	-	-	12	52	
- Maintenance		9	6	3	-	-	-	379	
- Other services		7	4	4	-	-	-	379	
2. Non-factory workers: 152 persons									
		(171 thous. manhours)							
<b>III. ANNUAL PRODUCTION &amp; CAPACITY</b>		Quantity	Value (Drs. Million)		<b>IV. INTERMEDIATE INPUTS</b>				
TOTAL actual revenue output 1963*			3,433		Quantity		Value (Drs. Million)		
- Laundry soaps		5,834 t	1,195		TOTAL actual consumption 1963				
- Toilet soaps and creams		781 t	270		1. Energy inputs: total 102				
- Other soaps		42 t	13		- Electricity 18				
- Powdered soaps		6,043 t	1,643		- Brown coal 13				
- Detergents		6 t	1		- Lignite 25				
- Toilet oil		5 t	9		- Liquid fuel 40				
- Tooth paste		6 t	11		2. Major production materials: total 2,163				
- Other cosmetics		45 t	97		- Tallow 428				
- Glycerins**		221 t	215		- Other technical oil 221				
* Including turnover tax on sold products.						- Coconut oil 126			
** 10 % is spent for further processing in the enterprise.						- Dodecil benzol sulphate 243			
<b>Capacity output:</b>						- Sodium hydroxide 30			
Soap of various kinds	7,450 t	Rate of utilisation				- Sodium tripoliphosphate 171			
Powdered soap	5,300 t	is 91 %.				- Sodium carbonate 60			
Glycerine	295 t					- Industrial salt 8			
Number of workers on 1st shift is estimated to be 150 for full utilization.						- Sulphuric acid 2			
						- Others 874			
						3. Repairs & maintenance: total 26			
						4. Other material & non-factor service inputs 235			
<b>VI. SUPPLEMENT</b>		Future plans:				<b>V. VALUE ADDED (1963) (Drs. Million)</b>			
a) Raising of the level of mechanization.						TOTAL (except turnover tax) 764			
b) Overhauling of the shops for preparation of fats.						- Wages of factory workers 164			
1/ Of which Drs. 138 million are funds belonging to the enterprise.						- Salaries of non-factory workers 128			
2/ Gross accumulation includes 'interests paid'.						- Depreciation 54			
						- Interests paid 60			
						- Other accumulation 358 1/			
						(Turnover tax) 143			
						<b>SELECTED COEFFICIENTS</b>			
						- Mach. & equip. per factory worker on 1st shift: Drs. 3,944,000			
						- Value added per employee: Drs. 1,705,000			
						- Annual wage per factory worker: Drs. 567,000			
						- Variable input cost/gross production ratio: 74 %			
						- Gross accumulation/gross production ratio: 12.7 %			
						(at full capacity 14 %)			
						- Level of production at break-even point: 52 % of the 1963 actual level.			



**MAJOR PRODUCTS:** Glass bottles (one litre and smaller). Annual capacity output is about 30 million bottles on four shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with capital stock about Fr. 600 thousand and employees 220 as of 1964. Founded in 1896.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( Fr. 000 )	<u>8,364</u>	<u>2,810</u>
1. Land	53	53
2. Land improvements	-	-
3. Buildings	2,161	930
4. Other construction works	-	-
5. Machinery & equipment	4,459	1,460
6. Tools & instruments	1,531	285
7. Vehicles	160	80
8. Office furniture & fixtures	-	-

DETAIL OF I.5 (No.)	Total Bk value bef. depr.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	196 replace value
a. Machine IS - 43 furnace	128	8	A	12.5	220
b. Machines IS - 43 furnace	126	15	A	"	150
c. Machines IS - 43 furnace	274	10	A	"	220
d. Machine IS - 23 furnace	196	5	A	"	220
e. Others	3,735	..	..	..	..

**II. INVENTORIES** (end of 1964)

	Actual	Normal
<b>TOTAL VALUE</b> ( Fr. 000 )	<u>1,406</u>	..
1. Direct production materials	267	
2. Other input materials	528	
3. Work in process	-	
4. Finished products	612	

- Actual inventories of finished products 7.0% of annual gross production

At the end of 1963 (year with a production level comparable to the 1964 output), the inventory of production materials and finished goods were about 50% of the end-1964 figures.

Capacity of electr. motors: 1,200 KW

Total load, capacity of trucks: 36.3 t  
Total load, capacity of railway stock: 8.1 t

Machines (a) and (b) are of domestic origin; (c) and (d) imported.

Prior to 1962, the production capacity was about 22 million bottles per annum (with 200 employees)

**EXTERNAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR** (1964 average)

	4th shift	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 220	15	175	15	15
1. Direct production (all male)	15	18	15	15
Annual total manhours (000)	(31.5)	(37.8)	(31.5)	(31.5)

- Bottle manufacturing plant \*

\* Excludes maintenance material handling crew, which are classified under "Auxiliary".

2. Auxiliary activities ( m. 146 f. 11 ) 157

a. Maintenance	105
b. Dispatch	16
c. Material handling	6
d. Preparation of materials	2
e. Production management administrative and commercial services	28

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other		
		Engi-neers	Other	
TOTAL	2	7	6	205
<b>Management</b>				
2	4	-	-	
<b>Direct Production</b>				
<b>Skilled</b>				
-	3	4	12	
<b>Semi-skilled</b>				
-	-	-	16	
<b>Unskilled</b>				
-	-	-	28	
<b>Auxiliary Activities</b>				
<b>Skilled</b>				
-	-	2	18	
<b>Semi-skilled</b>				
-	-	-	15	
<b>Unskilled</b>				
-	-	-	116	

- Actual hours worked per annum per direct production worker: 2,100 hours.

- Motore and furnaces are fully occupied on all shifts.

**Technological features:****Direct production**

a): Uses automatic machines

**Auxiliary activities**

- a): Uses modern machines  
b): By electrical freight cars.  
c): Uses modern equipment.  
d): Ordered by punched cards.

- Mechanisation is excellent in direct production and auxiliary shop (a) and (d), and fair in auxiliary shop (b) and (c). Automation is generally excellent, except for maintenance.

- **Skilled workers** in direct production are engaging in operation of machines and furnaces. Those in auxiliary activities are for maintenance, electrical control, forging adjustment, preparation of furnaces and finishing of castings.

France : 332 - ( 1 )

**IV. ANNUAL PRODUCTION (1964)**TOTAL VALUE OF PRODUCTION ( Fr. 000 ) 8,735 \*

Product	Unit	Quantity Produced	Unit Value (000Fr.)
<u>Litre glass bottles for:</u>			
a. "6 étoiles"	mil. bottles		241.0
b. "Anis"	"	1.4	212.6
<u>3/4 litre glass bottles for:</u>			
c. "Bordeaux"	"	9.2	227.5
d. "Bourgogne"	"	1.8	231.9
e. "Anisette"	"	1.2	247.5
f. <u>Litre glass bottles for rum</u>	"	2.0	213.0

\* Includes unspecified products amounting to about 30% of the total value.

**CAPACITY OUTPUT:**

Close to the 1964 actual production level.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price full c.i.f. except for electricity, gas and paper products, which are valued at partial o.i.f.

- Products (c) and (e) are partly used for bottling of exported products.
- Glass sand is imported with freight cost 6% of the c.i.f. value. Soda carbonate and fuel oils are domestically made with some import contents and delivered with freight cost 20% of the c.i.f. values.

**V. INTERMEDIATE INPUTS (196)**TOTAL VALUE OF CONSUMPTION ( 000 Fr. ) 4,578

1. Energy & water: total	Quantity consumed	Unit value (Fr.)
- Water	000 m <sup>3</sup> 39.5	400.00
- Electricity	000 KWH 423.0	65.50
- Fuel oil, light	ton 228.0	145.55
- Fuel oil, No. 2	" 6,353.0	114.75
- City gas	000 m <sup>3</sup> 278.0	41.00
<b>2. Direct production materials: total</b>		<b>1,814</b>
a. Glass sand	ton 14,280	18.65
b. Soda carbonate	" 4,057	248.67
c. Soda sulfate	" 330	164.19
d. Soda nitrate	" 20	547.59
e. Dolomite	" 1,314	48.62
f. Feldspar	" 1,695	87.35
g. Limestone	" 2,220	20.00
h. Manganese dioxide	" 330	582.12
i. Iron oxide	" 217	101.55
j. Calcium	" 103	32.32
<b>3. Packaging materials: total</b>		<b>49</b>
Of which paper materials (Fr. 0.78/carton)		
12,900 cartons		
<b>4. Work performed by sub-contractors ( )</b>		<b>-</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>		<b>469</b>
Maintenance of buildings	Fr. 49,100	
Maintenance of equipment and tools	Fr. 401,200	
Maintenance of vehicles	Fr. 16,500	
<b>6. Material inputs for auxiliary activities</b>		<b>154</b>
Of which research & development Fr. 2,700; hygiene Fr. 13,700; administration Fr. 68,100		
<b>7. Non-factor service inputs: total</b>		<b>159</b>
Transportation, insurance and storage (purchased separately) Fr. 80,234		

**VI. VALUE ADDED TOTAL 1964 ( Fr. 000 ) 5,157**

1. Wages & salaries (before income tax)	
- Employees in direct production 1/	2,788
- Other employees 2/	896
2. Other expenditures for employees	36
3. Annual depreciation allowance	831
4. Royalties	33
5. Sales & other indirect taxes (less subsidies) (not included in total)	[2,323]
6. Other gross business income (before income tax)	571

**PER-EMPLOYEE COEFFICIENTS**

- Mech., equip., instruments & tools per employee in direct production on 1st shift: Fr. 155,300 (Fr. 37,00 2/)
- Value added per employee: Fr. 23,450
- Annual wage per employee in direct production: Fr. 14,520 3/
- Variable input costs/gross production ratio: 63.8% 4/
- Gross profit/gross production ratio: 6.5%
- Level of production at break-even point is approximately 81 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross equi- sition	internal
From 1963 to 1965		
a. Total Investment ( Fr. 000 )	<u>4,547</u>	
- Land	5	-
- Land improvements	-	-
- Buildings	106	-
- Other construction work	-	-
- Machinery & equipment	3,090	284
- Tools & instruments	1,244	-
- Vehicles	102	-
- Office furniture & fixtures	-	-
b. Corresponding increase:	<u>From 1961</u>	<u>to 1965</u>
In no. of employees	219	266
In annual gross production (Fr. million) (incl. taxes)	12.0	11.8

**2. Future Plan: None**

- a. Investment proposed for the period 19 to 19  
Total value ( )  
Of which: - Mech. & equipment %  
- Land improv. & bldg.  
- Land  
- Others
- b. Net increase in no. of employees envisaged for the same period:  
- Direct production:  
- Auxiliary:
- c. Purposes:

**VIII. SUPPLEMENT**

- 1/ Includes the wages of the employees in 2. (a) to (d).
- 2/ Managerial and administrative staff only.
- 3/ The denominator includes the employees classified as "auxiliary" under 2. (a) to (d).
- 4/ Variable wage cost being assumed to be 33% of the total wages and salaries.

**MAJOR PRODUCTS:** Fibrebricks and blocks, insulating bricks, sewage pipes and mortars. Annual capacity output (with one shift ) about 5,000 tons of bricks, blocks and pipes plus 3,300 tons of mortars.

**REPORTING UNIT:** A one-establishment enterprise, founded in 1959, with total assets of Rs. 2.3 million (net worth Rs. 0.7 million) and employees 491 as of 1965.

I. FIXED CAPITAL ASSETS (end of year)		1964	1965	II. INVENTORIES (end of 1965)		
		After deprec.	After deprec.	Actual	Normal	
<b>TOTAL BOOK VALUE</b> (Rs. thous.)		954	1,125	<b>TOTAL VALUE</b> (Rs.thous. )	215 - 42 %	
1. Land		64	64	1. Direct production materials	} 128 - 50	
2. Land improvements		-	-	2. Other input materials		
3. Buildings		445	556	3. Work in process	- -	
4. Other construction works		-	-	4. Finished products	87 - 30	
5. Machinery & equipment		358	402			
6. Tools & instruments	}			- Normal inventories of finished products		
7. Vehicles		87	103	2.8 % of annual gross production		
8. Office furniture & fixtures				- Seasonal variations: ..		
<b>DETAIL OF I.5 (No.)</b>		<b>Total</b>	<b>Avg. Age</b>	<b>Oper. rate</b>	<b>Depr. rate</b>	<b>1965 replace value</b>
		<b>After depr. (end of 1964)</b>	<b>(Yr.)</b>	<b>(%)</b>	<b>(%)</b>	
a. Pan mill	}	6	B	} 10 %	}	Rs. 370 thousand.
b. Tube mill		2	A			Rs. 370 thousand.
c. Vibratory screens		2	A			
d. Pug mill		6	A			
e. Ball mill		4	A			
f. Rotary pan mill		3	A			
g. Box feeders		2	A			

Capacity of electr. motors: 424 KW  
 Total load, capacity of trucks: - t (o) and (g) imported; the rest domestically produced.  
 Average age of machinery 4 years. The enterprise has just completed a major expansion programme with an investment amounting to Rs. 574 thousand. ( see VII)

**GENERAL CONDITIONS:**  
 Local transport, electricity and water, excellent. Long distance transport and community facilities fair.

III. LABOUR (1965 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
<b>TOTAL EMPLOYED</b>	491	491	-	-	Univ. or higher	Sr. High sch. or equiv.	Others	
1. Direct production ( all male )	439	(1,100 )	( )	( )	Engi- neers	Other		
Annual total manhours (000)					<b>TOTAL</b>			
a. Production	115				2	3	29	457
b. Moulding	93				<b>Management</b>			
c. Inspecting	62				2	3	14	-
d. Dispatching	57				<b>Direct Production</b>			
e. Maintenance	60				<b>Skilled</b>			
f. Laboratory	52				<b>Semi-skilled</b>			
					<b>Unskilled</b>			
					<b>Auxiliary Activities</b>			
					<b>Skilled</b>			
					<b>Semi-skilled</b>			
					<b>Unskilled</b>			
2. Auxiliary activities ( all male )	52							
Administration	52							

- Actual hours worked per annum per direct production worker: 2,506 hours.

- Proportion of motors occupied: 95%

- **Technological features:**  
 The nomenclature of the shops is self indicative of the processes.

- Mechanization and automation generally fair.

- **Skilled workers** in direct production: moulders, fitters etc.

Those in auxiliary activities: administrative assist- ante, accountants and sales and purchase assistants.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)				
TOTAL VALUE OF PRODUCTION ( Rs. thous. ) <u>2,196</u>				TOTAL VALUE OF CONSUMPTION ( Rs. thous. ) <u>1,094</u>				
<u>Product</u>	<u>Unit</u>	<u>Quantity Produced</u>	<u>Unit Value (Rs.)</u>	<u>1. Energy &amp; water: total (incl. 6,400 l. lubricating oil at Rs. 0.94/l.)</u>	<u>Quantity consumed</u>	<u>Unit value (Rs.)</u>		
a. Firebricks and blocks	ton	3,858	170	- Water	000 litre	14	2	
b. Insulating bricks	"	477	566	- Electricity	000 KWH	157	150	
c. Sewage (S.W.) pipes	"	560	659	- Coal	000 ton	16	30,000	
d. Mortars of all types	"	3,288	274	- Petroleum	000 litre	7	800	
				- Other fuel oils	"	10	400	
				<u>2. Direct production materials: total</u>			<u>272</u>	
				a. Fire clay	000 tone	17.8	6,500	
				b. Bauxite	ton	80	25	
				c. Magnesite	"	25	254	
				d. Quartzite (powder)	"	80	152.6	
				e. Waste mica (graded)	"	6	673	
				f. Saw dust	000 tone	0.67	33,600	
				g. Kainite	ton	85	200	
				h. Sodium silicate	"	57	281	
				i. Salt	"	32	148	
				j. Borax	"	1	976	
				k. Others	Rs. thous.	70	..	
				<u>3. Packaging materials: total</u>			<u>39</u>	
				<u>4. Work performed by sub-contractors ( )</u>			<u>82</u>	
				<u>5. Repairs &amp; maintenance (materials &amp; services purchased)</u>			<u>32</u>	
				Parts and materials -	4			
				Services purchased -	28			
				<u>6. Material inputs for auxiliary activities</u>			<u>9</u>	
				Stationery and printing				
				<u>7. Non-factor service inputs: total</u>			<u>141</u>	
				Transportation, insurance and storage	-	124		
				Communication, advertising, etc.	-	17		
<b>CAPACITY OUTPUT:</b>				<b>SELECTED COEFFICIENTS</b>				
Not higher than the 1965 actual production level.				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 1,130 1/				
In 1959, when the enterprise first started commercial production, the annual production and employment were about 50 and 60 %, respectively, of the 1965 level.				- Value added per employee: Rs. 2,244				
Unit value of product: Market value f.o.b. before sales tax.				- Annual wage per employee in direct production: Rs. 977				
Unit value of material: Market price c.i.f.				- Variable input costs/gross production ratio: 61%				
- All direct production materials are of domestic origins. Delivery by railroad and road with freight costs ranging from 2 to 5 % of c.i.f. values.				- Gross profit/gross production ratio: 14.7%				
- Level of production at break-even point is approximately 62 % of the 1965 actual level.								
<b>VI. VALUE ADDED TOTAL 1965 ( Rs. thous. ) <u>1,102</u></b>								
1. Wages & salaries (before income tax)								
- Employees in direct production				429				
- Other employees				143				
2. Other expenditures for employees				109				
3. Annual depreciation allowance				78				
4. Rental paid (2 for buildings; 17 for others)				19				
5. Sales & other indirect taxes (less subsidies) (not included in total)				43				
6. Other gross business income (before income tax)				324				
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>								
1. <u>Recent Expansion</u>				2. <u>Future Plan</u> : None				
From 1964 to 1965				e. Investment proposed for the period 19 to 19				
a. Total Investment ( Rs. thous. )		<u>574</u>		Total value ( )				
- Land		-		Of which: - Mach. & equipment			%	
- Land improvements		-		- Land improv. bldg.				
- Buildings		311	5	- Land				
- Other construction work		12	-	- Others				
- Machinery & equipment		178	10	b. Net increase in no. of employees envisaged for the same period:				
- Tools & instruments		-	-	- Direct production:				
- Vehicles		73	7	- Auxiliary:				
- Office furniture & fixtures		-	-	c. Purposes:				
b. Corresponding increase:		<u>From 1964</u>	<u>to 1965</u>					
In no. of employees		216	491					
In annual gross production (Rs. thous. )		1,500	2,196					
<b>VIII. SUPPLEMENT</b>				<u>Liquid assets and short (and middle) term liabilities (end of 1965; Rs. thousand).</u>				
Cash on hand and in banks				160	Taxes payable			50
Accounts receivable				645	Accounts payable			324
Loans and advances				120	Borrowing from commercial banks			475
<p>1/ The 1965 replacement value, including tools and instruments, estimated roughly at Rs. 500 thousand.</p>								

**MAJOR PRODUCTS:** Fire bricks and blocks; also produces mortars and refined clay. Annual capacity output (with one shift) is 5,300 tons of fire bricks and blocks plus about 5,000 tons of mortars and refined clay.

**REPORTING UNIT:** Older sister branch of India 331-(3); the parent enterprise, founded in 1943, has total assets of Re. 5.5 million (net worth Re. 1.5 million) and employees 479 as of 1965. This branch contains the central office of the enterprise.

**I. FIXED CAPITAL ASSETS**

	End of 1964 After deprec.	End of 1965 After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. thous )	1,097	1,169
1. Land	184	184
2. Land improvements	-	-
3. Buildings	249	330
4. Other construction works	-	-
5. Machinery & equipment	516	495
6. Tools & instruments	-	-
7. Vehicles	148	170
8. Office furniture & fixtures	-	-

**DETAIL OF I.5 (No.)**

	Total Bk. value Ref. Amer.	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (\$)	1964 replac. value
a. Automatic brick cutting machines (2)	Re. 412 Thous.	3	A	10%	Rs. 470 Thous.
b. Reintergrators (5)		14	C		
c. Work shop equipment (7)		15	C		
d. Box feeders (2)		1	A		
e. Magnetic separators (1)		1	A		
f. Pug mills (4)		11	B		
g. Pan mills (2)		3	A		
h. Press (pipe making) (3)		10	B		
i. Rotary screen (1)		2	A		
j. Stamping machines (12)	6	B			

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Rs. thous )	339	- 12%
1. Direct production materials	9%	- 15
2. Other input materials		
3. Work in process	-	-
4. Finished products	244	- 10

- Normal inventories of finished products 15.4% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 162 KW

Total load, capacity of trucks: 15 t  
(a), (d), (e) imported; the rest domestically produced.

Average age of machinery 9 years.

The establishment is currently under a major expansion programme, which will further extend to the period of 1965 to 68 (see VII).

**EXTERNAL CONDITIONS:**

Transport and public utilities facilities excellent; community facilities fair.

**III. LABOUR**

(1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> ( m. 173 )	277	-	-
1. Direct production ( f. 27 )	200	-	-
Annual total manhours (000)	(510)	( )	( )
a. Moulding department	60	-	-
b. Production department	125	-	-
c. Maintenance and repairs	15	-	-
2. Auxiliary activities ( m. 70 ) ( f. 7 )	77	-	-
a. Managerial, technical and other activities	72	-	-
b. Inspection department	5	-	-

**EDUCATIONAL BACKGROUND**  
(No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
2	4	8	2
<b>Direct Production</b>			
Skilled			
-	-	10	80
Semi-skilled			
Unskilled			
-	-	-	-
<b>Auxiliary Activities</b>			
Skilled			
-	7	30	3
Semi-skilled			
Unskilled			
-	-	-	21

- Actual hours worked per annum per direct production worker: 2,550 hours.

- Proportion of motors occupied: 95 %

- Mechanization and automation generally poor.

- Skilled workers in direct production perform: moulding, turning, pattern making, etc.

Those in auxiliary activities are: administrative assistants, sales and purchase assistants, accountants, etc.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION (Rs. thous. ) 1,418				TOTAL VALUE OF CONSUMPTION (Rs. thous. ) 610			
Product	Unit	Quantity	Unit Value (Rs.)	1. <u>Energy &amp; water: total</u> (incl. 17,000 l. of other fuel oils at Rs. 0.4/ l. and 3,000 l of lubricating oil at Rs. 0.92/ l.)	Quantity	Unit value	
					con-	value	
					Unit	sumed	(Rs.)
a. Fire bricks and blocks	ton	6,290	209	- Electricity	000 KWH	170	170
b. Mortars (all types)	"	1,158	72.5	- Coal	ton	2,576	28.35
c. Refined clay	"	2,800	4.75	- Petroleum	000 litre	18	851
				- Water	000 k.l.	11.55	190
				2. <u>Direct production materials: total</u>			159
				a. Fire clay (non plastic)	ton	15,660	7.1
				b. Others	Rs. thous.	48	..
<b>CAPACITY OUTPUT:</b>				3. <u>Finishing materials: total</u> 28			
Not higher than the 1965 actual production level.				4. <u>Work performed by sub-contractors ( )</u> --			
Product - mix is flexible.				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> 90			
This branch first started commercial production in 1943, with an annual capacity of no more than 3,000 tons of bricks.				6. <u>Material inputs for auxiliary activities</u> 13			
Unit value of product: Market value f.o.b. before sales tax				7. <u>Non-factor service inputs: total</u> 191			
Unit value of material: Market price c.i.f.							
- Fire clay is domestically produced and delivered by railroad with freight cost 5% of c.i.f. value.							
<b>VI. VALUE ADDED</b> TOTAL 1965 (Rs. thous. ) 808				<b>SELECTED COEFFICIENTS</b> (in 1965 replacement value)			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools/per employee in direct production on 1st shift: Rs. 2,440			
- Employees in direct production		166		- Value added per employee: Rs. 2,910			
- Other employees		218		- Annual wages per employee in direct production: Re. 830			
2. Other expenditures for employees		70		- Variable input costs/gross production ratio: 34%			
3. Annual depreciation allowance		98		- Gross profit/gross production ratio: 17.3%			
4. Rental paid		10					
5. Sales & other indirect taxes (less subsidies)		[ 29 ]		- Level of production at break-even point is approximately 74% of the 1965 actual level.			
6. Other gross business income (before income tax)		246					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u>				2. <u>Future Plan</u>			
From 1963 to 1965				a. Investment proposed for the period 1965 to 1968			
a. Total Investment (Rs. thous. )		371		Total value (Rs. million )		0.6	
- Land		-		Of which: - Mach. & equipment		75	%
- Land improvements		-		- Land improv. & bldg.		25	
- Buildings		87	10	- Land		-	
- Other construction work		-		- Others		-	
- Machinery & equipment		161	20	b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments		-		- Direct production: -			
- Vehicles		123	8	- Auxiliary: 4			
- Office furniture & fixtures		-		c. <u>Purposes:</u> Introduction of new automatic material handling and automation of furnaces; expansion of the moulding and production departments.			
b. Corresponding increase:							
In no. of employees		From 1963	to 1965				
In annual gross production (Rs. thous. )		222	177				
		1,074	1,428				
<b>VIII. SUPPLEMENT</b>							
<u>Liquid assets and short (and middle) term liabilities of the parent enterprise (end of 1965; Rs. thousand).</u>							
Cash on hand and in banks	748	Taxes payable	373				
Accounts receivable	1,063	Accounts payable	752				
Wages and advances	569	Borrowing from commercial banks	538				
N.B. The two branches (India : 331 - (2) and (3)), are operating almost independently of each other.							



**MAJOR PRODUCTS:** Fire brioke. Annual capacity output (with one shift) about 9,300 tons.

**REPORTING UNIT:** The other branch - establishment, founded in 1945 of the same enterprise that owns India 331 - (2).

**I. FIXED CAPITAL ASSETS**

	End of 1964 After deprec.	End of 1965 After deprec.
<b>TOTAL BOOK VALUE</b> ( Re. thous. )	966	977
1. Land	86	86
2. Land improvements	-	75
3. Buildings	440	422
4. Other construction works	-	-
5. Machinery & equipment	305	273
6. Tools & instruments	-	-
7. Vehicles	115	121
8. Office furniture & fixtures	-	-

**DETAIL OF I.5 (No.)**

	Total Bk. value bef. deprec.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (\$)	1965 replace value
a. Automatic brick cutting machines (2)		3	A		
b. Distintegrators (4)		13	C		
c. Work shop equipment (6)		14	C		
d. Box feeders (2)		1	A		
e. Magnetic separators (1)	Rs. 244	1	A		Rs. 270
f. Pug mills (3)	thous.	10	B	10 %	thous.
g. Pan mills (2)		3	A		
h. Presses (2)		8	B		
i. Rotary screen (1)		3	A		
j. Stamping machines (8)		7	B		

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Re. thous.)	549	- 16 \$
1. Direct production materials	229	- 10
2. Other input materials		
3. Work in process	-	-
4. Finished products	320	- 20

- Normal inventories of finished products 25 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 246 KW

Total load, capacity of trucks: 10 t

(a), (d), (e) imported;

the rest domestically produced.

Average age of machinery : 7 years.

**GENERAL CONDITIONS:** Transport and public utilities facilities, excellent; residential facilities, fair; health, recreational and educational facilities, poor.

**III. LABOUR**

(1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> m. 168	212	-	-
1. Direct production ( f. 23 )	191	-	-
Annual total manhours (000)	(480)	( )	( )
a. Moulding department	56		
b. Production department	117		
c. Repairs and maintenance	14		
d. Inspection department	4		
2. Auxiliary activities ( all male )	21		
Managerial, technical and other activities	21		

**EDUCATIONAL BACKGROUND**  
(No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
1	3	10	198
<b>Management</b>			
1	2	3	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	75
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	-	116
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	1	7	1
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	-	6

- Actual hours worked per annum per direct production worker: 2,513 hours.

- Proportion of motore occupied: 95 %.

- Mechanisation and automation are generally poor.

- Skilled workers in direct production perform: moulding, turning, pattern making, sto.

Those in auxiliary activities are: administrative assistants, sales and purchase assistants, accountants, etc.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION (Rs. thous. )			1,018	TOTAL VALUE OF CONSUMPTION (Rs. thous. )			506
<u>Product</u>	<u>Unit</u>	<u>Quantity Produced</u>	<u>Unit Value (Rs.)</u>	1. <u>Energy &amp; water: total</u> (incl. 14,000 l. other fuel oils at Rs. 2.06/ l. and 1,446 l. lubricating oil at Rs. 1.17/ l. )			
					<u>Quantity consumed</u>	<u>Unit value (Rs.)</u>	
a. Fire bricks	ton	9,343	106	- Electricity	000 KWH	175	140
b. Mortars (all types)	"	570	49	- Coal	ton	3,596	29
				- Petroleum	000 litre	9	928
				- Water	"	3,280	0.2
				2. <u>Direct production materials: total</u>			
				a. Fire clay	ton	14,821	6
				b. Bauxite	"	654	26
				c. Others	Rs. thous.	15	..
<b>CAPACITY OUTPUT:</b>				3. <u>Packaging materials: total</u>			
Not higher than the 1965 actual production level.							
Product - mix is flexible.				4. <u>Work performed by sub-contractors ( )</u>			
The first commercial production (in 1945) was at about 4,000 tons - per - annum rate.				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>			
Unit value of product: Market value f.o.b. before sales tax				6. <u>Material inputs for auxiliary activities</u>			
Unit value of material: Market price c.i.f.				Stationery and printing			
- All direct production materials are produced domestically and delivered by road; freight costs are negligible.				7. <u>Non-factor service inputs: total</u>			
VI. VALUE ADDED TOTAL 1965 (Rs. thous. )				512			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools/per employee in direct production on 1st shift:Rs. 1,770			
- Employees in direct production				- Value added per employee: Rs. 2,415			
- Other employees				- Annual wage per employee in direct production:Rs. 890			
2. Other expenditures for employees				- Variable input costs/gross production ratio: 45 %			
3. Annual depreciation allowance				- Gross profit/gross production ratio: 12.8 %			
4. Rental paid				- Level of production at break-even point is approximately 77 % of the 1965 actual level.			
5. Sales & other indirect taxes (less subsidies) (not included in total)				[ 20 ]			
6. Other gross business income (before income tax)				130			
VII. EXPANSION: HISTORY & PLAN				SELECTED COEFFICIENTS (in 1965 replacement value)			
1. <u>Recent Expansion</u>				2. <u>Future Plan</u> : None			
From 19 63 to 19 65				a. Investment proposed for the period 19 to 19			
a. Total Investment (Rs. thous. )				Total value ( )			
- Land				Of which: - Mach. & equipment			
- Land improvements				- Land improv. & bldg.			
- Buildings				- Land			
- Other construction work				- Others			
- Machinery & equipment				b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments				- Direct production:			
- Vehicles				- Auxiliary:			
- Office furniture & fixtures				c. <u>Purposes:</u>			
b. Corresponding increase:				From 1963 to 1965			
In no. of employees				160 212			
In annual gross production (Rs. thous. )				624 1,018			
VIII. SUPPLEMENT							

**MAJOR PRODUCTS:** Glass wool, refractory products and stone ware pipes. Annual capacity outputs are 20 - 25 tone of glass wool and 8,000 - 9,000 tone of refractory products and stone ware pipes on 3 shift operation. (The factory currently operate only one shift because of lack of demand).

**REPORTING UNIT:** One-establishment enterprise with total assets Re. 4 million (net worth Re. one million) and employees 309 as of 1965. Founded in 1956.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. 000 )	1,201	967
1. Land	49	49
2. Land improvements	5	4
3. Buildings	420	394
4. Other construction works	75	65
5. Machinery & equipment	507	347
6. Tools & instruments	47	23
7. Vehicles	98	85

DETAIL OF I.5 (No.)	Total Bk. value	Avg. Age (Yr.)	Depr. rate (%)	1964 replace. value
---------------------	-----------------	----------------	----------------	---------------------

a. Pan mills (2)	10	B	..	..
b. Pug mills (4)	8	"	..	..
c. Pipe machines (3)	7	"	..	..
d. Hand operated screw pressee (5)	5	C	..	..
e. Pettler machines (3)	6	A	..	..
f. Lathes (4)	6	A,B	80	..
g. Shaping machine (1)	5	B	24	..
h. Pillar drill (1)	6	C	10	..
i. Elevators (3)	507	7	B	5
j. Rotary screens (3)	5	C	..	..
k. Cutting machine (1)	5	B	..	..
l. Clipper saw (2)	4	"	..	..
m. Air blower (1)	6	A	..	..
n. Oil burners (2)	6	"	..	..
o. Vertical boiler (1)	8	B	..	..
p. Feed pumps (2)	8	"	..	..
q. Rotary grate (1)	6	"	..	..
r. Water pumps (2)	6	A	..	..

**II. INVENTORIES**

(end of 1965)	Actual	Normal
<b>TOTAL VALUE</b> (Rs. 000 )	652	- 16
1. Direct production materials	405	- 28
2. Other input materials		
3. Work in process	23	+ 36
4. Finished products	224	- 1

- Normal inventories of finished products 17.0% of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 377 KW

Total load, capacity of trucks: 3 t

Machines (a) to (e), (i), (j), (l)

and (g) were internally made;

the rest domestically made.

**EXTERNAL CONDITIONS:** Transport and water, excellent. Residential facilities fair. Electricity, health, educational and recreational facilities, poor.

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	309	--	--
1. Direct production ( m. 217 r. 18 )	235	--	--
Annual total manhours (000)	( 567 )	( )	( )
a. Refractory shop	110		
b. Pipe plant	70		
c. Glass wool	55		
2. Auxiliary activities ( all male)	74	--	--
a. Managerial and technical control	1		
b. Maintenance	49		
c. Other shops in factory	14		
d. Central office (separately located)	10		

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other
Engrs		
Other		
<b>TOTAL</b>	1	31
<b>Management</b>	1	--
<b>Direct Production</b>	--	--
Skilled	--	--
Semi-skilled	--	--
Unskilled	--	235
<b>Auxiliary Activities</b>	--	--
Skilled	--	31
Semi-skilled	--	25
Unskilled	--	14
	--	3

- Actual hours worked per annum per direct production worker : 2,413 hours.

- Motors are almost fully occupied (97%) during the operation.

- Mechanisation generally fair, automation poor.

IV. ANNUAL PRODUCTION (1965)			
TOTAL VALUE OF PRODUCTION ( Rs. 000 )			
Product	Unit	Quantity Produced	Unit Value (Rs.)
a. Glass wool	ton	19	750
b. Refractory products	"	6,672	180
c. Stone ware pipes	"	372	280

(b) was introduced in the production line in 1963, and (c) in 1965 (see VII. 1)

**CAPACITY OUTPUT:** 25% higher than the 1964 actual production level with additional man-hours 80,000, 70,000, 70,000 on 1st., 2nd., and 3rd., shift, respectively. Reasonably insufficient demand for the products is the main cause of the underutilization. The proportions of refractory products and stone ware pipes may be changed.

Unit value of product: Market value f.o.b. before sales tax.  
 Unit value of material: Market price c.i.f.  
 - All production materials domestically produced.  
 Freight rates range from 1 to 3% with the exception of (1), for which it is 6%.  
 Delivery by railroad and road.

V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF CONSUMPTION ( Rs. 000 )			
1. Energy & water: total	299		
	Quantity consumed	Unit	Unit value (Rs.)
- Lubricating oil		K.L.	2
- Electricity	234	KWH	1,472
- Coal	4,198	ton	68
- Coke	"	"	93
- Fuel oil	13	K.L.	362
2. Direct production materials: total	251		
a. Sand	25	ton	51
b. Lime	45	"	96
c. Soda ash	275	Kg.	592
d. Dolomite	18	ton	25
e. Borax granular	6.4	ton	1,090
f. M.S. sheets	16	"	1,006
g. Saw dust	27	"	37
h. Slag iron	18	"	37
i. Raw clay	12,640	"	10.6
j. Bauxite	629	"	72
k. Consumable stores	43	000Rs.	..
3. Packaging materials: total	20		
Empty products (Rs. 3.7/ton) 60, 1964, wooden boxes (Rs. 1.5/cloth) 20; wooden bags (Rs. 393/000) 22,000; wooden cloth (Rs. 480/000 m) 1,640 m; wire netting (Rs. 4.52/m) 2,000 m.			
4. Work performed by sub-contractors	-		
5. Repairs & maintenance (materials & services purchased)	80		
Materials 62 Services 18			
6. Material inputs for auxiliary activities	6		
Stationery and printing			
7. Non-factor service inputs: total	27		
Of which transportation, insurance and storage purchased separately 23			

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 2,160 (Rs. 1,785 1/2)
- Value added per employee: Rs. 2,050
- Annual wage per employee in direct production: Rs. 1,230
- Variable input costs/gross production ratio: 65.3%
- Gross profit/gross production ratio: 2.7% (at full capacity : 9.2%)
- Level of production at break-even point is approximately 92 % of the 1965 actual level.

VII. EXPANSION: HISTORY & PLAN			
1. Recent Expansion			
From 1963 to 1965			
	Gross acquisition	% of repair	
a. Total Investment (Rs. 000 )	1,327 2/3		
- Land	-	-	
- Land improvements	-	-	
- Buildings	350	5	
- Other construction work	149	3	
- Machinery & equipment	768	5	
- Tools & instruments	-	-	
- Vehicles	25	-	
- Office furniture & fixtures	37	-	
b. Corresponding increase:	From 1963 to 1965		
In no. of employees	200	309	
In annual gross production	+ 27%		
2. Future Plan			
a. Investment proposed for the period 1967 to 1971			
Total value ( Rs. million )			
Of which: - Mach. & equipment 60 %			
- Land improv. & bldg. 20			
- Land -			
- Others 20			
b. Net increase in no. of employees envisaged for the same period:			
- Direct production: 150			
- Auxiliary: 50			
c. Purpose: Introduction of new processes and largely balanced expansion of existing capacity in the same location.			

VIII. SUPPLEMENT			
Structure of liquid assets and current liabilities (end of 1965; Rs. 000).			
Cash on hand and in bank	9	Accounts payable	302
Accounts receivable	2,169		

1/ Denominator includes maintenance crew.  
 2/ Of which Rs. 175,000 for the introduction of refractory products. Another Rs. 2,600,000 is being invested in 1965 for the introduction of stone ware pipes. Not all these expenditures are capitalised yet as of the end of 1965.

Israel : 331 - (1)

**MAJOR PRODUCTS:** Tiles, white and coloured. Annual capacity is 9.5 million pieces on partial three-shift operation; the capacity output will easily reach a 17 - 18 million piece level with a I£ 0.7 million investment.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets I£ 3 million and employees 115 as of 1964. Founded in 1953.

I. FIXED CAPITAL ASSETS (end of 1964)		Before deprec.	After deprec.	II. INVENTORIES (end of 1964)		Actual	Normal	
<b>TOTAL BOOK VALUE (I£ 000 )</b>		1,500	300	<b>TOTAL VALUE (I£ 000 )</b>		370	- \$	
1. Land (total acreage: 6)			(rented)	1. Direct production materials	70	-		
2. Land improvements		-		2. Other input materials	100	-		
3. Buildings (total floor space: 5000 sq.m.)		-	(rented)	3. Work in process	200	-		
4. Other construction works		-		4. Finished products				
5. Machinery & equipment		1,300	700					
6. Tools & instruments				- Normal inventories of finished products 10 % of annual gross production				
7. Vehicles		200	100	- Seasonal variations: None.				
8. Office furniture & fixtures								
<b>DETAIL OF 1.5 (No.)</b>		<b>Total bk. value</b>	<b>Avg. Age</b>	<b>Oper. rate</b>	<b>Depr. rate</b>	<b>1964 replace value</b>		
(Subtotal)		772				1,109		
a. Braying machine, 4 tons/hour (1)	2	1	A	12	2			
b. Ball mills, 11 tone/24 hours (5)	50	6	A	12	75			
c. Filtration presses, 1/2 ton/hour (2)	30	6	A	12	40			
d. Raviola-triece and furnace, 1/2 ton/hour (1)	50	1	A	12	50			
e. Milling system (1)	150	1	A	12	150			
f. Presses, 50,000 pcs./8 hrs.(4)	40	2	A	12	40			
g. Drying furnace (1)	160	4	A	12	200			
h. Combustion furnace, 40,000 pcs./24 hours (1)	200	8	A	12	400			
i. Glazing machines, 60,000 pcs./8 hours (2)	20	8	A	12	40			
j. Combustion furnace, 17,000 pcs. per 3 hours (1)	60	8	A	12	100			
k. Glaze manufacturing mills, 5 tons/4 hours (2)	10	2	A	12	12			
<b>III. LABOUR (1964 average)</b>		<b>1st shift</b>	<b>2nd shift</b>	<b>3rd shift</b>	<b>EDUCATIONAL BACKGROUND (No. of employees)</b>			
<b>TOTAL EMPLOYED 115</b>		101	7	7	Univ. or higher	Sr. High sch. or equiv.	Others	- Average working hours per annum per direct production worker: 2,452 hours.
<b>1. Direct production (all male )</b>		86	7	7	Engi-ners	Other		- Proportion of motors occupied: 100 % on the 1st shift and 40 % on the 2nd and 3rd shifts.
<b>Annual total manhours (000)</b>		(210)	(18)	(18)	<b>TOTAL</b>			- Proportion of furnaces occupied is 100 % on each of the 3 shifts.
a. Material preparation		7	-	-	Management			- Conventional processes are employed. Degree of mechanization is high; no automation.
b. Pressing		9	-	-	1			
c. Furnaces		7	6	6	<b>Direct Production</b>			
d. Glaze preparation		1	1	1	Skilled		9	
e. Glazing		18	-	-	Semi-skilled			
f. Packaging		15	-	-	Unskilled			
g. Miscellaneous		29	-	-	<b>Auxiliary Activities</b>		91	
					Skilled			
					Semi-skilled			
					Unskilled		1	
							4	9
<b>2. Auxiliary activities (male 11 fem. 4 )</b>		15	-	-				

Capacity of electr. motors: 200 KW  
Capacity of electr. furnaces: 300 KW  
Total load, capacity of trucks: - t

- Most of the itemized machines were imported, mainly from Italy. Only (b), (g), (k) are wholly local manufactures. For (e) key components were imported but installation, fixtures and accessories are of local manufacture.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities are excellent.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( If 000 )		2,000
Product	Unit	Quantity Unit Produced ( If )
a. White tiles	000 pcs.	9,000 170
b. Coloured tiles	000 pcs.	3,600 210
c. Others	( If 000 )	224 ..

**CAPACITY OUTPUT:** About the same as the 1964 actual production level. The installed capacity of the furnaces constitutes a bottleneck. The technologically feasible minimum increase in capacity requires an investment of some If 0.7 million, by which the capacity would be raised by 80 %. Then additional annual manhours of 17,600 each on 2nd and 3rd shifts would be needed for the full utilization of this expanded capacity.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Direct production materials (d), (e) and (f) are imported. The approximate freight rates per ton are If 55 for (d) and (e) and If 30 for (f).

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( If 000 )		990
<b>1. Energy &amp; water: total</b>		253
	Quantity Unit consumed ( If )	
- Electricity	000 kWh	4,380 30
- Diesel oil	ton	1,200 100
- Water	000 cu.m.	15 120
<b>2. Direct production materials: total</b>		247
a. Clay	ton	1,200 50
b. Dolomite	ton	360 40
c. Calcite	ton	360 30
d. Kaoline	ton	300 110
e. Feldspar	ton	480 145
f. Ball-clay	ton	360 120
g. Other	( If 000 )	16 ..
<b>3. Packaging materials: total</b>		180
Wooden boxes	000 pcs.	180 1,000
<b>4. Work performed by sub-contractors ( )</b>		-
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>		50
<b>6. Material inputs for auxiliary activities</b>		20
<b>7. Non-factor service inputs: total</b>		240
Of which transport, insurance and storage services purchased separately		40

**VI. VALUE ADDED TOTAL 1964 ( If 000 ) 1,010**

1. Wages & salaries (before income tax)	
- Employees in direct production	540
- Other employees	120
2. Other expenditures for employees	50
3. Annual depreciation allowance	100
4. Rental paid (land and buildings)	15
5. Sales & other indirect taxes (less subsidies) (not included in total)	[320]
6. Other gross business income (before income tax)	185

**KEY-WORD COMMENTARY**

- (in 1964 replacement value)
- Mach., equip., instruments & tools/per employee in direct production on 1st shift: If 23,300
  - Value added per employee: If 8,780
  - Annual wage per employee in direct production: If 5,400
  - Variable input costs/gross production ratio: 61.0 %
  - Gross profit/gross production ratio: 9.3 %
  - Level of production at break-even point is approximately 76 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

<b>1. Recent Expansion</b>		Gross acquisition	Scrapped or sold
From 1957 to 1964			
a. Total Investment ( If 000 )	500	-	-
- Land	-	-	-
- Land improvements	-	-	-
- Buildings	-	-	-
- Other construction work	-	-	-
- Machinery & equipment	400	-	-
- Tools & instruments	-	-	-
- Vehicles	100	-	-
- Office furniture & fixtures	-	-	-
b. Corresponding increase:	From 1962	to 1964	
In no. of employees (direct prod. only)	50	100	
In annual gross production ( If 000 )	1,000	2,000	

**2. Future Plan**

- a. Investment proposed for the period 1966 to 1967
- |                        |        |
|------------------------|--------|
| Total value ( If 000 ) | 700    |
| Of which:              |        |
| - Mach. & equipment    | 100 \$ |
| - Land improv. & bldg. | -      |
| - Land                 | -      |
| - Others               | -      |
- b. Net increase in no. of employees envisaged for the same period:
- Direct production: 15
  - Auxiliary: -
- c. Purpose: Selective expansion of existing capacity.

**VIII. SUPPLEMENT**

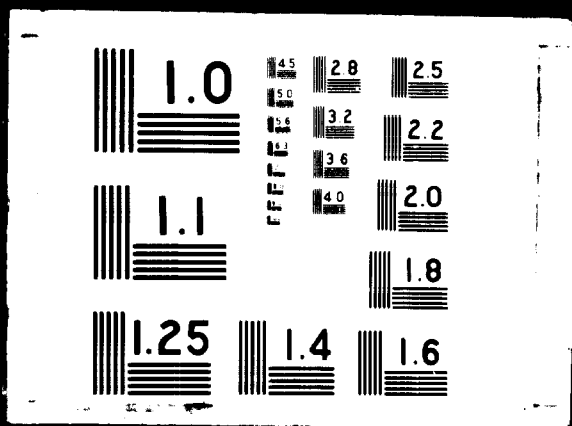


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Israel : 332 - ( 1 )

**MAJOR PRODUCTS:** Glassware (tea cups, bottles, etc.). Capable of processing annually some 2,000 t of raw materials (sand, limestone, soda ash, etc.). To produce I£ 3.4 million worth of various glassware on partial 3-shift operation.

**REPORTING UNIT:** An independent one establishment enterprise with total assets I£ 1.2 million and employees 190 as of 1964. Founded in 1934.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.	
<b>TOTAL BOOK VALUE</b> ( I£ 000 )	470	110	
1. Land (15,000 sq. m.)	125	45	
2. Land improvements			
3. Buildings (total floor space 5,000sq. m.)			
4. Other construction works			
5. Machinery & equipment	315	45	
6. Tools & instruments			
7. Vehicles	30	20	
8. Office furniture & fixtures			
<b>DETAIL OF I.5 (No.)</b>	<b>Avr. Age (Yr.)</b>	<b>Depr. Oper. rate Cond.</b>	<b>196 4 replace value</b>

a. Kilns (3)	10-20	B	5	300
b. Combustion compressors (3)	10-20	B	10	20
c. Blowing compressors (4)	10-20	B	10	16
d. Pressing machines (3)	10-20	B	10	6

**II. INVENTORIES**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> ( I£ 000 )	360	- %
1. Direct production materials	60	-
2. Other input materials	20	-
3. Work in process	-	-
4. Finished products	280	-

- Normal inventories of finished products 12.4% of annual gross production

- Seasonal variations: Nons.

Capacity of electr. motors: 300 HP  
 " " kilns: 200 KW  
 Total load, capacity of trucks: - t

For all the itemised equipment, key components were imported; installation, fixtures and accessories are of local origins.

**GENERAL CONDITIONS:**

Transportation public utilities and community facilities are excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 190	114	60	16
1. Direct production ( m. 135 f. 25 )	84	60	16
Annual total manhours (000)	( 210 )	( 150 )	( 40 )
a. Kiln	24	24	-
b. Pressing	15	15	15
c. Blowing	14	14	-
d. Finishing and packaging	30	6	-
e. Miscellaneous	1	1	1
2. Auxiliary activities ( m. 25 f. 5 )	30	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
Engi-ners			
<b>TOTAL</b>	11	178	
<b>Management</b>			
1	1	-	-
<b>Direct Production</b>			
Skilled		35	
Semi-skilled	5		
Unskilled			120
<b>Auxiliary Activities</b>			
Skilled			
Semi-skilled			
Unskilled	5	23	

- Average working hours per annum per direct production employee: 2,500 hours.

- Proportion of motors occupied: 80 - 90% on the 1st. shift, 60% on the 2nd., and 40% on the 3rd.

- Proportion of kilns occupied is 100% on the 1st. and on the 2nd shifts.

- Conventional process is employed.

Degree of mechanisation is fair. No automation.

IV. ANNUAL PRODUCTION (1964)			
TOTAL VALUE OF PRODUCTION ( I£ 000 )		2,253	
Product	Unit	Quantity Produced	Unit Value ( I£ )
a. Tea cups	000 po.	1,250	300
b. Various bottles	"	250	110-200
c. Lantern heads	"	125	280
d. Water glasses	"	100	310
e. Various pressed products	"	250	200
f. Other various products	000 I£	1,723	..

**CAPACITY OUTPUT:** 50% higher than the 1964 actual production level with sufficient demand for the product. An investment of I£ 500,000 on kilne would increase the capacity by 150% over the 1964 actual level; additional manhours then required would be 75,000 on the 2nd shift and 150,000 on the 3rd. shift.

Unit value of product: Market value f.o.b. before sales tax.  
Unit value of material: Market price o.i.f.

- Soda ash is imported. The approximate freight rate is I£ 40 per ton.

V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF CONSUMPTION ( I£ 000 )		691	
1. <u>Energy &amp; water: total</u> 213			
		Quantity consumed	Unit value ( I£ )
- Electricity	000 KWH (000 I£)	750	40
- Crude oil, solar oil, kerosene, etc.		180	..
- Water	000 cu.m	15	200
2. <u>Direct production materials: total</u> 150			
a. Sand	ton	720	30
b. Lime stone	"	192	32
c. Soda ash	"	384	210
d. Sodium nitrate	"	36	280
e. Others	(000 I£)	31	..
3. <u>Packaging materials: total</u> 120			
4. <u>Work performed by sub-contractors ( )</u> -			
5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> 15			
6. <u>Material inputs for auxiliary activities</u> 15			
7. <u>Non-factor service inputs: total</u> 180			
Of which transport, insurance and storage services purchased separately 30			

VI. VALUE ADDED		TOTAL 1964 ( I£ 000 )	1,560
1. Wages & salaries (before income tax)			
- Employees in direct production	}	1,500	
- Other employees			
2. Other expenditures for employees		20	
3. Annual depreciation allowance		10	
4. Rental paid		10	
5. Sales & other indirect taxes (less subsidies) (not included in total)	[	250	]
6. Other gross business income (before income tax)		20	

**SELECTED COEFFICIENTS** (in 1964 replacement value)

- Mach., equip., instruments & tools/per employee in direct production on 1st shift: I£ 4,070
- Value added per employee: I£ 8,200
- Annual wage per employee I£ 7,890 1/
- Variable input costs/gross production ratio: 62.7% 2/
- Gross profit/gross production ratio: 1.0%
- (at full capacity : 23.6%)
- Level of production at break-even point is approximately 89 % of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN		Gross acquisition	Scrapped or sold
1. <u>Recent Expansion</u> : None			
From 19 to 19			
a. Total Investment ( )			
- Land			
- Land improvements			
- Buildings			
- Other construction work			
- Machinery & equipment			
- Tools & instruments			
- Vehicles			
- Office furniture & fixtures			
b. Corresponding increase : In no. of employees	From 19	to 19	
In annual gross production ( )			

2. <u>Future Plan</u>	
a. Investment proposed for the period 1966 to 1967	Total value ( ) I£ 500,000
Of which:	
- Mach. & equipment	100 \$
- Land improv. & bldg.	-
- Land	-
- Others	-
b. Net increase in no. of employees envisaged for the same period:	
- Direct production:	30
- Auxiliary:	-
c. Purposes:	Introduction of new processes.

**VIII. SUPPLEMENT**

1/ Average wages and salaries.

2/ Two-thirds of wages and salaries regarded as variable cost.

An enterprise, founded in 1953, manufacturing ceramic tiles, sanitary ceramics and other household ceramics. Annual capacity output is 10,000t with three shifts. Only 2% of products are sold abroad, while 17% of raw materials (mostly dyes and tin oxide) are imported. Located about 25 to 500 km from the sources of raw materials with favourable communication lines.

I. FIXED CAPITAL		(end of 1963)	Original purchase value	1963 re- placement value	Capital expenditures in the past years: (Drs. million)					
					1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)			4,358	5,350	-	298	293	1,344		
Buildings & land improvements			2,037	2,800	-	67	304	351		
Machinery & equipment			2,246	2,450						
Other capital assets			75	100						
<b>Major machinery crucial for determining the overall production capacity:</b>					Calculated average age of fixed assets: 7.1 years					
Ceramic tiles: Electronic ovens (3 shifts).					<b>Electric motors:</b>					
Ceramics for households: Tunnel ovens (3 shifts).					Total installed capacity: 1,992 KW					
Sanitary ceramics: Tunnel ovens (3 shifts).					Of which actually operated in 1963:					
(About one-third of machinery and equipment was imported)					1st shift 100 %; 2nd shift 38 %; 3rd shift 26 %					
					<b>Technological features:</b> The rate of mechanization and automation is close to the standard of modern factories. Primary processing by the damp process; plastic formation and vacuuming for further processing of tiles and porcelain; roasting is done in two cycles. Por sanitary ceramics, dried articles are glazed and then roasted.					
II. LABOUR		(1963)	TOTAL no. of employees:			Educational background of workers:				
			1st shift	2nd shift	3rd shift	Techn.	Econ.	Low	Others	Total
1. Factory workers:			837	107	50	16	8	2	5	31
Total 994 persons			(2,201 thous. manhrs.)	(1850)	(242)	(109)				
2. Non-factory workers:			205 persons							
			(443 thous. manhours)							
a. Tiles			194	55	23					
b. Ceramic utensils			429	31	15					
c. Sanitary ceramic equipment			214	21	12					
III. ANNUAL PRODUCTION & CAPACITY			Quantity	Value (Drs. Million)	IV. INTERMEDIATE INPUTS					
					Quantity	Value (Drs. Million)				
TOTAL actual revenue output 1963 *				3,666	TOTAL actual consumption 1963					
a. Ceramics for household			1,535 t	879	1. Energy inputs: total 279					
b. Ceramic tiles			5,828 t	1,894	- Electricity 9,704 kwh 119					
c. Sanitary ceramics			2,322 t	893	- Lignite 30,503 t 126					
* Including turnover tax on sold products.					- Liquid fuel 616 t 44					
Capacity Output:					2. Major production materials: total 739					
a. Ceramic tiles			5,900 t	Overall rate of utilisation: 97%	a. Kaoline 2,711 t 96					
b. Ceramics for households			1,600 t		b. Feldspar 1,892 t 54					
c. Sanitary ceramics			2,500 t		c. Refractory clay 7,254 t 94					
- No additional workers required on the 1st shift for the full utilisation of the capacity.					d. Cement 138 t 2					
					e. Putty 1,221 t 29					
					f. Borax 11 t 35					
					g. Boric acid 1.4 t 37					
					h. Zircon silicates 119 t 13					
					i. Quartz sand 1,432 t 17					
					j. Dyes 5.4 t 24					
					k. Refractory materials 148,000 pos 24					
					l. Gold .. 31					
					m. Packing cases .. 23					
					n. Repair materials .. 255					
					3. Repairs & maintenance: total (except materials) 447					
					4. Other material & non-factor service inputs (of which services 113) 243					
VI. SUPPLEMENT		Future Plans	V. VALUE ADDED (1963) (Drs. Million)							
An expansion is envisaged for the capacity of wall tiles and sanitary ceramics production.			TOTAL (except turnover tax) 1,922							
1. "Gross accumulation" includes interests paid.			- Wages of factory workers 61.4							
			- Salaries of non-factory workers 161							
			- Depreciation 147							
			- Interests paid 18							
			- Other accumulation 83							
			(Turnover tax) 36							
			SELECTED COEFFICIENTS							
			- Mach. & equip. per factory worker on 1st shift: Drs. 2,927,000							
			- Value added per employee: Drs. 1,603,000							
			- Annual wage per factory worker: Drs. 608,000							
			- Variable input cost/gross production ratio: 44.7 %							
			- Gross accumulation/gross production ratio: 27.8 %							
			(at full capacity) 28.6 %							
			- Level of production at break-even point: 50 % of the 1963 actual level.							

An enterprise, founded in 1869, manufacturing bricks and tiles. Annual capacity output is 33,000 pieces of tile and 24,000 pieces of full and hollow bricks with one shift.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-62			
TOTAL (Drs. million)		2,012	2,550	41	138	612	376			
Buildings & land improvements		790	1,200	33	71	139	241			
Machinery & equipment		1,176	1,300	Calculated average age of fixed assets: 6.0 years						
Other capital assets		46	50	<b>Electric motors:</b>						
				Total installed capacity: 1,896 KW						
				Of which actually operated in 1963:						
				1st shift 100 %; 2nd shift - %; 3rd shift - %						
				<b>Technological features:</b>						
				Located close to the raw material supply and produces for local consumption. The shaping of clay products is done using the damp treatment and the baking by circular and tunnel kilns. The tunnel drying plants and kilns operate continuously throughout the year while the rest of the capacity is operated 240 days a year.						
<b>Major machinery crucial for determining the overall production capacity:</b>										
Brickworks: Circular kilns, tunnel kilns (1 shift).										
(Capacities other than those of tunnel drying plant and kilns are operated seasonally, 240 days a year).										
- 1 of equipment imported.										
II. LABOUR (1963)		TOTAL no. of employees: 982			<b>Educational background of workers:</b>					
1. Factory workers:		1st shift	2nd shift	3rd shift	Techn.	Acad.	Low	Others	Total	
Total	884 persons	884	-	-	3	3	1	-	7	
	(2,210 thous. manhrs.)	(2,210)	(-)	(-)	-	2	-	-	2	
- Brickworks	591				24	-	-	-	24	
- Maintenance, transport and other service shops	293				-	-	-	949	949	
					IV. INTERMEDIATE INPUTS					
2. Non-factory workers:		98 persons	Quantity							Value (Drs. Million)
	(242 thous. manhours)		TOTAL actual consumption 1963							277
			1. Energy inputs: total							108
			- Electricity							30
			- Brown coal							14,423 t
			- Lignite							2,265 t
			2. Major production materials: total							113
			- Clay							187,000 t
			- Baked clay, dolomite and other materials							88
			3. Repairs & maintenance: total							38
			4. Other material & non-factor service inputs (services only)							18
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	V. VALUE ADDED (1963) (Drs. Million)						
TOTAL actual revenue output 1963 *			1,110	TOTAL (except turnover tax)						821
- Full brick	10,195,000 pcs		107	- Wages of factory workers						371
- Hollow brick blocks	13,902,000 pcs		125	- Salaries of non-factory workers						65
- Tile	33,139,000 pcs		878	- Depreciation						103
Includes turnover tax.									115	
Capacity Output:									167 1/2	
Full bricks	10,200,000 pcs	Overall rate of utilisation: 100%							(12)	
Hollow bricks and blocks	14,000,000 pcs									
Tile	33,200,000 pcs									
VI. SUPPLEMENT		Future Plans			SELECTED COEFFICIENTS					
Plans to produce keramite and thin items. The tile production will adopt an automatic revolving press method. The existing capacity of vacuum presses, Keller's artificial drying plant and kilns are to be expanded in the near future.					- Mech. & equip. per factory worker on 1st shift: Drs. 1,471,000					
1 of which Drs. 47 million for internal accumulation.					- Value added per employee: Drs. 929,000					
2 Gross accumulation includes interests paid.					- Annual wage per factory worker: Drs. 420,000					
					- Variable input cost/gross production ratio: 54 %					
					- Gross accumulation/gross production ratio: 2/ 25.7 %					
					- Level of production at break-even point: 44 % of the 1963 actual level.					

An enterprise, founded in 1950, manufacturing fire-clay bricks and other refractory materials. Annual capacity output is 135,000 t of raw refractory clay (some 7 % for internal use), 35,000 t of baked clay (40 % for internal use), and 57,000 t of fire-clay bricks and other refractory materials on three shifts. Only 4 % of the products are exported and 7 % of the materials imported. Located at 10 - 20 km from the raw material supply.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		4,589	5,420	232	428	565	1,093		
Buildings & land improvements		2,164	2,800	209	353	324	452		
Machinery & equipment		2,425	2,620						
Other capital assets		-	-						
<p>Calculated average age of fixed assets: <u>6.9</u> years</p> <p><b>Electric motors:</b> Total installed capacity: <u>3,252</u> KW Of which actually operated in 1963: 1st shift <u>100</u> %; 2nd shift <u>59</u> %; 3rd shift <u>48</u> %</p> <p><b>Technological features:</b> Production processes are well mechanized and highly automated and are operated continuously with three shifts. The basic technology is characterized by the semi-dry and plastic processes. The product-mix is generally considered as suitable for the present engineering and market set-up.</p>									
<p><b>Major machinery crucial for determining the overall production capacity:</b> <u>Fire-clay bricks:</u> Tunnel and chamber kilns (3 shifts). <u>Baked clay:</u> Shaft kilns (3 shifts).</p> <p>(55 % of machinery and equipment were imported.)</p>									
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Low	Others	Total
1. Factory workers:		315	438	300	27	3	2	-	32
Total 1,653 persons		(3,885 thous. manhrs.)	(2,147)	(1,030)	14	3	1	2	20
					37	24	-	6	67
					Primary school				1,766
- Production of raw clay and brickworks		386	330	266					1,766
- Auxiliary shops		230	108	34					
- Transportation and other operative services		299	-	-					
2. Non-factory workers:		232 persons	(550 thous. manhours)						
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		IV. INTERMEDIATE INPUTS				
					Quantity	Value (Drs. Million)			
TOTAL actual revenue output 1963*			4,476		TOTAL actual consumption 1963				2,231
- Raw refractory clay (sold outside)		117,974 t	603		1. Energy inputs: total				307
- Raw refractory clay (used internally)		9,600 t	(49)		- Electricity				36
- Baked clay (sold outside)		19,595 t	332		- Brown coal				138
- Baked clay (used internally)		13,000 t	(222)		- Lignite				69
- Fire-clay bricks		54,875 t	3,146		- Liquid fuel				14
- Other refractory materials		8,369 t	197		2. Major production materials: total				1,664
- Packaging glass		2,550 t	198		- Raw refractory clay (purchased from outside)				659
					- Baked clay (purchased from outside)				789
					- Raw clay and other materials				216
					3. Repairs & maintenance: total				151
					4. Other material & non-factor service inputs (services only)				109
					V. VALUE ADDED (1963) (Drs. Million)				
					TOTAL (except turnover tax)				2,003
					- Wages of factory workers				731
					- Salaries of non-factory workers				150
					- Depreciation				167
					- Interests paid				247
					- Other accumulation (Turnover tax)				708 1/2
					242				
VI. SUPPLEMENT		Future plans:		SELECTED COEFFICIENTS					
a) Production of high-aluminium baked clay.				- Mach. & equip. per factory worker on 1st shift: Drs: 2,865,000					
b) Expansion of the capacity for fire-clay bricks.				- Value added per employee: Drs. 1,060,000					
				- Annual wage per factory worker: Drs. 442,000					
				- Variable input cost/gross production ratio: 64.8 %					
				- Gross accumulation/gross production ratio: 22.5 2/3 %					
				- Level of production at break-even point: 39 % of the 1963 actual level.					
1/ Of which Drs. 333 million belong to this enterprise.									
2/ Gross accumulation includes interest paid.									

An old enterprise manufacturing bricks and clay. Annual capacity output is 48 million pieces of brickworks on three-shift operation. Founded in 1900. Located near clay mining and a large consumer centre.

I. FIXED CAPITAL		(end of 1963)	Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)						
					1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)			1,648	2,270	Gross expenditures	13	68	271	111		
Buildings & land improvements			921	1,070	Retirements	52	122	107	195		
Machinery & equipment			719	1,200	Calculated average age of fixed assets: 8.7 years						
Other capital assets			8	-	<b>Electric motors:</b>						
					Total installed capacity: 1,139 KW						
					Of which actually operated in 1963:						
					1st shift 100 %; 2nd shift 8 %; 3rd shift 8 %						
					<b>Technological features:</b> Production of raw bricks is based on the KELLE'S system; baking of brick in circular "HOFMANN" brick-kilns; baked clay is produced by shaft kilns. Capacity is utilized seasonally due to weather conditions. Mechanization and automation are not satisfactory (rated at 80 and 50, respectively).						
<b>Major machinery crucial for determining the overall production capacity:</b>											
Brickworks (shaping): Pressing machines (1 shift).											
Brickworks (baking): Circular brick kilns (3 shifts).											
Wire clay products: Shaft kiln (3 shifts).											
(capacity production assumes 200 working days a year due to seasonal factors).											
(6% of machinery and equipment was imported).											
II. LABOUR		(1963)	TOTAL no. of employees: 511			<b>Educational background of workers:</b>					
			1st shift	2nd shift	3rd shift	Techn. Econ.	Law	Others	Total		
1. Factory workers:						Univ. or higher	1	1	1	3	
Total	469 persons		443	15	11	Tech. Higher sch.	-	-	-	-	
	(1,102 thous. manhrs.)	(1,042)	(36)	(24)		Secondary sch.	1	2	-	6	
						Primary school	-	-	-	499	
- Excavation of clay						IV. INTERMEDIATE INPUTS					
- Shaping of bricks						Quantity		Value (Drs. Million)			
- Baking of bricks			443	15	11	TOTAL actual consumption 1963 304					
- Baking of fire clay						1. Energy inputs: total 154					
						- Electricity 548 mwh 29					
						- Brown coal 15,315 t 36					
						- lignite 7,025 t 29					
						- Liquid fuel 56,000 t 10					
2. Non-factory workers:		42 persons				2. Major production materials: total 63					
		(99 thous. manhours)				- Raw clay (material costs of excavation) 207,000 t 31					
						- Others .. 32					
III. ANNUAL PRODUCTION & CAPACITY			Quantity		Value (Drs. Million)		3. Repairs & maintenance: total 47				
TOTAL actual revenue output 1963*					733		4. Other material & non-factor service inputs 40				
- Raw clay **			(207,000 t)		(31)		V. VALUE ADDED (1963) (Drs. Million)				
- Full brick			37,881,000 pos		562		TOTAL (except turnover tax) 407				
- Hollow brick			2,114,000 pos		33		- Wages of factory workers 241				
- Hollow brick blocks			3,971,000 pos		55		- Salaries of non-factory workers 35				
- Baked clay			3,619,000 pos		83		- Depreciation 77				
							- Interests paid 44				
							- Other accumulation 10				
							- (Turnover tax) 22				
							The number of factory workers on the 1st shift is estimated to be 450 for full utilization of the existing capacity.				
							Including turnover tax on sold products.				
							** Internally used.				
							Capacity Output:				
Brickworks		48,000,000 pos					Overall rate of utilisation: 91%				
Baked clay		4,000,000 pos									
VI. SUPPLEMENT		Future Plans				SELECTED COEFFICIENTS					
No large expansion plan. Use of masut for fuel is planned to eliminate the influence of seasonal weather conditions.						- Mech. & equip. per factory worker on 1st shift: Drs. 2,708,000					
						- Value added per employee: Drs. 796,000					
						- Annual wage per factory worker: Drs. 514,000					
						- Variable input cost/gross production ratio: 64.4 %					
						- Gross accumulation/gross production ratio: 2/ 7.6 %					
						- Level of production at break-even point: 79 % of the 1963 actual level.					
1. Out of this and other sources Drs. 44 million was retained in the enterprise as its own fund in 1963.											
2. Gross accumulation includes interests paid.											

An enterprise, founded in 1932, manufacturing flat glass, glass tubes, bottles and technical glassware; annual capacity output is about 10 million m<sup>2</sup> of flat glass and over 1,700 t of glass products with three shifts. 15 % of products are sold abroad; about one-fifth of materials are imported (major imported items are: glass tubes and refractory materials). Located at about 150 km from the sources of raw materials.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 re-placement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)		5,277	6,643	Gross expenditures	455	149	993	595		
Buildings & land improvements		1,894	2,261	Retirements	262	449	532	680		
Machinery & equipment		4,083	4,382	Calculated average age of fixed assets: 8.0 years						
Other capital assets		-	-	<b>Electric motors:</b>						
				Total installed capacity: 1,704 KW						
				Of which actually operated in 1963:						
				1st shift 100 %; 2nd shift 98 %; 3rd shift 95 %						
				<b>Technological features:</b>						
				Highly mechanised and automated. Employs "Porocut" system for the production of flat glass, horizontal drawing for ornament glass, "Daner" system for the production of glass tubes. Product-mix considered appropriate both technologically and commercially.						
<b>Major machinery crucial for determining the overall production capacity:</b>										
Drawn glass: drawing furnaces (3 shifts).										
Moulded glass: moulding furnaces (3 shifts).										
One-fifth of machinery and equipment was imported.										
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:					
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Low	Others	Total	
1. Factory workers:					Univ. or higher	34	10	3	3	50
Total 1,681 persons		1,130	346	205	Tech. Higher sch.	1	4	1	3	9
(3,715 thous. manhrs.)		(2,433)	(767)	(455)	Secondary sch.	58	35	-	22	115
a. Flat glass		665	212	134	Primary school	-	-	-	1,754	1,754
b. Neutral glass		127	65	46						
c. By-products shop		122	54	14						
d. Auxiliary shops and services		216	15	11						
2. Non-factory workers:		247 persons			IV. INTERMEDIATE INPUTS					
(534 thous. manhours)					Quantity		Value (Drs. Million)			
					TOTAL actual consumption 1963		3,482			
					1. Energy inputs: total		572			
					- Electricity		4,832 Mwh			
					- Brown coal		75,346 t			
					- Liquid fuel		567 t			
					2. Major production materials: total		2,205			
					a. Silicium sand		40,453 t			
					b. Calcinated sodium		12,612 t			
					c. Dolomite		7,278 t			
					d. Limestone		1,502 t			
					e. Feldspar		1,786 t			
					f. Glass granulates		28,515 t			
					g. Others		..			
					3. Repairs & maintenance: total		225			
					4. Other material & non-factor service inputs (services only)		280			
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Billion)		V. VALUE ADDED (1963) (Drs. Million)					
TOTAL actual revenue output 1963*			6,572		TOTAL (except turnover tax)					
a. Drawn flat glass		8,553,000 m <sup>2</sup>	3,421		- Wages of factory workers					
b. Ornament flat glass		873,000 m <sup>2</sup>	574		- Salaries of non-factory workers					
c. Wire reinforced flat glass		276,000 m <sup>2</sup>	518		- Depreciation					
d. Glass tubes		262 t	53		- Interests paid					
e. Ampullae and small bottles		275 t	326		- Other accumulation					
f. Technical glassware		1,442 t	983		(Turnover tax)					
g. Wood cases		7,756 m <sup>3</sup>	697		2,237					
* Including turnover tax on sold products.					- Wages of factory workers					
Capacity output:					- Salaries of non-factory workers					
a. Drawn flat glass		8,670,000 m <sup>2</sup>	Overall rate of utilization: 97 %		- Depreciation					
b. Ornament flat glass		990,000 m <sup>2</sup>			- Interests paid					
c. Reinforced flat glass		285,000 m <sup>2</sup>			- Other accumulation					
d. Ampullae and small bottles		280 t			(Turnover tax)					
e. Technical glass		1,450 t			865					
f. Wood cases		820 m <sup>3</sup>			177					
1,180 workers would be required on the first shift for the full utilization of the capacity.					260					
					378					
					617					
					(793)					
VI. SUPPLEMENT		Future plans:			SELECTED COEFFICIENTS					
The 'Pittsburg' system is to be introduced in the near future. Kapolit, termapon, vacuum prisms, glass balloons, etc. are considered among the new products to be introduced. The existing capacities will be expanded at the same time by about 50 %.					- Mach. & equip. per factory worker on 1st shift: Drs. 3,878,000					
					- Value added per employee: Drs. 1,191,000					
					- Annual wage per factory worker: Drs. 515,000					
					- Variable input cost/gross production ratio: 66.5 %					
					- Gross accumulation/gross production ratio: 17.2 % (at full capacity 17.5 %)					
					- Level of production at break-even point: 49 % of the 1963 actual level.					
1/ Gross accumulation includes interests paid.										

An enterprise, founded in 1860, producing various types of glass containers. Annual capacity output is 27,000 t. Located at 10 to 320 km from the sources of raw material suppliers. 13 % of the output is directly exported. Imported materials (sodium selenite, etc.) account for only 2 % of the total material consumption.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		2,032	2,380	Gross expenditures	58	123	205	628	
Buildings & land improvements		567	750	Retirements	152	229	181	235	
Machinery & equipment		1,433	1,520	Calculated average age of fixed assets: <u>7.3</u> years					
Other capital assets		39	110	<b>Electric motors:</b>					
<b>Major machinery crucial for determining the overall production capacity:</b>		Total installed capacity: <u>1,300</u> KW							
Overall production capacity depends on the capacity of automatic machines (3 shifts).		Of which actually operated in 1963:							
(5 % of machinery and equipment are of foreign origins.)		1st shift <u>100</u> %; 2nd shift <u>77</u> %; 3rd shift <u>77</u> %							
		<b>Technological features:</b>							
		Smelting of glass mass by semi-automatic equipment. Further processing partly manual and partly automatic machines. Mechanization is rated at 80 %; automation 75 %.							
II. LABOUR (1963)		TOTAL no. of employees: 1,097			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn. High.	Low	Others	Total	
1. Factory workers:					4	4	1	9	
Total	974 persons	491	238	245	-	1	3	4	
(2,338 thous. manhrs.)		(1,175)	(575)	(588)	13	-	-	14	27
- Material handling within yard		95	12	12	Secondary sch. 13 - - - 14 27				
- Glass & glassworks		260	205	217	Primary school - - - - 1,057				
- Gas production		15	15	15	IV. INTERMEDIATE INPUTS				
- Off-site transport		9	1	1	Quantity		Value (Drs. Million)		
- Ancillary shops		111	5	-	TOTAL actual consumption 1963				
2. Non-factory workers: 123 persons		(290 thous. manhours)			1. Energy inputs: total		1,168		
					- Electricity		58		
					- Brown coal		189		
					- Liquid fuel		105		
					2. Major production materials: total		531		
					- Silicon sand		68		
					- Anhydrous sodium carbonate		140		
					- Crushed glass		32		
					- Clay		1		
					- Refractory material		18		
					- Sodium selenite		1		
					- Dolomite		9		
					- Feldspar		17		
					- Various iron		54		
					- Electrical parts		13		
					- Others		178		
					3. Repairs & maintenance: total		84		
					4. Other material & non-factor service inputs (services only)		201		
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1963)		(Drs. Million)		
TOTAL actual revenue output 1963			2,406		TOTAL (except turnover tax)		1,217		
- Glass containers		24,350 t	2,386		- Wages of factory workers		553		
- Refractory products		85 t	20		- Salaries of non-factory workers		100		
Capacity output:					- Depreciation		101		
Glass containers: 27,000 t					- Interests paid		87		
Rate of utilization is 90 %.					- Other accumulation (Turnover tax)		376 1/2		
- The full capacity operation will need a slight increase in the number of workers on the 2nd and 3rd shifts.							(21)		
VI. SUPPLEMENT		Future plans:			SELECTED COEFFICIENTS				
Glass smelting process using masut will be introduced.					- Mach. & equip. per factory worker on 1st shift: Drs. 3,090,000				
1/ Of which Drs. 135 million are funds belonging to the enterprise.					- Value added per employee: Drs. 1,110,000				
2/ Gross accumulation includes interests paid.					- Annual wage per factory worker: Drs. 568,000				
					- Variable input cost/gross production ratio: 60 %				
					- Gross accumulation/gross production ratio: 19.3 %				
					(at full capacity) 21.5 %				
					- Level of production at break-even point: 51 % of the 1963 actual level.				



An old enterprise, founded in 1927, producing glass. Annual capacity output is 1,165 t with partial three shifts. About 70 % of goods are exported; some 19 % of input materials, such as potassium, hydrofluoric acid, abrasive materials etc., are imported. Located at 200 - 400 km from the sources of basic raw materials. Good communication lines.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 re- placement value	Capital expenditures in the past years: (Drs. million)					
TOTAL (Drs. million)		1,301	1,490	1953-54	1955-57	1958-60	1961-63		
Buildings & land improvements		481	630	Gross expenditures	70	28	120		
Machinery & equipment		820	860	Retirements	52	55	79		
Other capital assets		-	-	Calculated average age of fixed assets: <u>6.0</u> years					
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Electric motors:</b>					
Capacity of smelting furnaces (3 shifts).				Total installed capacity: <u>223</u> KW					
(One fifth of machinery and equipment was imported.)				Of which actually operated in 1963:					
				1st shift <u>100</u> %; 2nd shift <u>32</u> %; 3rd shift <u>23</u> %					
				<b>Technological features:</b>					
				Glassware mainly by hand production. The "COBELCOMEX BRUSEL" cold storage is used for cooling processes. Finishing of crystal glass products is done by machines. Thanks to good quality it can compete on domestic market.					
II. LABOUR (1963)		TOTAL no. of employees: <u>1,031</u>			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Law	Others	Total
1. Factory workers:					Univ. or higher	2	-	-	2
Total	<u>926</u> persons	780	118	28	Tech. Higher sch.	-	1	-	1
(2,098 thous. manhrs.)		(1,774)	(264)	(60)	Secondary sch.	3	10	2	15
					Primary school	-	-	-	1,013
					1,013				
- Glass production		575	11	2	IV. INTERMEDIATE INPUTS				
- Finishing		105	91	20	Quantity		Value (Drs. Million)		
- Auxiliary shops		25	4	4	TOTAL actual consumption 1963				
- Transportation		10	7	-	1. Energy inputs: total				
- Services		65	5	2	- Electricity				
2. Non-factory workers: <u>105</u> persons					- Lignite				
(238 thous. manhours)					- Liquid fuel				
					2. Major production materials: total				
					- Abrasive materials				
					- Silicon sand				
					- Refractory material				
					- Potassium				
					- Sawn timber				
					- Calcium sodium				
					- Marble				
					- Minium				
					- Electric corundum				
					- Hydrofluoric acid				
					- Butane				
					- Boxes				
					- Paper				
					- Others				
					3. Repairs & maintenance: total				
					4. Other material & non-factor service inputs				
					5				
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1963) (Drs. Million)				
TOTAL actual revenue output 1963*			1,720		TOTAL (except turnover tax)				
- Glass for general consumption		883 t	1,061		- Wages of factory workers				
- Polished crystal glass products		247 t	526		- Salaries of non-factory workers				
- Others		..	133		- Depreciation				
					- Interests paid				
					- Other accumulation				
					(Turnover tax)				
					48				
					VI. SUPPLEMENT				
					Future plans:				
					a) A new, improved method of smelting is to be introduced.				
					b) Overhauling and synchronisation of the existing shops is in the course of being undertaken.				
					c) Changing of a form of decoration and design.				
					1/ Of which Drs. 88 mill. are funds belonging to the enterprise.				
					2/ The denominator is 715, i. e. excluding workers of 'services'.				
					3/ Gross accumulation includes interest paid.				
					SELECTED COEFFICIENTS				
					- Mech. & equip. per factory worker on 1st shift: Drs. 1,200,000				
					- Value added per employee: Drs. 1,076,000				
					- Annual wage per factory worker: Drs. 635,000				
					- Variable input cost/gross production ratio: 63.4 %				
					- Gross accumulation/gross production ratio: 23.8 %				
					(at full capacity 24.2 %)				
					- Level of production at break-even point: 35 % of the 1963 actual level.				

An enterprise, founded in 1923, producing cement and cement-asbestos products. Annual capacity output is over 200,000 t of cement and approximately 100,000 t of cement-asbestos products with 3 shifts. About 12 % of products are exported, while some 40 % of input materials, mainly asbestos fibres, are imported. Located close to the source of raw materials.

I. FIXED CAPITAL	(end of 1965)	Original	1965 re-
		purchase value	placement value
TOTAL (Drs. million)		6,359	7,420
Buildings & land improvements		2,841	3,700
Machinery & equipment		3,420	3,600
Other capital assets		98	120

**Major machinery crucial for determining the overall production capacity:**

Portland cement: clinker mill & rotating kiln (3 shifts).  
Asbestos-cement products: capacities of specialised machines (3 shifts).

(About 40 % of machinery and equipment was imported).

Capital expenditures in the past years: (Drs. million)	1951-54	1955-57	1958-60	1961-62
	Gross expenditures	315	308	119
Retirements	156	249	302	716
Calculated average age of fixed assets:	7.5 years			

**Electric motors:**

Total installed capacity: 5,312 kW  
Of which actually operated in 1965:

1st shift 100 %; 2nd shift 97 %; 3rd shift 95 %

**Technological features:** In addition to the production of marl and portland cement (the dry process for the latter), engages in the production of asbestos-cement products (slabs by "Hatschek" process and tubes by "Massa" process). The processes are well mechanized up to the world standard.

II. LABOUR	(1965)	TOTAL no. of employees:		
		1st shift	2nd shift	3rd shift
1. Factory workers:		707	342	202
Total	1,251 persons	(2,811 thous. manhrs.)	(1,587 )	( 768 )
			( 456 )	
- Marl quarrying and cement production		138	67	25
- Asbestos-cement products		258	160	127
- Maintenance and internal transport		138	60	25
- Warehouses and outside transport		82	40	15
- Test & research laboratory		93	15	10
2. Non-factory workers:	154 persons	( 346 thous. manhours )		

**Educational background of workers:**

	Techn. High.	Low	Others	Total
Univ. or higher	13	-	2	15
Tech. Higher sch.	-	4	2	6
Secondary sch.	22	7	4	33
Primary school	-	-	-	1,351
				1,351

**IV. INTERMEDIATE INPUTS**

	Quantity	Value (Drs. Million)
TOTAL actual consumption 1965		3,470
1. Energy inputs: total		604
- Electricity	28,697 kWh	343
- Hard coal	3,613 t	30
- Brown coal	40,069 t	213
- Liquid fuel	109 t	10
2. Major production materials: total		1,919
- Materials used for the production of marl	..	32
- Asbestos fibres	8,794 t	1,742
- Kraft paper bags	583 t	145

(Cement is wholly internally supplied.)

3. Repairs & maintenance: total	192
4. Other material & non-factor service inputs (of which services 64)	755

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
	TOTAL actual revenue output 1965 *	
- Marl (internal use)	(198,800 t)	(32)
- Portland cement (sold outside)	145,274 t	1,652
- Portland cement (internal use)	(51,719 t)	(595)
- Asbestos-cement roofing materials	56,669 t	3,329
- Penstocks	11,430 t	1,289
- Collector pipes	6,240 t	546
- Sectional parts	1,190 t	151

\* Includes turnover tax on sold products.

**Capacity output:**

- Portland cement	200,000 t	Overall rate of utilization is 82 %.
- Asbestos-cement roofing material	73,000 t	
- Penstocks	15,000 t	
- Collector pipes	8,000 t	
- Sectional parts	1,500 t	

Full utilisation of existing capacity can be achieved without additional workers (optimum no. of workers for the first shift estimated to be 695).

V. VALUE ADDED	(1965)	(Drs. Million)
TOTAL (except turnover tax)		2,838
- Wages of factory workers		899
- Salaries of non-factory workers		128
- Depreciation		354
- Interests paid		397
- Other accumulation		1,060
(Turnover tax)		( 659 )

**VI. SUPPLEMENT** Future plans:

- The shop producing asbestos-cement tubes is to be reconstructed in the near future.
- A new rotating kiln of capacity 220,000 t of cement is to be installed.
- As a new product, filter pipes for wells are scheduled.

of which Drs. 395 million retained by the enterprise as wages are considered as fixed costs. its own fund. gross accumulation includes interests paid.

**SELECTED COEFFICIENTS**

- Mach. & equip. per factory worker on 1st shift: Drs.	5,100,000
- Value added per employee: Drs.	2,020,000
- Annual wage per factory worker: Drs.	718,000
- Variable input cost/gross production ratio:	40.0 %
- Gross accumulation/gross production ratio:	2 23 %
(at full capacity)	29 %
- Level of production at break-even point:	61 % of the 1965 actual level.

An enterprise, founded in 1956, producing portland cement. Annual capacity output is 330,000 t of cement on a partial 3-shift basis (attained in 1963). Located near the site of self-owned earl and limestone mines; good communication lines.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)						
TOTAL (Drs. million)		7,723	8,718	1951-54	1955-57	1958-60	1961-63			
Buildings & land improvements		3,205	4,200	-	517	475	1,051			
Machinery & equipment		4,247	4,247	-	227	728	1,320			
Other capital assets		-	-	Retirements						
				Calculated average age of fixed assets: 6.2 years						
<b>Major machinery crucial for determining the overall production capacity:</b>		<b>Electric motors:</b> 8,944 KW								
Capacity of rotating kilns with due allowance for the equipment for the milling of clinker and transportation (3 shifts):		Total installed capacity: 8,944 KW								
(As much as 70% of machinery and equipment was imported)		Of which actually operated in 1963:								
		1st shift 97 %; 2nd shift 88 %; 3rd shift 88 %								
		<b>Technological features:</b> Produces basic raw materials internally. Uses the dry process and rotating kilns. Both mechanization and automation are rated high (90% and 85%, respectively). Involves a large department specialized in installation and maintenance work.								
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:					
		1st shift	2nd shift	3rd shift	Techn. High.	Low	Others	Total		
1. Factory workers:		471	121	77	Univ. or higher	7	4	3	1	15
Total 663 persons		(1,132)	(288)	(180)	Tech. Higher sch.	1	1	1	-	3
(1,600 thous. manhrs.)					Secondary sch.	28	26	-	8	62
- Exploitation of raw materials		72	-	-	Primary school	-	-	-	769	769
- Production of clinker and cement (2 units)		97	68	66	IV. INTERMEDIATE INPUTS					
- Transportation		63	41	-	Quantity		Value (Drs. Million)			
- Laboratory		43	8	7	TOTAL actual consumption 1963					
- Mechanical and electrical dept.		48	4	4	1. Energy inputs: total					
- Construction group		48	-	-	- Electricity					
2. Non-factory workers:		180 persons	-	-	- Hard coal					
(422 thous. manhours)					- Brown coal					
					- Liquid fuel					
					2. Major production materials: total					
					- Material costs of the production of earl and limestone (explosives, energy inputs, not elsewhere counted)					
					- Fireclay bricks					
					- Kraft paper bags					
					3. Repairs & maintenance: total					
					4. Other material & non-factor service inputs					
					V. VALUE ADDED (1963) (Drs. Million)					
					TOTAL (except turnover tax)					
					- Wages of factory workers					
					- Salaries of non-factory workers					
					- Depreciation					
					- Interests paid					
					- Other accumulation					
					(Turnover tax)					
					VI. SUPPLEMENT					
					Future Plans					
					Expansion of capacity up to 370,000 t.					
					1 of which Drs. 502 million belongs to the enterprise.					
					2/ Gross accumulation includes interests paid.					
					SELECTED COEFFICIENTS					
					- Mach. & equip. per factory worker on 1st shift: Drs. 9,310,000					
					- Value added per employee: Drs. 2,820,000					
					- Annual wage per factory worker: Drs. 672,000					
					- Variable input cost/gross production ratio: 44.5 %					
					- Gross accumulation/gross production ratio: 2/ 34.8 %					
					(at full capacity 34.8 %)					
					- Level of production at break-even point: 4. % of the 1963 actual level.					

An old enterprise, founded in 1905, producing portland cement. Annual capacity output is close to 120,000 t on a 3-shift basis. Anthracite is imported, while the product is all sold on domestic markets. Located in the immediate vicinity of the self-owned source of basic raw materials; has good railway and road communication and inland water transport.

I. FIXED CAPITAL	(end of 1965)	Original	1965 re-	Capital expenditures in the past years: (Drs. million)				
		purchase value	placement value	1953-54	1955-57	1958-60	1961-63	
TOTAL (Drs. million)		2,315	2,700	Gross expenditures	5	85	224	1,427
Buildings & land improvements		956	1,010	Retirements	29	87	111	178
Machinery & equipment		1,182	1,490	Calculated average age of fixed assets: 5.0 years				
Other capital assets		177	200	<b>Electric motors:</b>				
<b>Major machinery crucial for determining the overall production capacity:</b>				Total installed capacity: 1,740 KW				
Vertical and rotating kilns. (3 shifts)				Of which actually operated in 1965:				
(9% of machinery and equipment was imported).				1st shift 100%; 2nd shift 95%; 3rd shift 88%				
				<b>Technological features:</b>				
				Old establishment producing raw materials internally. This recent renovation still leaves the key production line obsolete compared to modern factories. Dry process; vertical kilns.				

II. LABOUR	(1965)	TOTAL no. of employees:		
		1st shift	2nd shift	3rd shift
1. Factory workers:		165	54	28
Total 247 persons		(376)	(120)	(60)
(556 thous. manhrs.)				
- Exploitation of raw materials		63	20	5
- Production of clinker		68	20	20
- Cement production		10	8	3
- Transportation of cement		24	6	-
2. Non-factory workers:	27 persons			
(60 thous. manhours)				

Educational background of workers:	Total				
	Tech.	Spec.	Low	Others	Total
Univ. or higher	1	1	-	-	2
Tech. Higher sch.	-	1	-	-	1
Secondary sch.	7	3	-	2	12
Primary school	-	-	-	259	259

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
	TOTAL actual revenue output 1965 *	
- Portland cement	63,971 t	965
Includes turnover tax on sold products.		
<b>Capacity output:</b>		
Portland cement	118,800 t	rate of utilisation is 54%.
- Underutilisation due to lagging supply of raw materials. About 130 workers are required on 1st shift for full capacity operation.		

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. Million)
	TOTAL actual consumption 1965	
1. Energy inputs: total		238
- Electricity	4,354 mwh	56
- Hard coal	4,812 t	68
- Brown coal	12,535 t	78
- Anthracite	2,009 t	31
- Liquid fuel	78 t	5
2. Major production materials: total		103
- Material cost of the production of marl (explosives, etc.)	..	22
- Fire resistant material	15 t	1
- Kraft paper bags	316 t	80
3. Repairs & maintenance: total		40
4. Other material & non-factor service inputs		46

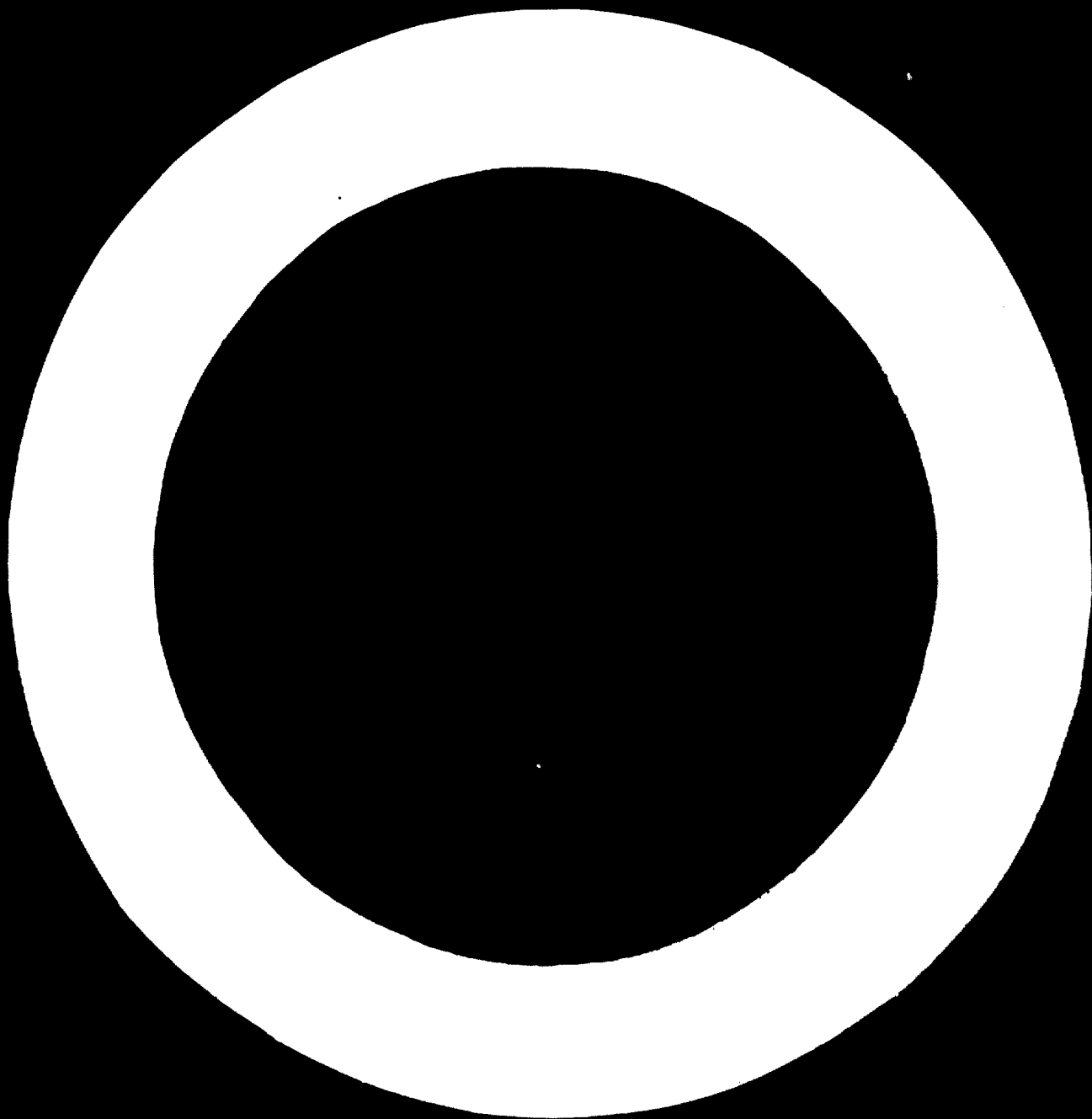
V. VALUE ADDED	(1965)	(Drs. Million)
TOTAL (except turnover tax)		507
- Wages of factory workers		168
- Salaries of non-factory workers		27
- Depreciation		103
- Interests paid		70
- Other accumulation		139
(Turnover tax)		31

VI. SUPPLEMENT	Future Plans
a)	Replacement of vertical kilns by rotating kilns.
b)	Production of white cement.
1)	All retained by the enterprise.
2)	Gross accumulation includes interests paid.

SELECTED COEFFICIENTS
- Mech. & equip. per factory worker on 1st shift: Drs. 904,000
- Value added per employee: Drs. 1,850,000
- Annual wage per factory worker: Drs. 681,000
- Variable input cost/gross production ratio: 54.5 %
- Gross accumulation/gross production ratio: 2/ 22.4 %
(at full capacity) 32.8 %
- Level of production at break-even point: 51 % of the 1965 actual level.

An enterprise, founded in 1839, producing portland cement for local use. Annual capacity output is 520,000 t of cement on a 3-shift basis. Located near the site of self-owned marl and limestone mines; has good railway and road communications as well as inland water transport facilities.

I. FIXED CAPITAL	(end of 1963)	Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)																															
TOTAL (Drs. million)		10,829	14,600	<table border="1"> <thead> <tr> <th></th> <th>1953-54</th> <th>1955-57</th> <th>1958-60</th> <th>1961-63</th> </tr> </thead> <tbody> <tr> <td>Gross expenditures</td> <td>1,010</td> <td>1,784</td> <td>235</td> <td>3,321</td> </tr> <tr> <td>Retirements</td> <td>176</td> <td>431</td> <td>694</td> <td>1,036</td> </tr> </tbody> </table>		1953-54	1955-57	1958-60	1961-63	Gross expenditures	1,010	1,784	235	3,321	Retirements	176	431	694	1,036																
	1953-54	1955-57	1958-60	1961-63																															
Gross expenditures	1,010	1,784	235	3,321																															
Retirements	176	431	694	1,036																															
Buildings & land improvements		4,545	6,340	Calculated average age of fixed assets: 5.9 years																															
Machinery & equipment		6,284	8,260	Electric motors:																															
Other capital assets		-	-	Total installed capacity: 12,793 KW																															
				Of which actually operated in 1963:																															
				1st shift 95 %; 2nd shift 92 %; 3rd shift 92 %																															
<u>Major machinery crucial for determining the overall production capacity:</u>				<u>Technological features:</u>																															
<u>Cement:</u> Vertical and rotating kilns plus equipment for the preparation of raw materials, clinker mill and equipment for transporting cement (3 shifts).				Relatively old establishment involving a large department producing basic raw materials (marl and limestone). Dry process is used in the shop with vertical kilns; damp process using solid fuels in the shop with rotating kilns; with medium degree of mechanization and automation.																															
(About 22 % of machinery and equipment was imported.)																																			
II. LABOUR	(1963)	TOTAL no. of employees:			Educational background of workers:																														
		1st shift	2nd shift	3rd shift																															
1. Factory workers:																																			
Total 1,054 persons		438	309	307	<table border="1"> <thead> <tr> <th></th> <th>Techn.</th> <th>Econ.</th> <th>Law</th> <th>Others</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Univ. or higher</td> <td>7</td> <td>4</td> <td>-</td> <td>-</td> <td>11</td> </tr> <tr> <td>Tech. Higher sch.</td> <td>1</td> <td>1</td> <td>-</td> <td>-</td> <td>2</td> </tr> <tr> <td>Secondary sch.</td> <td>18</td> <td>14</td> <td>-</td> <td>4</td> <td>36</td> </tr> <tr> <td>Primary school</td> <td>-</td> <td>-</td> <td>-</td> <td>1,104</td> <td>1,104</td> </tr> </tbody> </table>		Techn.	Econ.	Law	Others	Total	Univ. or higher	7	4	-	-	11	Tech. Higher sch.	1	1	-	-	2	Secondary sch.	18	14	-	4	36	Primary school	-	-	-	1,104	1,104
	Techn.	Econ.	Law	Others	Total																														
Univ. or higher	7	4	-	-	11																														
Tech. Higher sch.	1	1	-	-	2																														
Secondary sch.	18	14	-	4	36																														
Primary school	-	-	-	1,104	1,104																														
(2,384 thous. manhrs.)		( 992 )	( 696 )	( 696 )																															
- Exploitation of raw materials	155	105	105																																
- Preparation of raw materials & production of clinker	74	55	52																																
- Cement production	42	33	33																																
- Maintenance shop	99	75	65																																
- Transportation and other services	68	41	52																																
2. Non-factory workers:	99 persons																																		
( 281 thous. manhours )																																			
III. ANNUAL PRODUCTION & CAPACITY	Quantity		Value (Drs. Million)	IV. INTERMEDIATE INPUTS																															
TOTAL actual revenue output 1963 *			5,862	Quantity (Drs. Million)																															
- Marl (internal use)	581,625 t		(105)	TOTAL actual consumption 1963																															
- Limestone (internal use)	246,615 t		(15)	3,190																															
- Portland cement	480,842 t		5,862	1. Energy inputs: total																															
				1,625																															
				- Electricity 39,957 Mwh 519																															
				- Coke 11,820 t 235																															
				- Hard coal 26,718 t 353																															
				- Brown coal 68,073 t 363																															
				- Anthracite 12,621 155																															
				2. Major production materials: total																															
				600																															
				- Material costs for the marl and limestone mining (explosives, pit ropes, etc.) .. 120																															
				- Kraft paper bags 2,124 t 480																															
				3. Repairs & maintenance: total 395																															
				4. Other material & non-factor service inputs 570																															
* Includes turnover tax on sold products.				V. VALUE ADDED (1963) (Drs. Million)																															
<u>Capacity output:</u>				TOTAL (except turnover tax) 2,385																															
Portland cement: 520,000 t				- Wages of factory workers 530																															
- Rate of capacity utilisation is 92 %.				- Salaries of non-factory workers 76																															
- Underutilisation due to the bottleneck at rotating kilns.				- Depreciation 561																															
No additional workers are required on 1st shift for full capacity operation.				- Interests paid 428																															
				- Other accumulation 790 1/																															
				(Turnover tax) ( 287 )																															
VI. SUPPLEMENT	Future plans:			SELECTED COEFFICIENTS																															
New rotating kilns of a capacity of 370,000 t of cement will soon be installed.				- Mech. & equip. per factory worker on 1st shift: Drs: 18,850,000																															
				- Value added per employee: Drs. 2,070,000																															
				- Annual wage per factory worker: Drs. 504,000																															
				- Variable input cost/gross production ratio: 49.4 %																															
				- Gross accumulation/gross production ratio: 21.82 %																															
				(at full capacity 27.0 %)																															
				- Level of production at break-even point: 57 % of the 1963 actual level.																															
1/ Of which Drs. 376 million retained by the enterprise as its own fund.																																			
2/ Gross accumulation includes interest paid.																																			



**MAJOR PRODUCTS:** Glass fibres (silicon filament, silicon poles, glass wicks and balls). Annual capacity output is about 3,000 tons of these products on one shift.

**REPORTING UNIT:** A one-establishment enterprise, founded in 1950, with capital stock Frs. 15 million and employees 1,245 as of 1966.

**I. FIXED CAPITAL ASSETS** (end of 1966)

TOTAL BOOK VALUE* (Frs. million)	Before deprec.	After deprec.
	120.2	51.2
1. Land (283,000 m <sup>2</sup> )	2.9	2.9
2. Land improvements	-	-
3. Buildings (total floor space 44,000 m <sup>2</sup> )	18.1	12.0
4. Other construction works	-	-
5. Machinery & equipment	70.4	13.2
6. Tools & instruments (precious metal)	23.1	23.2
7. Vehicles	1.1	.6
8. Office furniture & fixtures	4.5	1.3
* Not including the 1967 installations.		
	Avr. Age (Yr.)	1964 replace value (Frs. Mil.)
<b>DETAIL OF I.5 (No.)</b>		
a. Furnaces for balls (2)	10	23
- with 50 m <sup>2</sup> of fusion		
- with 60 m <sup>2</sup> of fusion		
b. "Machines de fibrage" (240)	1 to 15	29
c. Twisting looms (55)	"	15
d. Machines for poles with drying tanks (2)	"	4
e. Equipment for research and laboratory	"	8
f. Tools (precious metals - platinum)	..	42
(Sub-total)		(121)

**II. INVENTORIES**

(end of 1966)	Actual	Normal
TOTAL VALUE (Frs. million)	20.9	..
1. Direct production materials	} 5.6	
2. Other input materials		
3. Work in process	.3	
4. Finished products	15.1	
- Actual inventories of finished products 19.2% of annual gross production		
- Seasonal variations: ..		

Capacity of electr. motors: 7,500 KW

Total load, capacity of trucks: 1.5 t

Up to 1958 (when substantial expansion took place), the production capacity remained around 3,000 t. per annum (with total employees about 120). The average age of machinery is believed to be close to 8 years.

**GENERAL CONDITIONS:**

Transportation, public utilities (water facilities fair) and community facilities excellent.

**III. LABOUR** (1966 average)

	1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				Actual hours worked per annum per direct production worker: 1,940 hours.
				Univ. or higher	Sr. High sch. or equiv.	Other	Other	
<b>TOTAL EMPLOYED</b>	1,245	--	--					
1. Direct production ( .. )	908							
Annual total manhours (000)	(1,753)	( )	( )					
a. Glaseworks	123			35	10	-	1200	
b. Filament making (fibrage)	254							
c. Finishing	330							
d. Maintenance	132							
e. Control	69							
2. Auxiliary activities ( .. )	337							
a. Research	137							
b. Administration	140							
c. Sales, purchase and other commercial activities	60							

- Skilled workers in direct production are: machine attendants.

**IV. ANNUAL PRODUCTION (1966)**TOTAL VALUE OF PRODUCTION (Frs. million) 78.68

Product	Unit	Quantity Unit	
		Pro-	Value
		( Frs. )	
a. Silicon filament for textile	ton	2,900	7,300
b. Stratified silicon filament	"	8,537	3,600
c. Silicon poles	"	4,200	4,800
d. Glass wicks	"	400	4,900
e. Glass balls	"	3,100	800
f. Other revenue outputs	Frs. mil.	2.18	..

**CAPACITY OUTPUT:**

20% higher than the 1966 actual production level with a 5% increase in man-hours and given sufficient demand for the products. The filament department forms a minor bottleneck, which could be eliminated with an investment of Frs. one million. The product-mix is flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Products are only partly exported.
- China clay is imported by railroad.

**V. INTERMEDIATE INPUTS (1966)**TOTAL VALUE OF CONSUMPTION (Frs. million) 36.32

1. Energy & water: total	Quantity Unit		Unit value (Frs.)
	con-	Unit	
			summed (Frs.)
- Electricity	000 KWH	55,000	55
- Liquid fuel	tone	20,000	120
- Gas	000 therm.	13,000	40
<b>2. Direct production materials: total</b>			<b>8.68</b>
a. Pulverised silica	ton	9,000	95
b. China clay	"	11,000	235
c. Dolomite	"	6,000	70
d. Resine	Frs. mil.	1.70	..
e. Others		3.12	..
<b>3. Packaging materials: total (cardboard)</b>			<b>0.70</b>
4. Work performed by sub-contractors ( )			-
5. Repairs & maintenance (materials & services purchased)			16.08
<b>6. Material inputs for auxiliary activities</b>			-
<b>7. Non-factor service inputs: total</b>			<b>4.91</b>
a. Transportation, insurance and storage services purchased (not incorporated in the value of materials)			2.87
b. Communication, advertising and other business services			2.04

**VI. VALUE ADDED TOTAL 1966 ( Frs. million) 42.36**

1. Wages & salaries (before income tax)	} 26.23
- Employees in direct production	
- Other employees	
2. Other expenditures for employees	
3. Annual depreciation allowance	11.76
4. Rental paid	2.82
5. Sales & other indirect taxes (less subsidies) (not included in total)	[12.33]
6. Other gross business income (before income tax)	1.55

**NEW AND REPAIRS (in 1966 replacement value)**

- Mach., equip., instruments & tools/per employee in direct production Frs. 133,000
- Value added per employee: Frs. 34,000
- Annual wage per employee in direct production: Frs. 21,100 <sup>1/</sup>
- Variable input costs/gross production ratio: 36.1% <sup>2/</sup>
- Gross profit/gross production ratio: 2.0% (at full capacity : 12.3%)
- Level of production at break-even point is approximately 97 % of the 1966 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross	
	equi-	Scrapped
From 1965 to 1967		
a. Total Investment (Frs. million)	60	
- Land	-	
- Land improvements	6	
- Buildings	-	
- Other construction work	-	
- Machinery & equipment	54	
- Tools & instruments	-	
- Vehicles	-	
- Office furniture & fixtures	-	
b. Corresponding increase:	From 1965	to 1967
In no. of employees (decrease)	1,235	1,185
In annual gross production		No increase

**2. Future Plan: None**

- a. Investment proposed for the period 19 to 19  
Total value ( )  
Of which: - Mach. & equipment \$  
- Land improv. & bldg.  
- Land  
- Others
- b. Net increase in no. of employees envisaged for the same period:  
- Direct production:  
- Auxiliary:
- c. Purposes:

**VIII. SUPPLEMENT**

- <sup>1/</sup> Average wages and salaries including fringe benefits.
- <sup>2/</sup> Half of wages and salaries is regarded as variable cost.



**MAJOR PRODUCTS:** Concrete products (small girders and plasterwork for prefabricated floorboards, concrete blocks and conduits). Annual capacity output about Fr. 4 million of various concrete products on partial two-shift operation.

**REPORTING UNIT:** Manufacturing branch of a three-establishment enterprise with capital stock Fr. 700,000 and total employees 135 as of 1964. Founded in 1959. The other two branches engage in stone quarrying and sand quarrying.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE *</b> ( Fr. 000 )	( 2,688 )	( 1,362 )
1. Land (27,000 m <sup>2</sup> )	( 32 )	( 32 )
2. Land improvements	( - )	( - )
3. Buildings (total floor space 5,400 m <sup>2</sup> )	( 270 )	( 237 )
4. Other construction works	( - )	( - )
5. Machinery & equipment	( 1,651 )	( 561 )
6. Tools & instruments	( - )	( - )
7. Vehicles	( 632 )	( 453 )
8. Office furniture & fixtures	( 103 )	( 80 )

\* For the enterprise as a whole. The book value of this branch alone account for 60 % of the total value.

DETAIL OF I.5 (No.)	Total Bk value bef. deprec.	Avg. Age (Yr.)	Oper. Cond.	1964 replace value
a. Mixer	26.8	6	C	35.0
b. Mixer	43.5	5	B	47.5
c. Mixer	17.4	3	B	25.0
d. Bench for prestrained girders	173.4	1	A	175.0
e. Bench for prestrained girders	169.3	1	A	170.0
f. Plasterwork layers (2)	22.5	4	B	25.0
g. Vibrating press	34.0	4	B	40.0
h. Vibrating press	13.6	3	B	15.0
i. Vibrating press	16.4	1	A	18.0
j. Vibrating tables (2)	3.0	1-3	B	3.0

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> ( Fr. 000 )	259	+ 50 %
1. Direct production materials	33	..
2. Other input materials	4	..
3. Work in process	10	..
4. Finished products	212	+ 50

- Normal inventories of finished products 9.4 % of annual gross production

- Seasonal variations: Seasonal high and low of finished goods are + 50 % at June and - 20 % at September, respectively, of the normal level at the end of 1964.

Capacity of electr. motors: 145 KW

Total load, capacity of trucks: 9 t

All machines domestically made.

Average age of the itemised machinery is 2 years.

Degree of depreciation is being applied.

**EXTERNAL CONDITIONS:** Transportation, public utilities, health, recreation and educational facilities, excellent. Residential facilities, poor.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				
				Univ. or higher	Sr. High sch. or equiv.	Other	Others	
<b>TOTAL EMPLOYED</b> 89	83	6	—					- Actual hours worked per annum per direct production worker : 2,364 hours.
1. Direct production (all male)	67	5	—					- Proportion of motors occupied : 90 % on the 1st shift.
Annual total manhours (000)	(159.1)	(11.1)	( )					- <b>Technological features:</b>
a. Small girders prestrained for prefabricated floorboards	15	5	—					(a): Two highly mechanized branches for pre - constrained girders.
b. Plasterwork for prefabricated floorboards	4	—	—					(b): Plasterwork layers with poor mechanization.
c. Concrete blocks	4	—	—					(c): Poorly mechanized mixers.
d. Conduits for smoke and ventilation	12	—	—					(d): Fairly mechanized vibrating presses.
e. Conduits for trash and rubbish disposal	4	—	—					(e): Vibrating tables with poor mechanization.
f. Product control, stocking and loading	28	—	—					- No automation is involved.
2. Auxiliary activities ( m. 13 f. 4 )	16	1	—					- Skilled workers in direct production are mostly foremen. Those in auxiliary activities are engaged in maintenance ( 2 persons ), administration ( 2 ), ordering ( 1 ) and research ( 2 ).
a. Maintenance	4	—	—					
b. Commercial services	2	—	—					
c. Technical direction	1	—	—					
d. Administrative services	4	1 ( night guard )	—					
e. Ordering	1	—	—					
f. Research division	3	—	—					
g. Laboratory	1	—	—					

## IV. ANNUAL PRODUCTION (1964)

TOTAL VALUE OF PRODUCTION ( Fr. 000 )				3,380	
Product	Unit	Quantity	Pro-Value	Unit Value	
			duced ( Fr. )		
a. Small girdere precontrained for prefabricated floorboards	000 metres	259.8	4,800		
b. Plasterwork for prefabricated floorboards	000 units	779.9	640		
c. Concrete blocks	"	534.9	800		
d. Conduits for smoks and ventilation	000 metres	77.1	11,600		
e. Conduits for trash and rubbish disposal	"	6.1	12,000		
f. Others	000 Fr.	238	..		

**CAPACITY OUTPUT:** 20 % higher than the 1964 actual production level with 10,000 additional manhours on 2nd shift, year - round sufficient demand being assumed. Capacity for plasterwork should preferably be raised by 75 with an investment of Fr. 150,000.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.  
- All direct production materials are domestically produced and delivered by road with freight costs per c.i.f. value 1%, 2%, 5%, & 3% for (a) to (d), respectively. Cement contains a significant amount of import contents.  
- The prices of the products in 1964 declined by about 20% from the level in 1963. However, the increase in the volume of production (almost 100% higher than the 1963 level) reduced the average cost significantly to make up for the decline of prices.

## V. INTERMEDIATE INPUTS (1964)

TOTAL VALUE OF CONSUMPTION ( Fr. 000 )				1,350	
1. Energy & water: total				76	
		Quantity	Unit	Unit	Unit
		con-	Value	Value	Value
		sumed	( Fr. )	( Fr. )	( Fr. )
- Electricity	000 KWH	91.56	87		
- Fuel oil	000 litres	375.50	181		
2. Direct production materials: total				990	
a. Cement	ton	5,625	92.50		
b. Sand and gravel	m <sup>3</sup>	14,753 *	12.10		
c. Pozzolana	m <sup>3</sup>	8,320	14.25		
d. Steel	ton	132	1,391.50		
* Of which 3,215 m <sup>3</sup> is transferred from the other establishment of the company and valued at intra - firm accounting price Fr. 8.8 / m <sup>3</sup> .					
3. Packaging materials: total				—	
4. Work performed by sub-contractors ( )				—	
5. Repairs & maintenance (materials & services purchased)				61	
6. Material inputs for auxiliary activities Small office furniture (Fr. 23,900); small tools (Fr. 11,900); spare parts (Fr. 35,900)				72	
7. Non-factor service inputs: total Transportation, insurance and storage (purchased separately) Fr. 101,200				151	

## VI. VALUE ADDED TOTAL 1964 ( Fr. 000 ) 2,030

1. Wages & salaries (before income tax)	
- Employees in direct production	696
- Other employees	141
2. Other expenditures for employees 1/	418
3. Annual depreciation allowance	541
4. Royalties	106
5. Sales & other indirect taxes (less subsidies) (not included in total)	410
6. Other gross business income (before income tax)	128

## SELECTED COMMENTARY

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Fr. 14,785 2/
- Value added per employee: Fr. 22,809
- Annual wage per employee in direct production: Fr. 9,667
- Variable input costs/gross production ratio: 52.1 %
- Gross profit/gross production ratio: 3.8% (Ratio at full capacity : 11.2%)
- Level of production at break-even point is approximately 92 % of the 1964 actual level.

## VII. EXPANSION: HISTORY &amp; PLAN

1. Recent Expansion	Gross acquisition	Scrapped or sold
From 1960 to 1964		
a. Total Investment ( Fr. 000 ) 2/	4,306	
- Land	155	
- Land improvements	-	
- Buildings	205	
- Other construction work	-	
- Machinery & equipment	2,999	
- Tools & instruments		
- Vehicles	947	
- Office furniture & fixtures	-	
b. Corresponding increase:	From 1960	to 1964
In no. of employees	15 ( 45 4/ )	89 ( 135 4/ )
In annual gross production ( Fr. 000 )	493 ( 2,360 4/ )	3,380 ( 6,900 4/ )

## 2. Future Plan 3/

- a. Investment proposed for the period 1964 to 1966  
Total value ( Fr. 000 ) 2,000  
Of which: - Mach. & equipment 70 %  
- Land improv. & bldg. 10  
- Land 10  
- Others 10
- b. Net increase in no. of employees envisaged for the same period: - Direct production: 15  
- Auxiliary: 5
- c. Purpose: Selective expansion of existing capacity concentrating on prefabricated boards; overhauling stock-yard; renovating quarrying department.

## VIII. SUPPLEMENT

- 1/ Consists of charges for workers' welfare and travel allowances, reception, social works, etc.
- 2/ The numerator is 60% of machinery and tools of the company.
- 3/ For the company as a whole. Includes land, buildings and equipment at the quarrying sites. The share of this establishment amounts to about 60 %.
- 4/ For the company as a whole.

**MAJOR PRODUCTS:** Concrete products (blocks, boards, pipes, paving materials, etc.). Capable of producing some Frs. 13 million worth of concrete products annually on one-shift operation.

**REPORTING UNIT:** Branch of a four-establishment company (all branches engaged in a similar line of activities) with capital stock Frs. two million and employees 587 as of 1966. This branch was founded in 1946.

**I. FIXED CAPITAL ASSETS (end of 1966)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE ( Frs. 000 )</b>	<u>4,370</u>	<u>1,658</u>
1. Land	532	503
2. Land improvements	-	-
3. Buildings	595	302
4. Other construction works	-	-
5. Machinery & equipment	1,297	220
6. Tools & instruments	283	34
7. Vehicles	140	8
8. Office furniture & fixtures	33	7
9. Fixtures & installations at factory	1,490	585

**DETAIL OF I.5 (No.)**

	Total Bk. value	Avr. Age	Oper. rate	Depr. rate
a. Concrete station	92	7	A	40
b. Blocks plant (Brenkmann)	119	6	B	40
c. Boilers	44	6	B	..
d. Paving machines	21	4	..	..
e. Welding machines	4	3	..	..
f. Girder making machines	11	3	..	5
g. Hoist	21	2	..	40
h. Monorail	18	2	..	50
i. Cranes (Weitz)	84	4	..	20
j. Benches for prestressing (2)	rented*	1,3	A	..
k. Vibrators	9	3,4	B	50

\* Original value estimated at Frs. 220,000.

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE ( Frs. 000 )</b>	<u>1,951</u>	<u>..</u>
1. Direct production materials	} 232	}
2. Other input materials		
3. Work in process	-	-
4. Finished products	1,719	-

- Normal inventories of finished products 14.3% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 260 KW  
Capacity of other prime movers: 300 HP  
Total load, capacity of trucks: 30 t

- Part of (a) internally made;  
(a) to (c) domestically made;  
the origin of the rest not available.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities are excellent.

**III. LABOUR (1966 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	<u>281</u>	-	-
1. Direct production ( all male )	<u>240</u>	-	-
Annual total manhours (000)	<u>(571)</u>	( )	( )
a. Material storage and handling	4	-	-
b. Moulds manufacturing	18	-	-
c. Production	177	-	-
d. Finishing	5	-	-
e. Control	2	-	-
f. Products storage and shipment	34	-	-

2. Auxiliary activities ( male 33 / fem. 8 ) 41

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other
Engl- Mgmt	Other	Other
<b>TOTAL</b>	<b>2</b>	<b>267</b>
<b>Management</b>	2	1
<b>Direct Production</b>	-	65
Skilled	-	160
Semi-skilled	-	15
Unskilled	-	15
<b>Auxiliary Activities</b>	-	15
Skilled	9	9
Semi-skilled	-	9
Unskilled	-	2

- Average working hours per annum per direct production worker: 2,379 hours.

- Motors and furnaces almost fully occupied.

**Technological features:**  
(c) consists of automatic mixing of materials on concrete station, fabrication of blocks by Brenkmann, fabrication of walls by moulding, fabrication of girders by prestressing, etc.

- Mechanization is generally fair; no automation except for the mixing of materials which is done automatically.

- Direct production workers classified as skilled are engaged in moulds manufacturing, preparation of concrete, products manufacturing and storage and shipment of products. Auxiliary activities workers classified as skilled are engaged in research, control and other general services.

**IV. ANNUAL PRODUCTION (1966)**

TOTAL VALUE OF PRODUCTION ( Frs. 000 )			
			11,959
Product	Unit	Quantity Produced	Unit Value ( Fr. )
a. Blocks	ton	7,100	48
b. Floor boards	sq.m.	184,410	15
c. Pipes (smoke or ventilation)	ton	20,415	112
d. Walls	sq.m.	68,500	53
e. Staircases	ton	1,640	235
f. Sidewalk pavements	m	8,160	21
g. Curb stones	ton	5,690	78
h. Enclosure	ton	100	104
i. Others	000 Frs.	1,920	..

**CAPACITY OUTPUT:** 6 % higher than the 1964 actual production level. Additional manhours required are 28,550 hrs. The capacities for prestressed girders and hollow bodies as well as for material handling presently form a bottle neck. A Frs. 700,000 million investment would eliminate this bottleneck, raising the overall capacity by about 30 % over the 1966 actual production.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price o.i.f.

- All direct production materials are made domestically. The approximate freight rates are: 12, 5, 3, 48, 11, 40, 80, 50, 30-100 percent of the o.i.f. price for (a) to (i), correspondingly. Delivery mostly by road.

**V. INTERMEDIATE INPUTS (1966)**

TOTAL VALUE OF CONSUMPTION ( Frs. 000 )			
			5,344
1. Energy & water: total			
			101
Quantity Unit Value			
Unit	consumed	( Fr. )	
- Electricity (not available)			
- Domestic liquid fuel	000 l	476	138
- Water	000 m <sup>3</sup>	25	..
2. Direct production materials: total			
			4,840
a. Ordinary steel	ton	481	733
b. Special steel	ton	521	1,000
c. Welded wire netting	sq.m.	9,450	0.4
d. Profiled braces (armatures façonnées)	ton	147	985
e. Ordinary cement	ton	15,265	92.5
f. Cement for facing	ton	302	179
g. Pozzolana (mixture of gravel and cement)	ton	10,620	135
h. Gravel sand	cu.m.	46,360	18
i. Facing mix	cu.m.	1,152	75
3. Packaging materials: total			
			-
4. Work performed by sub-contractors ( )			
			-
5. Repairs & maintenance (materials & services purchased)			
			291
6. Material inputs for auxiliary activities			
			17
7. Non-factor service inputs: total			
			95
Of which transport, insurance and storage purchased separately			
			52

**VI. VALUE ADDED TOTAL 1966 ( Frs. 000 )**

1. Wages & salaries (before income tax)		
- Employees in direct production	3,176	
- Other employees	883	
2. Other expenditures for employees	65	
3. Annual depreciation allowance	430	
4. Rental paid (buildings 4; machinery 11)	15	
5. Sales & other indirect taxes (less subsidies) (not included in total)	[3,012]	
6. Other gross business income (before income tax)	2,046	

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Frs. 6,580 (12,770 <sup>1/</sup>)
- Value added per employee: Frs. 23,541
- Annual wage per employee in direct production: Frs. 13,221
- Variable input costs/gross production ratio: 67.9 %
- Gross profit/gross production ratio: 17.1 % (at full capacity: 17.9 %)
- Level of production at break-even point is approximately 47 % of the 1966 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion		Gross acquisition	Of which supplied internally
From 1954 to 1966			
a. Total investment ( Frs. 000 )		1,501	
- Land		5	
- Fixtures and installations		864	714
- Buildings		110	
- Other construction work		-	
- Machinery & equipment		318	77
- Tools & instruments		66	4
- Vehicles		-	
- Office furniture & fixtures		8	
b. Corresponding increase:			
In no. of employees	From 1964	350	to 1966 587
In annual gross production			+ 74 %

**2. Future Plan**

a. Investment proposed for the period 1966 to 1970	
Total value ( Frs. 000 )	1,500
Of which:	
- Mach. & equipment	20 %
- Land improv. & bldg.	10
- Land	60
- Others	10
b. Net increase in no. of employees envisaged for the same period:	
- Direct production:	40
- Auxiliary:	10
c. Purposes: Selective expansion of the production of walls, floor boards, prefabricated concrete products, prestressed girders, and blocks; establishment of a new factory in a new locality; improvement of productivity in material handling.	

**VIII. SUPPLEMENT**

<sup>1/</sup> Including fixtures and installations at factory.

**MAJOR PRODUCTS:** Asbestos-cement products. Annual capacity output is 4.7 million m<sup>2</sup> of sheets and boards, 370,000 m of pipes and almost 6,000 of fittings for pipes; 3 shift operation (the bulk cement handling plant works only one - shift).

**REPORTING UNIT:** An oldest branch of a four-establishment enterprise with total assets Rs. 66 million (net worth Rs. 35 million) and employees 4,625 as in 1964. Founded in 1934. The other 2 branches are described as India 339-(2) and (3). They are operating relatively independently of each other.

I. FIXED CAPITAL ASSETS		End of 1963 After deprec.	End of 1964 After deprec.	II. INVENTORIES (end of 1964)		
TOTAL BOOK VALUE (Rs. 000)		2,382	2,083	TOTAL VALUE (Rs. 000)	Actual Normal	
1. Land		18	13	1. Direct production materials	3,751 + 27	
2. Land improvements		144	99	2. Other input materials	- ..	
3. Buildings		1,625	1,344	3. Work in process	1,445 - 1	
4. Other construction works		-	-	4. Finished products	327 - 47	
5. Machinery & equipment		528	486	- Normal inventories of finished products 0.6 % of annual gross production		
6. Tools & instruments		-	-	- Seasonal variations: ..		
7. Vehicles		112	96	Capacity of electr. motors: 412 KW		
8. Office furniture & fixtures		..	..	Total load, capacity of trucks: - t		
				Average age of machinery is around 18 years. Machines and equipment were imported (except the cement silcs, which were built from domestic resources).		
<b>DETAIL OF I.5 (No.)</b>		Total original value	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace. value
a. Bulk cement handling plant (1)		30	A	10		
b. Cement silos (2)		"	"	"		
c. Fibre grinding mills (3)		"	B	"		
d. Disintegrators (3)		"	"	"		
e. Sheet making machines (2)	2,941	8	"	"		3,235
f. Pipe forming machines (2)		"	"	"		
g. Curing section machinery (..)		"	A	"		
h. Testing machinery (..)		2	"	"		
<b>III. LABOUR (1964 average)</b>		1st shift	2nd shift	3rd shift	<b>EDUCATIONAL BACKGROUND (No. of employees)</b>	
TOTAL EMPLOYED	m. 1,356 f. 1,143	615	411	330	Univ. or higher	Sr. High sch. or equiv.
1. Direct production	(130)	540	403	330	Engi-ners	Other
Annual total manhours (000)		(1,296)	(962)	(792)	TOTAL	1,315
a. Bulk cement handling plant		56	-	-	Management	1 3 36
b. Fibrising mills		98	76	53	Direct Production	Skilled
c. Disintegrators section		86	72	62	Semi-skilled	60
d. Sheet making section		65	55	43	Unskilled	285
e. Pipe forming section		79	68	56	Auxiliary Activities	928
f. Curing section		60	50	41	Skilled	-
g. Testing section		96	82	75	Semi-skilled	37
					Unskilled	-
2. Auxiliary activities (all male)		75	8	-		6
Managerial, technical and other activities					- Annual average hours worked per direct production worker: 2,395 hours.	
					- Proportion of motors occupied on 1st., 2nd., and 3rd., shift, 96%, 84% and 70%, respectively.	
					- Technological features: All shops use conventional processes and are rated as fair both in term of mechanisation and automation.	
					- Skilled workers in direct production are: mechanics, fitters, welders, electricians, etc. Those in auxiliary activities are: administrators, accountants, salesmen, purchasers, store attendants.	

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( Rs. 000 )		28,534	
Product	Unit	Quantity Produced	Unit Value (Rs.)
a. Asbestos cement corrugated sheets	000 sq.m.	2,395	5,500
b. Asbestos cement semi-corrugated sheets	000 sq.m.	1,375	4,900
c. Asbestos cement plain flexible boards	000 sq.m.	590	3,500
d. Asbestos cement building pipes	000 m.	343	3,200
e. Asbestos cement fittings for building pipes	tons	5,552	850
f. Other major products	000 Rs.	743	..

**CAPACITY OUTPUT:** 7% higher than the 1964 actual production level; attainable without any addition to man-hours as employed in 1964. The underutilization of capacity is mainly due to insufficient supply of raw asbestos fibre (see footnote below). The product - mix as shown above would also remain unchanged.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

V.2: Asbestos fibre is directly imported. The imports are controlled by the Government and the supply is very much restricted due to the foreign exchange difficulties. The freight cost involved in c.i.f. value is about 10%. The other production materials are made domestically and delivered with freight rate 5% for (a) and 2% for (c).

**VI. VALUE ADDED TOTAL 1964 ( Rs. 000 ) 8,362**

1. Wages & salaries (before income tax)	
- Employees in direct production	3,243
- Other employees	583
2. Other expenditures for employees	136
3. Annual depreciation allowance	840
4. Rental paid	-
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	3,560

**SELECTED CONVECIENCE (in 1964 replacement value)**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 5,990
- Value added per employee: Rs. 6,904
- Annual wage per employee in direct production: Rs. 3,547
- Variable input costs/gross production ratio: 69.9%
- Gross profit/gross production ratio: 12.5%
- (at full capacity : 14%)
- Level of production at break-even point is approximately 44 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition	% of repair
From 1963 to 1965		
a. Total Investment ( Rs. 000 )	1,599	
- Land	82	-
- Land improvements	-	-
- Buildings	942	4
- Other construction work	-	-
- Machinery & equipment	427	5
- Tools & instruments	-	-
- Vehicles	-	-
- Office furniture & fixtures	148	8
b. Corresponding increase:	From 1963 to 1965	
In no. of employees	1,365	1,382
In annual gross production		+ 10%

**2. Future Plan : (for the enterprise as a whole)**

- |  |  |
|--|--|
| a. Investment proposed   |  |
| Total value (Rs. million)  | 15   |
| Of which:  |  |
| - Mach. & equipment  | ..   |
| - Land improv. & bldg.   | ..   |
| - Land   | ..   |
| - Others   | ..   |
| b. Net increase in no. of employees envisaged for the same period: |  |
| - Direct production:   | ..   |
| - Auxiliary:   | ..   |
| c. Purposes:   | The company has planned to set up another manufacturing unit for asbestos cement products. |

**VIII. SUPPLEMENT****Structure of liquid assets of the company (end of 1964; Rs. million)**

Cash on hand and in bank	6.6	Taxes payable	12.0
Accounts receivable	7.9	Accounts payable	12.6
Other current assets	11.2		

1/ Excluding all wages and salaries from variable costs.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( Rs. 000 )		20,172	
<b>1. Energy &amp; water: total</b> 557			
Including coal 3.2 t, (Rs. 24.6/t);			
oaks 3.75 t (Rs. 129/t); firewood			
112 t (Rs. 46/t) and charcoal			
1.9 t (Rs. 112/t).			
	Quantity	Unit	Value
			(Rs.)
- Electricity	000 KWH	2,300	130
- Petroleum	000 lit.	198	960
- Other fuel oils	"	5.9	80
- Lubricating oil	"	133	388
<b>2. Direct production materials: total</b> 19,056			
a. Cement	tons	50,700	159
b. Asbestos fibre	"	6,700	1,639
c. Acetic acid	"	1.2	3,000
d. Hydrochloric acid	"	.32	450
<b>3. Packing materials: total</b> 313			
a. Hoop iron and tin seals	ton	137	1,634
a. Timber	cu. ft.	336	6
c. Saw dust	ton	1,946	20.4
d. Straw, wire nails and coil rope	Rs.000	47	..
<b>4. Work performed by sub-contractors ( )</b> -			
<b>5. Repairs &amp; maintenance</b> 108			
Parts and materials			
<b>6. Material inputs for auxiliary activities</b> 6			
Stationery and printing			
<b>7. Non-factor service inputs: total</b> 132			
Of which transportation, insurance and storage services Rs. 113,000			

**MAJOR PRODUCTS:** Asbestos-cement products (sheets, boards and pipe). Annual capacity output (as attained in 1964) is some 2.6 million m<sup>2</sup> of sheets and boards, 600,000 m of pipes and 3,500 t of fitting for pipe on three shift operation.

**REPORTING UNIT:** A sister branch of India 339-(1) and -(3); this branch was founded in 1938, and has some 1,000 employees as of 1964.

I. FIXED CAPITAL ASSETS (end of 1964)		(as on 31.3.64)	(as on 31.3.65)	II. INVENTORIES (end of 1964)		
		After deprec.	After deprec.	Actual	Normal	
<b>TOTAL BOOK VALUE</b>	(Rs. thousand)	1,739	2,708	<b>TOTAL VALUE (Rs. thousand)</b>	5,256 - 1 %	
1. Land		-	-	1. Direct production materials	} 3,568 + 1	
2. Land improvements		76	114	2. Other input materials		
3. Buildings		612	1,396	3. Work in process	981 - 9	
4. Other construction works		-	-	4. Finished products	707 + 0	
5. Machinery & equipment		989	1,158	- Normal inventories of finished products 3.8 % of annual gross production		
6. Tools & instruments	}	62	40	- Seasonal variations: ..		
7. Vehicles						
8. Office furniture & fixtures						
* Including those capitalized during 1964.						
<b>DETAIL OF I.5 (No.)</b>		Total original value	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Bulk cement handling plant	(1)	12	B			
b. Cement silos	(2)	12	B			
c. Fibre grinding mills	(2)	24	B			
d. Disintegrators	(2)	1,438	B	10	1,582	
e. Sheet making machine	(1)		24			B
f. Pipe framing machines	(2)		3			A
g. Curing machine			24			B
h. Testing machines		24	B			

Capacity of electr. motors: 572 KW

Total load, capacity of trucks: - t

Cement silos are of domestic origin.

The rest were imported.

Average age of machinery is estimated as more than 18 years.

**GENERAL CONDITIONS:**

Local transportation, electricity and water, excellent. Long distance transportation and community facilities, fair.

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)					
<b>TOTAL EMPLOYED</b>			297							
1. Direct production ( .. )			935							
Annual total manhours (000)			(2,390)							
a. Bulk cement handling plant	}				Univ. or higher	Br. High sch. or equiv.	Other		- Actual hours worked per annum per direct production workers: 2,556 hours.	
b. Fibre grinding mill					Management					
c. Disintegrators section					Skilled		22	35		- Proportion of motors occupied in all three shifts is 45%.
d. Sheet making section			935		Semi-skilled			201		
e. Pipe forming section					Unskilled			677		
f. Curing section					<b>Auxiliary Activities</b>					- Mechanisation and automation is generally poor.
g. Testing section.					Skilled		5			
				Semi-skilled			8			
2. Auxiliary activities ( .. )			62		Unskilled			17	- Skilled workers in direct production are: mechanics, fitters, welders, electricians, etc.	
Managerial and technical and other activities										

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( Rs. 000 )				TOTAL VALUE OF CONSUMPTION ( Rs. 000 )			
18,423				11,320			
Product	Unit	Quantity Produced	Unit Value (Rs.)			Quantity consumed	Unit value (Rs.)
a. Asbestos cement corrugated sheets	000 sq.m	1,285	5,460	1. Energy & water: total		138	
b. Asbestos cement semi-corrugated sheets	000 sq.m	997	4,920	- Electricity	000 KWH	1,115	90
c. Asbestos cement plain flexible boards	000 sq.m	336	1,320	- Coal	ton	3.15	42.85
d. Asbestos cement building pipes	000 m	592	3,650	- Coke	ton	37.6	50
e. Asbestos cement fittings for building pipe	tons	3,419	845	- Lubricating oil	000 lit.	98	370
				2. Direct production materials: total		10,775	
				a. Cement	ton	31,928	150
				b. Asbestos fibre	ton	4,182	1,395.5
				c. Acetic acid	ton	1.04	2,450
				d. Consumable stores	Rs.thous.	147	..
<b>CAPACITY OUTPUT:</b>				3. Packing materials: total			
Close to the 1964 actual production level.				a. Hoop iron & tin seals	ton	11	1,548
Product - mix is <u>not</u> flexible.				b. Fibre	ton	248	246
				c. Saw dust	ton	940	16.7
				d. Straw, wire nails & rope	Rs.thous.	16	..
				4. Work performed by sub-contractors ( )		-	
				5. Repairs & maintenance		138	
				Parts and materials			
				6. Material inputs for auxiliary activities		81	
				Stationery and printing			
				7. Non-factor service inputs: total		79	
Unit value of product: Market value f.o.b. before sales tax							
Unit value of material: Market price full c.i.f.							
V.2: Asbestos fibre is directly imported (freight rate 10%; delivered exaborn); the rest is domestically produced with very little amount of import contents; freight rate 2-5%; delivery by railroad.							
<b>VI. VALUE ADDED TOTAL 1964 ( Rs. 000 )</b>				<b>SELECTED COEFFICIENTS (in 1964 replacement value)</b>			
7,103				- Mach., equip., instruments & tools/per employee in direct production Rs. 5,070			
1. Wages & salaries (before income tax)				- Value added per employee: Rs. 7,120			
- Employees in direct production		2,413		- Annual wage per employee in direct production: Rs. 2,580			
- Other employees		591		- Variable input costs/gross production ratio: 72.9%			
2. Other expenditures for employees		413		- Gross profit/gross production ratio: 18.6%			
3. Annual depreciation allowance		186		- Level of production at break-even point is approximately 31 % of the 1964 actual level.			
4. Rental paid		60					
5. Sales & other indirect taxes (less subsidies)		-					
6. Other gross business income (before income tax)		3,440					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. Recent Expansion		Gross acquisition	Scrapped or sold	2. Future Plan: See India 339- (1) for the company plan.			
From 1963 to 1964				a. Investment proposed for the period 19 to 19			
a. Total investment ( Rs. thousand)		1,978		Total value ( )			
- Land		-		Of which: - Mach. & equipment			
- Land improvements		102		- Land improv. & bldg.			
- Buildings		1,094		- Land			
- Other construction work		-		- Others			
- Machinery & equipment		724		b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments		-		- Direct production:			
- Vehicles		58		- Auxiliary:			
- Office furniture & fixtures		-		c. Purposes:			
b. Corresponding increase:	From 1963 to 1964						
In no. of employees		951	997				
In annual gross production (Rs. million)		17.4	18.4				
<b>VIII. SUPPLEMENT</b>							
1/ The 1964 replacement value divided by one-third of the total number of direct production workers.							



**MAJOR PRODUCTS:** Asbestos-cement products: Capable of making 2.2 to 2.3 million m<sup>2</sup> of sheets and boards, over one million m of pipes and over 4,000 t of fittings for pipes and moulded goods annually on partial three shift operation.

**REPORTING UNIT:** Another (newer) sister branch of India 339-(1) and -(2). This branch was founded in 1953, and has 911 employees as of 1964.

**I. FIXED CAPITAL ASSETS**

	End of 1963 After deprec.	End of 1964 After deprec.*
<b>TOTAL BOOK VALUE</b> (Rs. thousand)	1,107	1,160
1. Land	188	188
2. Land improvements	28	25
3. Buildings	264	336
4. Other construction works	-	-
5. Machinery & equipment	595	568
6. Tools & instruments	-	-
7. Vehicles	-	-
8. Office furniture & fixtures	32	43

\* Including those capitalised during 1964.

**DETAIL OF 1.5 (No.)**

	Total original value	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	196 4 replace value
a. Bulk cement handling plant (1)	2,206	3	A	10	2,426
b. Fibre grinding mill (1)		3	"	10	
c. Disintegrators (3)		3	B	10	
d. Cyclone fan (1)		3	"	10	
e. Sheet making machine (1)		13	"	10	
f. Pipe forming machines (3)		10	"	10	
g. Curing machinery (..)		13	"	10	
h. Testing machinery (..)		13	"	10	

**II. INVENTORIES**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE (Rs. thousand)</b>	3,589	-18 %
1. Direct production materials	2,085	-40
2. Other input materials	..	-
3. Work in process	850	- 8
4. Finished products	654	+38

- Normal inventories of finished products 5.3% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 450 KW

Total load, capacity of trucks: .. t

Fibre grinding mill is of domestic origin. Other machines were imported.

Average age of machinery is estimated to be over 6 years.

**EXTERNAL CONDITIONS:**

Local transportation, electricity and water, excellent. Long distance transportation and community facilities, fair.

**III. LABOUR**

(1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 911	452	318	141
1. Direct production ( m. 757 f. 107 )	412	311	141
Annual total manhours (2,037,000)	(..)	(..)	(..)
a. Bulk cement handling plant	77	45	-
b. Fibrising mills	65	53	42
c. Disintegration section	67	50	38
d. Sheet making section	40	30	25
e. Pipe forming section	60	48	-
f. Curing section	57	43	36
g. Testing section	46	42	-
2. Auxiliary activities ( all male )	40	7	-
Managerial, technical and other activities			

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other
Engrs	3	36
Others	17	44
<b>TOTAL</b>	3	871
<b>Management</b>	1	3
<b>Direct Production</b>	3	17
Skilled	-	-
Semi-skilled	-	44
Unskilled	-	204
<b>Auxiliary Activities</b>	-	616
Skilled	-	-
Semi-skilled	-	19
Unskilled	-	-
	-	7

- Actual hours worked per annum per direct production worker : 2,357 hours.

- Proportion of motors occupied on all three shifts: 60 %.

- Mechanisation and automation is generally fair.

- **Skilled workers** in direct production are: mechanics, fitters, welders, electricians, etc. Those in auxiliary activities are: administrators, accountants and sales, purchase and store assistants, etc.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION (Rs. thousand)			17,153	TOTAL VALUE OF CONSUMPTION (Rs. thousand)			9,801
<u>Product</u>	<u>Unit</u>	<u>Quantity Produced</u>	<u>Unit Value (Rs.)</u>				
a. Asbestos cement corrugated sheets	000 sq.m	523	5,400	1. <u>Energy &amp; water: total</u> 203 (including 4,400 l of powerine at Rs. 0.75/l.)			
b. Asbestos cement semi-corrugated sheets	000 sq.m	1,208	4,900	Quantity Unit consumed (Rs.)			
c. Asbestos cement plain flexible boards	000 sq.m	364	4,700	- Electricity	000 KWH	1,420	100
d. Asbestos cement building pipes	000 "	967	3,300	- Kerosene oil	000 lit.	10.9	400
e. Asbestos cement fittings for building pipe and moulded goods	000 tons	3,989	880	- Petroleum	"	22.1	860
				- H.S. diesel oil	"	35.7	800
				- Lubricating oil	"	3.5	1,300
				- Charcoal	bags	268	5.03
				2. <u>Direct production materials: total</u> 9,228			
				a. Cement	ton	26,566	133
				b. Asbestos fibre	"	3,504	1,600
				c. Acetic acid	"	.89	3,500
				d. Consumable stores	Rs. thous.	.96	..
				3. <u>Packaging materials: total</u> 167 Hoop iron, tin seals, timber, saw dust, straw, wire nails and coir rope.			
				4. <u>Work performed by sub-contractors</u> ( ) -			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> 93			
				6. <u>Material inputs for auxiliary activities</u> 15 Stationery and printing			
				7. <u>Non-factor service inputs: total</u> 95 Of which transportation, insurance and storage purchased separately 33			
<b>CAPACITY OUTPUT:</b>							
7% higher than the 1964 actual production level without additional man-hours. The underutilization is mainly due to insufficient supply of imported raw asbestos (restricted on account of foreign exchange difficulties).							
Product - mix is <u>not</u> flexible.							
Unit value of product: Market value f.o.b. before sales tax							
Unit value of material: Market price c.i.f.							
V.2: Asbestos is directly imported (freight rate 10%); the rest is domestically produced with very little amount of import contents (freight rate 2 to 3%).							
<b>VI. VALUE ADDED</b> TOTAL 1964 (Rs. thousand) 7,352				<b>SELECTED COEFFICIENTS</b> (in 1964 replacement value)			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools/per employee in direct production on 1st shift: Rs. 5,890			
- Employees in direct production 2,609				- Value added per employee: Rs. 8,320			
- Other employees 519				- Annual wage per employee in direct production: Rs. 3,020			
2. Other expenditures for employees 140				- Variable input costs/gross production ratio: 56% 1/			
3. Annual depreciation allowances 216				- Gross profit/gross production ratio: 22.5%			
4. Rental paid -				- (at full capacity : 2% 1/)			
5. Sales & other indirect taxes (less subsidies) -				- Level of production at break-even point is approximately 49 % of the 1964 actual level. 1/			
6. Other gross business income (before income tax) 3,868							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u>				2. <u>Future Plan</u> : See India 339 - ( 1 )			
From 1963 to 1965				a. Investment proposed for the period 19 to 19			
a. Total Investment (Rs. thousand)		636		Total value ( )			
- Land		-		Of which: - Mach. & equipment			
- Land improvements		23		- Land improv. & bldg.			
- Buildings		73	2	- Land			
- Other construction work		-		- Others			
- Machinery & equipment		528	6				
- Tools & instruments		-		b. Net increase in no. of employees envisaged for the same period:			
- Vehicles		12	1	- Direct production:			
- Office furniture & fixtures		-		- Auxiliary:			
b. Corresponding increase:				c. Purposes:			
In no. of employees		792	911				
In annual gross production (Rs. million)		15.8	17.2				
<b>VIII. SUPPLEMENT</b>							
1/ Excluding all wages and salaries from variable costs.							

**MAJOR PRODUCTS:** Cement-asbestos products (sheets, pipes and moulded forms). Capable of processing circa 75,000 tons of cement and 10,000 tons of asbestos per annum on the basis of 3-shift operation.

**REPORTING UNIT:** An independent one - establishment enterprise with total assets I£ 35 million and employees 800 as of 1964. Founded in 1953.

**I. FIXED CAPITAL ASSETS** (end of 1964)

TOTAL BOOK VALUE ( I£ 000 )	Before deprec.	After deprec.
	23,500	10,500
1. Land	..	..
2. Land improvements	..	..
3. Buildings	2,500	2,000
4. Other construction works	..	..
5. Machinery & equipment	18,000	7,000
6. Tools & instruments	..	..
7. Vehicles	3,000	1,500
8. Office furniture & fixtures	..	..

DETAIL OF I.5 (No.)	Total Bk value bef. depr.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
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I. System for pipe manufacturing (2)

a. 14,000 tons per year	900	12	A	1%	2,250
b. 20,000 tons per year	1,800	3	A	1%	3,000

II. System for sheet manufacturing (2)

a. 20,000 tons per year	540	12	A	1%	1,350
b. 20,000 tons per year	720	3	A	1%	1,350

**II. INVENTORIES**

(end of 1964)	Actual	Normal
TOTAL VALUE ( I£ 000 )	8,823	- 4 %

1. Direct production materials	7,213	-
2. Other input materials	850	- 5
3. Work in process	-	..
4. Finished products	690	-40

- Normal inventories of finished products 3.1% of annual gross production

- Seasonal variations: None

Capacity of electr. motors:	400 HP
" " " generator :	220 HP
Total load, capacity of railway:	220 t
Total length of railway track:	0.3 Km.

All the machines itemised were imported from Switzerland. During the recent expansion period of 1959/62, additional production lines for pipes and sheets were installed, more than doubling the capacity for this part.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities are excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED	800	630	120
1. Direct production ( all male )	390	120	50
Annual total manhours (000)	(1,092)	(288)	(120)
a. Sheets	140	40	20
b. Pipes	110	40	10
c. Moulding	140	40	20
2. Auxiliary operatives (all male)	110	-	-
a. Store-house	50	-	-
b. Other auxiliary operatives	60	-	-
3. Auxiliary activities ( m. 80 f. 50 )	130	--	--
a. Technical and administrative management	50	-	-
b. Other office work	80	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
9	1	20	770
<b>Management</b>			
2	1	14	-
<b>Direct Production</b>			
Skilled			
-	-	-	50
Semi-skilled			
2	-	-	-
Unskilled			
-	-	-	508
<b>Auxiliary Activities</b>			
Skilled			
-	-	-	-
Semi-skilled			
4	-	6	22
Unskilled			
1	-	-	190

- Average working hours per

direct production workers:

2,679 hours.

- Proportion of motors occupied

is 90% on each of the 3

shifts in operation.

- **Technological features:**

"Hatchecksystem" is employed

for (a), "Massa system" for (b), and conventional

process for (c). Degree of mechanisation is high in

(a) and (b); poor in (c). No automation.

## IV. ANNUAL PRODUCTION (1964)

TOTAL VALUE OF PRODUCTION ( IL 000 ) 21,940

Product	Unit	Quantity Produced	Unit Value (IL)
a. Asbestos sheets and products	ton	32,000*	260
b. Pipes and pipe products	ton	29,000	420
c. Moulded and formed articles	ton	6,000	500

\* Of which 6,000 tons internally used and not counted in the total.

## CAPACITY OUTPUT:

25% higher than the 1964 actual production level, given sufficient demand.

No additional labour input is required.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market prices o.i.f.

- Products are all partly exported.
- Asbestos is imported. The approximate freight rate is \$35 per ton.

## V. INTERMEDIATE INPUTS (1964)

TOTAL VALUE OF CONSUMPTION ( IL 000 ) 12,640

1. Energy & water: total	Quantity consumed	Unit value (IL)
- Electricity	000 KWH	5,000
- Water (internally supplied)	000 cu.m	200
- Liquid fuel (too diversified to itemise)		..
2. Direct production materials: total		10,000
a. Asbestos	ton	8,000
b. Cement	ton	60,000
c. Others	(000IL)	1,120
3. Packaging materials: total		100
4. Work performed by sub-contractors ( )		-
5. Repairs & maintenance (materials & services purchased)		200
6. Material inputs for auxiliary activities		100
7. Non-factor service inputs: total		2,040
Of which transport, insurance and storage services purchased separately		480

## VI. VALUE ADDED TOTAL 1964 ( IL 000 ) 9,300

1. Wages & salaries (before income tax)	
- Employees in direct production 1/	4,500
- Other employees	2,500
2. Other expenditures for employees	100
3. Annual depreciation allowance	700
4. Royalties paid	500
5. Sales & other indirect taxes (less subsidies) (not included in total)	[ 1,000 ]
6. Other gross business income (before income tax)	1,000

## SELECTED COEFFICIENTS

- Mach., equip., instruments & tools per employee in direct production on 1st shift: IL 46,154
- Value added per employee: IL 11,625
- Annual wage per employee in direct production: IL 6,820 1/
- Variable input costs/gross production ratio: 46.9% 2/
- Gross profit/gross production ratio: 4.6%
- (at full capacity : 14.4%)
- Level of production at break-even point is approximately 91 % of the 1964 actual level.

## VII. EXPANSION: HISTORY &amp; PLAN

1. Recent Expansion	Gross acquisition	Scrapped or sold
From 1959 to 1962		
a. Total Investment ( IL 000 )	9,000	-
- Land	-	-
- Land improvements	-	-
- Buildings	1,500	-
- Other construction work	-	-
- Machinery & equipment	6,000	-
- Tools & instruments	-	-
- Vehicles	1,500	-
- Office furniture & fixtures	-	-
b. Corresponding increase:	From 1959	to 1962
In no. of employees	380	550
In annual gross production ( IL 000 )	12,000	18,000

## 2. Future Plan: None

- a. Investment proposed for the period 19 to 19
- Total value ( )
- Of which: - Mach. & equipment %
- Land improv. & bldg.
- Land
- Others
- b. Net increase in no. of employees envisaged for the same period: - Direct production:
- Auxiliary:
- c. Purposes:

## VIII. SUPPLEMENT

1/ Including auxiliary operatives.

2/ All wages and salaries regarded as fixed cost.

**MAJOR PRODUCTS:** Concrete pipes, railway sleepers, electricity poles and bricks. Capable of processing 60,000 - 70,000 tons cement per annum on three-shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets of 7 million and employees 320 as of 1964 (770 employees in 1963). Founded in 1951.

**I. FIXED CAPITAL ASSETS (end of 1964)**

TOTAL BOOK VALUE ( If 000 )	Before deprec.	After deprec.
	6,426	2,746
1. Land		
2. Land improvements		
3. Buildings	2,426	1,564
4. Other construction works		
5. Machinery & equipment	3,609	1,002
6. Tools & instruments	-	-
7. Vehicles	330	139
8. Office furniture & fixtures	61	41

**DETAIL OF I.5 (No.)**

	Total Bk value	Avg. Age	Oper. rate	Depr. rate	1964 replace value
I. <u>Pipe manufacturing system</u>					
a. Shearing machines					
b. Casting machines					
c. Centrifugal machines	1,500	13	A	10	..
d. Coating machines					
II. <u>Sleeper manufacturing system</u>	750	1	A	10	800
Vibrating tables (20)					
III. <u>Pole manufacturing system</u>	..	1	A	10	..
Crane and casting forms					
IV. <u>Brick manufacturing system</u>	400	1	A	10	..
Mixer, brick making machines (3), etc.					

**II. INVENTORIES (end of 1964)**

TOTAL VALUE ( If 000 )	Actual	Normal
	2,222	-
1. Direct production materials	1,490	-
2. Other input materials	164	-
3. Work in process	568	-
4. Finished products		

- Normal inventories of finished products 11.8 % of annual gross production

- Seasonal variations: None.

Capacity of electr. motors: 700 KW

Total load, capacity of trucks(4): 60 t

I: Partly internally made, partly domestically made and partly (key components) imported.

II: Partly domestically made and partly imported.

IV: All imported.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities are excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	320	-	-
1. <u>Direct production (all male)</u>	220		
Annual total manhours (000)	(484)	( )	( )
a. Pipes	150		
b. Poles	20		
c. Sleepers	40		
d. Bricks	10		
2. <u>Auxiliary activities</u> (male 95, fem. 5)	100		

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	Other
Engi-neers			
<b>TOTAL</b>	8	2	50 260
<b>Management</b>	6	2	4 -
<b>Direct Production</b>			
Skilled	-	-	-
Semi-skilled	-	-	-
Unskilled	-	40	180
<b>Auxiliary Activities</b>			
Skilled	-	-	-
Semi-skilled	2	-	-
Unskilled	-	-	6 80

- Average working hours per annum per direct production worker: 2,200 hours.

- Proportion of motors occupied is 50 % on the 1st shift.

- Conventional processes are employed in all shops.

Degree of mechanization is high. Automation is very poor in (a) and non-existent in the rest.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( I£ 000 )		4,815	
Product	Unit	Quantity Produced	Unit Value ( I£ )
a. Concrete pipes	pc.	1,133	2,300
b. Railway sleepers*	pc.	24,000	25
c. Electricity poles	pc.	3,791	216
d. Bricks	000 pc.	726	350
e. Miscellaneous products	(000 I£)	48	..

\* Introduced into the production line in 1964.

**CAPACITY OUTPUT:** 300 - 400 % higher than the 1964 actual production level, given sufficient demand and additional numbers of 330,000 each on the 2nd and the 3rd shifts. In 1963 there were 660 direct production workers working on all the three shifts, producing: 6,780 pcs. of concrete pipes, 24,000 pcs. of electricity poles and 24,000 pcs. of bricks. Product-mix not flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Steel sheets are imported. The approximate import rate is I£ 180 per ton.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( I£ 000 )		2,900	
1. Energy & water: total	125		
	Quantity consumed	Unit value	( I£ )
- Water	000 cu.m.	250	60
- Electricity	000 kWh	750	40
- Solar oil, kerosene, crude oil, benzine & lubricating oil	(I£ 000)	80	..
2. Direct production materials: total	2,350		
a. Cement	ton	15,200	98
b. Gravelstone	cu.m.	9,000	15
c. Coarse sand	cu.m.	6,000	4
d. Steel sheets	ton	770	780
e. Others	(I£ 000)	100	..
3. Packaging materials: total	-		
4. Work performed by sub-contractors ( )	85*		
5. Repairs & maintenance (materials & services purchased)	46		
6. Material inputs for auxiliary activities	50		
7. Non-factor service inputs: total	310		
Of which transport, insurance and storage services purchased separately 100			

\* Much diversified to list in detail.

**VI. VALUE ADDED**

TOTAL 1964 ( I£ 000 ) 1,849

1. Wages & salaries (before income tax)	
- Employees in direct production	1,337
- Other employees	
2. Other expenditures for employees	80
3. Annual depreciation allowance	302
4. Rental paid (land)	30
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	100

**SELECTED COEFFICIENTS**

- Mech., equip., instruments & tools per employee in direct production on 1st shift:	I£ 16,400
- Value added per employee:	I£ 5,778
- Annual wage per employee	I£ 4,178
- Variable input costs/gross production ratio:	81.0 % 1/
- Gross profit/gross production ratio:	2.1 % 2/
(at full capacity: 15.6 % 2/)	
- Level of production at break-even point is approximately 59 % of the 1964 actual level.	

**VII. EXPANSION: HISTORY & PLAN****1. Recent Expansion**

From 1963 to 1964

a. Total Investment ( )	Gross acquisition	Scrapped or sold
- Land		
- Land improvements		
- Buildings		
- Other construction work		
- Machinery & equipment		
- Tools & instruments		
- Vehicles		
- Office furniture & fixtures		
c. Corresponding increase: In no. of employees	From 19	to 19
In annual gross production ( )		

Installation of the railway sleeper manufacturing system and replacement of the poles and bricks manufacturing system. See "Detail of T.5".

**2. Future Plan: None.**

a. Investment proposed for the period 19 to 19	Total value ( )
Of which:	
- Mech. & equipment	
- Land improv. & bldg.	
- Land	
- Others	
b. Net increase in no. of employees envisaged for the same period:	
- Direct production:	
- Auxiliary:	
c. Purpose:	

**VIII. SUPPLEMENT**

1/ All wages and salaries regarded as variable cost.

2/ In 1963, when the level of operation was 3.7 times that in 1964, the gross profit/gross production ratio was only 2.4 %. The major item of production in 1963 was concrete pipes (6,780 t); the consumption of cement and steel sheets was 59,000 t and 1,800 t, respectively. But there were subcontractors' fees amounting to some I£ 1 million, and the costs of repairs and maintenance and expenses for advertising and other business services which were more than three times higher than the 1964 records.

**MAJOR PRODUCTS:** Prefabricated concrete building materials and bricks. Capable of processing about 5,000 tons of cement per annum on the basis of one shift operation. (Possibly 15,000 tons of cement if operated with three shifts).

**REPORTING UNIT:** An independent one-establishment enterprise with total assets I£ 7 million and employees 180 as of 1964. Founded in 1955.

I. FIXED CAPITAL ASSETS (end of Year)	1963		1964	
	After deprec.	After deprec.	After deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (I£ 000 )	2,665	2,124		
1. Land (partly rented)	337	337		
2. Land improvements	-	-		
3. Buildings	772	662		
4. Other construction works	-	-		
5. Machinery & equipment	1,434	1,035		
6. Tools & instruments	53	51		
7. Vehicles	30	12		
8. Office furniture & fixtures	34	27		

DETAIL OF I.5 (No.)	Total Bk. value After deprec.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
b. Crane (1)	125	1	A	8	125
c. Fork lifts, 2 ton (2)	..	4	A	8	..
d. Fork lifts, 4 ton (2)	..	9	A	8	..
e. Fork lifts, 10 ton (2)	65	1	A	8	65
f. Pressing equipment (4)	5	1-2	A	8	5
g. Concrete station, 500 ton	..	3	A	8	..
h. Concrete station, 750 ton	25	1	A	8	25
i. Concrete station, 750 ton	..	9	A	8	..
j. Brick producing machine (1,800-2,200 bricks per 8 hrs)	250	4	A	8	..
k. Steam equipment (1,000 cu.m. per hr)	35	1	A	8	35

II. INVENTORIES (end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> (I£ 000 )	1,100	-
1. Direct production materials		
2. Other input materials		
3. Work in process		
4. Finished products		

- Normal inventories of finished products .. % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 2,800 KW  
 Capacity of electr. generation: 45 HP  
 Total load, capacity of trucks: - t

Most of the itemized machines were imported (mainly from the U.K.); (f) is wholly of local manufacture; for (a) key components imported, installation; fixtures and accessories of local manufacture.

**ENVIRONMENTAL CONDITIONS:** Transportation, public utilities and community facilities are excellent.

III. LABOUR (1964 average)	1st shift	2nd shift	3rd shift
	<b>TOTAL EMPLOYED</b>	180	-
1. Direct production (all male)	150	-	-
Annual total manhours (000)	(330)	( )	( )
a. Meshee station	21		
b. Casting station	111		
c. Brick shop	10		
d. Loading and transportation	8		
2. Auxiliary activities ( m. f. )	30 ( 23 )	-	-

EDUCATIONAL BACKGROUND (No. of employees)			
Univ. or higher	Sr. High sch. or equiv.	Other	Other
Engi-neers			
<b>TOTAL</b>	6	12	161
<b>Management</b>			
1	1	-	-
<b>Direct Production</b>			
<b>Skilled</b>	3	3	4
<b>Semi-skilled</b>	-	3	4
<b>Unskilled</b>	-	-	-
<b>Auxiliary Activities</b>			
<b>Skilled</b>	2	-	-
<b>Semi-skilled</b>	-	-	-
<b>Unskilled</b>	-	3	23

- Average working hours per annum per direct production worker: 2,200 hours.

- Proportion of motors occupied; 80% on the 1st shift.

- Conventional process is employed. Degree of mechanization is high in (c), fair in (b) and poor in (a). (c) is also moderately automated. No automation in the rest.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( I£ 000 )			
6,481			
Product	Unit	Quantity Produced	Unit Value ( I£ )
a. Prefabricated concretes'	ou.m.	2,000	150-300
a' " (internal use)	"	(7,000)*	(120-240)
b. Prestressed concrete	cu.m.	100	500-600
b' " (internal use)	"	(900)*	(400-480)
c. Decoration elements	sq.m.	600	25-30
c' " (internal use)	"	(1,400)*	(20-24)
d. Bricks	000 pc	1,710	190-410
d' " (internal use)	"	(90)*	(150-330)
e. Prefabricated houses	pc	150	14,000-19000
f. Prefabricated industrial buildings	sq.m.	6,000	110-125
g. Others	(I£ 000)	1,500	..
approx.			

\* All internal use (figures in parenthesis) not included in the total.

**CAPACITY OUTPUT:** Slightly higher (by some 5%) than the 1964 actual production level on the basis of one-shift operation. With higher demand, all three shifts can be operated with additional annual manhours of 15,000, 300,000 and 300,000 on 1st, 2nd and 3rd shifts, respectively, tripling the level of output. Product-mix inflexible.

Unit value of product: Market value f.o.b. before sales tax.  
Unit value of material: Market price c.i.f.

- Steel wire (c.i.f. \$330/t) and steel cables (c.i.f. \$415/t) are imported.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( I£ 000 )			
3,114			
1. <u>Energy &amp; water: total</u>			
	Quantity	Unit	Unit Value ( I£ )
	consumed	consumed	( I£ )
- Electricity	000 Kwh	120	45
- Solar Oil	( I£ 000 )	18	..
- Lubricating Oil	"	36	..
- Water	000 cu.m.	25	200
2. <u>Direct production materials: total</u> 1,488*			
a. Cement	ton	5,000	102
b. Reinforced steel	ton	900	620
c. Steel wire	ton	10	1,000
d. Steel cables	ton	20	1,260
e. Aggregates (gravel, sand, etc)	cu.m.	35,000	10
f. Isolation materials	cu.m.	350	..
- Polyester sheets	..	..	150
- Lightweight heat and sound insulating bricks	..	..	50

\* Excluding those internally supplied.

3. <u>Packaging materials: total</u> -			
4. <u>Work performed by sub-contractors</u> ( .. ) 830			
5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> 130			
6. <u>Material inputs for auxiliary activities</u> 2			
7. <u>Non-factor service inputs: total</u> 632			
Of which transport, insurance and storage services purchased separately. 146			

**VI. VALUE ADDED TOTAL 1964 ( I£ 000 ) 3,367**

1. Wages & salaries (before income tax)	
- Employees in direct production )	2,500
- Other employees )	
2. Other expenditures for employees	-
3. Annual depreciation allowance	540
4. Rental paid (land)	7
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	320

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: I£ 9,950
- Value added per employee: I£ 18,706
- Annual wage per employee: I£ 13,889 1/
- Variable input costs/gross production ratio: 59.4% 2/
- Gross profit/gross production ratio: 4.9% (at full capacity: 6.8%)
- Level of production at break-even point is approximately 88 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
1. <u>Recent Expansion</u>		
From 1961 to 1964		
a. Total Investment ( I£ 000 )	609	-
- Land	110	-
- Land improvements	-	-
- Buildings	233	-
- Other construction work	-	-
- Machinery & equipment	224	-
- Tools & instruments	18	-
- Vehicles	15	-
- Office furniture & fixtures	9	-
b. Corresponding increase:	From 1961	to 1964
In no. of employees (direct prod. only)	60	150
In annual gross production ( I£ million)	3.3	6.5

**2. Future Plan** None

- a. Investment proposed for the period 19 to 19  
Total value ( ) \$
- Of which: - Mach. & equipment \$  
- Land improv. & bldg.  
- Land  
- Others
- b. Net increase in no. of employees envisaged for the same period:  
- Direct production:  
- Auxiliary:
- c. Purpose:

**VIII. SUPPLEMENT**Work performed by Sub-contractors:

building work (too diversified to list in detail) is totally done by a number of subcontractors.

1. Average of wages and salaries including other expenditures for employees.

2. I£ 1.5 million of wages and salaries regarded as variable cost.



**MAJOR PRODUCTS:** Cement-gypsum products (light weight heat and sound insulating bricks and prefabricated concrete components). Annual capacity is about 180,000 cu.m. of these products on the basis of 3-shift operation. (The factory is presently operating only two shifts).  
**REPORTING UNIT:** Branch of a two-establishment enterprise with total assets of 22 million and employees 400 as of 1964. This branch was founded in 1954 and has 250 employees as of 1964. The other branch produces paving stones. See Israel 339-(5).

I. FIXED CAPITAL ASSETS		End of 1963 After deprec.	End of 1964 After deprec.	II. INVENTORY	
(IE 000)		11,000	9,950	(end of 1964)	Actual Normal
<b>TOTAL BOOK VALUE</b>				<b>TOTAL VALUE (IE 000)</b>	1,200 -
1. Land				1. Direct production materials	400 -
2. Land improvements	}	1,500	1,400	2. Other input materials	- ..
3. Buildings				3. Work in process	- ..
4. Other construction works	}	9,000	8,100	4. Finished products	800 -
5. Machinery & equipment					
6. Tools & instruments					
7. Vehicles	}	500	450		
8. Office furniture & fixtures					
		<b>Total</b>	<b>Avg. Age</b>	<b>Depr. rate</b>	<b>1964 replace value</b>
<b>DETAIL OF I.5 (No.)</b>		<b>Ref. descr.</b>	<b>(Yr.)</b>	<b>Ann. (\$)</b>	
a. Hammer mills (2)	..	10	A	10	10
b. Ball mills (2)	..	5	A	10	200
c. Mixers (2)	..	12	A	10	20
d. Shears (2)	..	1;12	A	10	108
e. Forme movers and auxiliary equipment for the transportation of finished products	..	..	A	10	510
f. Big ball mill, automatic system	810	1	A	10	810
g. Finishing containers (autoclaves) (7) and auxiliary equipment	..	5-12	A	10	3,000

Capacity of electr. motors: 700 HP  
 Total load, capacity of trucks(3): 24 t  
 - All the machines itemised, except (c), were imported; (b) and (f) from Germany.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities are excellent.

III. LABOUR (1964 average)	1st shift			2nd shift			3rd shift			EDUCATIONAL BACKGROUND (No. of employees)				- Average working hours per annum per direct production worker: 2,500 hours.				
	TOTAL EMPLOYED: 250	150	100	-	125	100	-	Univ. or higher	Sr. High sch. or equiv.	Other	Other	Other	Other					
1. Direct production (all male)	125	100	-	-	312	350	-	2	1	30	217	-	-	-	-	-	-	-
I. Light weight insulating bricks																		
a. Casting	4	4	-	-	4	4	-	2	1	-	-	-	-	-	-	-	-	-
b. Cutting	7	7	-	-	7	7	-	-	-	-	-	-	-	-	-	-	-	-
II. Prefabricated concrete products																		
a. Reinforcing	6	6	-	-	6	6	-	-	-	-	-	-	-	-	-	-	-	-
b. Casting	8	8	-	-	8	8	-	-	-	25	200	-	-	-	-	-	-	-
c. Cutting	4	4	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-
III. Miscellaneous operatives	47	40	-	-	47	40	-	-	-	-	-	-	-	-	-	-	-	-
2. Auxiliary activities (male 12, fem. 13)	25	-	-	-	25	-	-	-	-	-	-	-	-	-	-	-	-	-

- Proportion of motors occupied: 90 - 100 % on first and second shifts.  
 - Conventional process is employed. Degree of mechanization is high in both I and II; automation is poor.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( I£ 000 ) 5,595

Product	Unit	Quantity	Unit Price	Value ( I£ )
a. Itung bricks (light weight heat & sound insulating material)	ou.m.	114,000	36*	
b. Prefabricated Itung components	ou.m.	13,400	111	

\* After-tax market price is I£ 38.6 per ou.m.

**CAPACITY OUTPUT:** 40 % higher than the 1964 actual production level, given sufficient demand and additional manhours of 25,000 on the 2nd shift and 350,000 on the 3rd. The present product-mix is supposed to be optimum with respect to the existing combination of facilities.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Aluminum powder is imported. The approximate freight rate is I£ 300 per ton.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( I£ 000 ) 3,025

Category	Unit	Quantity	Unit Price	Value ( I£ )
<b>1. Energy &amp; water: total</b> <u>203</u>				
- Electricity	000 kWh	2,500	35	
- Heavy liquid fuel	ton	1,000	100	
- Water	000 ou.m.	100	150	
<b>2. Direct production materials: total</b> <u>1,190</u>				
a. Gypsum	ton	13,500	33	
b. Aluminum powder	ton	51	4,000	
c. Grey cement	ton	4,500	98	
d. Stressed iron wire	ton	415	720	
<b>3. Finishing materials: total</b> <u>-</u>				
<b>4. Work performed by sub-contractors ( )</b> <u>-</u>				
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> <u>400</u>				
<b>6. Material inputs for auxiliary activities</b> <u>120</u>				
<b>7. Non-factor service inputs: total</b> <u>912</u>				
Of which transport, insurance and storage services purchased separately <u>30</u>				

**VI. VALUE ADDED TOTAL 1964 ( I£ 000 ) 2,570**

1. Wages & salaries (before income tax)	
- Employees in direct production	1,000
- Other employees	50
2. Other expenditures for employees	50
3. Annual depreciation allowance	1,050
4. Rental paid on land (incl. royalties 160)	170
5. Sales & other indirect taxes (less subsidies) (not included in total)	[160]
6. Other gross business income (before income tax)	300

**SELECTED CONCLUSIONS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: I£ 72,000  
- Value added per employ.e: I£ 10,280  
- Annual wage per employee: I£ 4,000  
- Variable input costs/gross production ratio: 46.4 % <sup>1/</sup>  
- Gross profit/gross production ratio: 5.4 % (at full capacity: 19.3 %)  
- Level of production at break-even point is approximately 90 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
<b>1. Recent Expansion</b>		
From 1963 to 1964		
a. Total Investment ( I£ 000 )	865	
- Land	-	
- Land improvements	-	
- Buildings	-	
- Other construction work	-	
- Machinery & equipment	865	
- Tools & instruments	-	
- Vehicles	-	
- Office furniture & fixtures	-	
b. Corresponding increase:	From 19	to 19
In no. of employees		
In annual gross production ( )	..	

**2. Future Plan: None**

a. Investment proposed for the period 19 to 19  
Total value ( )  
Of which: - Mach. & equipment \$  
- Land improv. & bldg.  
- Land  
- Others

b. Net increase in no. of employees envisaged for the same period:  
- Direct production:  
- Auxiliary:

c. Purposes:

**VIII. SUPPLEMENT**

<sup>1/</sup> All wages and salaries regarded as variable cost.

**MAJOR PRODUCTS:** Concrete paving materials. Annual capacity output is about 600,000 sq.m. paving stones on three-shift operation.  
**REPORTING UNIT:** Sister branch of Israel 339 - (4). This branch was founded in 1959 and has 150 employees as of 1964.

**I. FIXED CAPITAL ASSETS**

	End of 1963 After deprec.	End of 1964 After deprec.
<b>TOTAL BOOK VALUE</b> ( If 000 )	3,000	2,725
1. Land		
2. Land improvements	500	475
3. Buildings		
4. Other construction works		
5. Machinery & equipment	2,000	1,800
6. Tools & instruments		
7. Vehicles	500	450
8. Office furniture & fixtures		

DETAIL OF 1.5 (No.)	Total Bk. value ref. deprec.	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replaced value
---------------------	------------------------------------	----------------------	----------------	----------------------	---------------------------

a. Autoclaves (2)	..	6	A	10	800
c. Mixers (2)	..	6	A	10	..
c. Casting/polishing equipment	..	6	A	10	..

**II. INVENTORY**

	Actual	Normal
<b>TOTAL VALUE</b> ( If 000 )	260	- \$
1. Direct production materials	90	-
2. Other input materials	-	..
3. Work in process	80	-
4. Finished products	90	-

- Normal inventories of finished products 2.7% of annual gross production  
 - Seasonal variations: None

Capacity of electr. motors: 370 KW  
 Total load, capacity of trucks(2): 16 t

- All the itemised machines were imported; (c) from Italy.

**EXTERNAL CONDITIONS:** Transportation, public utilities and community facilities are excellent.

**III. LABOUR**

(1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED :</b> 150	75	50	15
1. Direct production ( all male )	60	60	15
Annual total manhours (000)	(150)	(150)	(37)
a. Preparation	8	8	2
b. Casting	20	20	5
c. Polishing	12	12	3
d. Shearing	16	16	4
e. Miscellaneous	4	4	1
2. Auxiliary activities (m.7; f.8 )	15	-	-

**EDUCATIONAL BACKGROUND**  
(No. of employees)

Univ. or higher	Br. High sch. or	Regi-Other		
		Other	Unskilled	
TOTAL	2	1	20	127
Management	2	1	-	-
Direct Production	-	-	-	-
Skilled	-	-	-	-
Semi-skilled	-	-	-	-
Unskilled	-	-	15	120
Auxiliary Activities	-	-	-	-
Skilled	-	-	-	-
Semi-skilled	-	-	2	-
Unskilled	-	-	-	-
	-	-	3	7

- Average working hours per annum per direct production workers: 2,500 hours.  
 - Proportion of motore occupied: 90 - 100 % on each of the three shifts.  
 - Conventional process is employed. Degree of mechanisation is high, but degree of automation, fair to poor.

IV. ANNUAL PRODUCTION (1964)			
TOTAL VALUE OF PRODUCTION ( I£ 000 ) 3,300			
Product	Unit	Quantity Produced	Unit Value ( I£ )
Paving stones	sq.m.	550,000	6

**CAPACITY OUTPUT:**

10 % higher than 1964 actual production level, given sufficient demand. No additional labour input is required.

Unit value of product: Market value f.o.b. before sales tax  
 Unit value of material: Market prices o.i.f.

- White cement, and titan and oxide are directly imported; the freight for the latter is US\$ 17/t.

V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF CONSUMPTION ( I£ 000 ) 2,080			
<b>1. Energy &amp; water: total 188</b>			
		Quantity consumed	Unit value ( I£ )
- Electricity	000 kWh	2,500	35
- Heavy liquid fuel	ton	1,000	100
- Water	000 cu.m.	100	150
<b>2. Direct production materials: total 1,350</b>			
a. White cement	ton	820	660
b. Mosaic	ton	1,600	130
c. Grey cement	ton	2,700	98
d. Titan and oxide	ton	75	1,500
e. Sand	(I£ 000)	94	..
f. Others	(I£ 000)	129	..
<b>3. Substances materials: total -</b>			
<b>4. Work performed by sub-contractors ( ) -</b>			
<b>5. Repairs &amp; maintenance (materials &amp; services purchased) 140</b>			
<b>6. Material inputs for auxiliary activities 20</b>			
<b>7. Non-factor service inputs: total 382</b>			
Of which transport, insurance and storage services : purchased separately 30			

VI. VALUE ADDED		TOTAL 1964 ( I£ 000 )
1. Wages & salaries (before income tax)		
- Employees in direct production		700
- Other employees		
2. Other expenditures for employees		40
3. Annual depreciation allowance		370
4. Rental paid (land)		10
5. Sales & other indirect taxes (less subsidies)		-
6. Other gross business income (before income tax)		100

**RELEVANT COMMENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: I£ 33,330

- Value added per employee: I£ 8,133

- Annual wage per employee: I£ 4,667

- Variable input costs/gross production ratio: 46.6 % <sup>1/</sup>

- Gross profit/gross production ratio: 3.0 %  
 (at full capacity: 7.6 %)

- Level of production at break-even point is approximately 95 % of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN			
1. Recent Expansion:	None	Gross acquisition	Scrapped or sold
From 19 to 19			
a. Total Investment ( )			
- Land			
- Land improvements			
- Buildings			
- Other construction work			
- Machinery & equipment			
- Tools & instruments			
- Vehicles			
- Office furniture & fixtures			
b. Corresponding increase:	From 19 to 19		
In no. of employees			
In annual gross production			

**2. Future Plan: None.**

a. Investment proposed for the period 19 to 19

Total value ( ) \$

Of which: - Mach. & equipment \$

- Land improv. & bldg.

- Land

- Others

b. Net increase in no. of employees envisaged for the same period:

- Direct production:

- Auxiliary:

c. Purposes:

**VIII. SUPPLEMENT**

<sup>1/</sup> Water and salaries are all excluded from variable cost.

**MAJOR PRODUCTS:** Concrete products for roads and concrete blocks. Annual capacity output is about 14,000 tons on one-shift operation.

**REPORTING UNIT:** A one-establishment enterprise with total assets ¥ 17 million (net worth ¥ 3.5 million) and 31 employees as of 1964. Founded in 1962.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( ¥ thous. )	<u>10,025</u>	<u>8,107</u>
1. Land (rented)	-	-
2. Land improvements	1,017	896
3. Buildings (Total floor space: 473 m <sup>2</sup> )	4,841	4,361
4. Other construction works	-	-
5. Machinery & equipment	764	630
6. Tools & instruments	1,522	927
7. Vehicles	1,736	1,171
8. Office furniture & fixtures	145	122

DETAIL OF I.5 (No.)	Total	Avr.	Depr.	1964	
	bk. value	Age	Oper. rate	replac.	
	bef. depr.	(Yr.)	(%)	value	
a. Concrete mixer (1)	78	3	B	16.2	100
b. Bending machine (1)	38	3	B	16.2	50
c. Concrete vibrator (1)	102	3	B	16.2	150
d. Boiler (1)	262	3	B	14.2	330
e. Welder (1)	94	3	B	16.2	150
f. Duplex grinder (1)	15	3	B	25.0	20
g. Grinder (1)	14	3	B	25.0	30
h. Concrete transfer wagon (1)	42	3	B	43.8	150
i. Palettes (10)	35	3	B	25.0	70
j. Vinyl sheets (5)	84	3	B	25.0	150
(Total)	(764)				(1,200)

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> ( ¥ thous. )	<u>2,277</u>	<u>..</u>
1. Direct production materials	46	
2. Other input materials	-	
3. Work in process	-	
4. Finished products	2,231	

- Actual inventories of finished products 5.3 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 44 KW

Total load, capacity of trucks: 8 t

- All machines are of domestic origin.

**GENERAL CONDITIONS:**

Transportation, public and community facilities, all excellent.

**III. LABOUR** (1964 average)

	1st	2nd	3rd
	shift	shift	shift
<b>TOTAL EMPLOYED</b> : 31	31	-	-
1. Direct production (n.13; f.14)	27	-	-
Annual total manhours (000)	(74.5)	(-)	(-)
a. Concrete products for roads	3	-	-
b. Concrete blocks	10	-	-
c. Finishing process	14	-	-
2. Auxiliary activities (n.3; f.1)	4	-	-
a. Management	2	-	-
b. Sales and purchase	2	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	
		Management	Others
TOTAL	2	29	
Management	2		
Direct Production			
Skilled		6	
Semi-skilled		17	
Unskilled		4	
Auxiliary Activities			
Skilled			
Semi-skilled		2	
Unskilled			

- Actual hours worked per annum per production worker: 2,759 hours.

- Proportion of motors occupied: 90 % on 1st shift.

- Mechanisation and automation are poor.

- Skilled workers in direct production are engaged mainly in machine processing, moulding and finishing.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( ¥ thous. )				TOTAL VALUE OF CONSUMPTION ( ¥ thousand )			
41,923				23,314			
<u>Product</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Value</u>				
		<u>Produced</u>	<u>( Yen )</u>	<u>Quantity</u>	<u>Unit</u>	<u>Value</u>	
				<u>Consumed</u>		<u>( Yen )</u>	
a. Concrete products for roads	ton	4,274	5,000	- Electricity	kWh	14,133	15.0
b. Concrete blocks	"	8,564	2,400	- Liquid Fuel	litre	21,025	14.5
				- Water	m <sup>3</sup>	2,592	39.5
				2. <u>Direct production materials: total</u>			
				19,244			
				a. Sand	m <sup>3</sup>	3,136	700
				b. Gravel	"	4,080	1,200
				c. Cement	ton	16,524	600
				d. Steel	kg	35,667	45
				e. Oil for exfoliation from molds	litre	1,385	60
				f. Calcium ohloride	bag	567	530
				g. Others (including materials for auxiliary activities	¥ 000	250	..
				3. <u>Finishing materials: total</u>			
				-			
				4. <u>Work performed by sub-contractors (see VIII)</u>			
				175			
				5. <u>Repairs &amp; maintenance</u>			
				2,699			
				Parts and materials	Yen	957,000	
				Services purchased	Yen	1,742,000	
				6. <u>Material inputs for auxiliary activities (included in 2.g.)</u>			
				-			
				7. <u>Non-factor service inputs: total</u>			
				577			
				Transportation, insurance and storage (including those involved in the purchase of materials) . . . . . Yen 429,000			
				Communication, advertising and other business services; / Yen 148,000.			
CAPACITY OUTPUT:							
10 % higher than the 1964 actual production level with 13,800 additional manhours on first shift. Product-mix is flexible.							
Unit value of product: Market value f.o.b. before sales tax							
Unit value of material: Market price f.o.b. at producer's factory.							
VI. VALUE ADDED TOTAL 1964 ( ¥ thous. )				18,609			
1. Wages & salaries (before income tax)							
- Employees in direct production				9,052			
- Other employees				2,447			
2. Other expenditures for employees				2,228			
3. Annual depreciation allowance				1,916			
4. Rental paid (land)				812			
5. Business tax				160			
6. Other gross business income (before income tax)				1,994			
VII. EXPANSION: HISTORY & PLAN				Gross acquisition			
1. <u>Recent Expansion</u>							
From 1962 to 1964							
a. Total Investment ( ¥ thousand )				12,015			
- Land				-			
- Land improvements				1,170			
- Buildings				5,398			
- Other construction work				-			
- Machinery & equipment				920			
- Tools & instruments				2,116			
- Vehicles				2,235			
- Office furniture & fixtures				176			
b. Corresponding increase:				From 1962 to 1964			
In no. of employees				20 31			
In annual gross production ( ¥ thousand )				21,955 41,923			
2. <u>Future Plan</u>							
a. Investment proposed for the period 1966 to 1968							
Total value ( ¥ million )				20			
Of which:							
- Mach. & equipment				35 ¥			
- Land improv. & bldg.				10 "			
- Land				50 "			
- Others				5 "			
b. Net increase in no. of employees envisaged for the same period:							
- Direct production:				5 persons			
- Auxiliary:				2 persons			
c. Purpose: Introduction of new processes; largely balanced expansion of the existing capacity in a new locality.							
VIII. SUPPLEMENT				Work performed by sub-contractors: A small subcontractor (with 20 employees) manufactured in 1964 35 frames for moulding on a short-time contract.			
				Liquid assets and short-term liabilities (end of 1964; Yen thousand)			
Cash				851			
Accounts receivable				4,982			
Suspense payment & loan				850			
Taxes payable				410			
Accounts payable				7,406			
Short-term loans from commercial banks				3,010			
1/ The numerator is the estimated 1964 replacement value.							
2/ The output in 1963 was already 11,500 t (90 % of the 1964 level); gross profit/Gross production ratio 3.9 %.							



IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)				
TOTAL VALUE OF PRODUCTION ( ¥. million )		72.72 <sup>1/</sup>		TOTAL VALUE OF CONSUMPTION ( ¥. million )		41.88		
Product	Unit	Quantity Pro- duced	Unit Value ( ¥. )		Quantity con- sumed	Unit value ( ¥. )		
a. Reinforced concrete - U type	M <sup>3</sup>	1,077	18,000	1. Energy & water: total			1.22	
b. Concrete plates for road	"	766	"	- Electricity	Kwh	31,358	14.80	
c. Boundary blocks	"	687	"	- Liquid fuel	litre	39,200	14.49	
d. Fabricated reinforced concrete walls	"	346	"	- Water	M <sup>3</sup>	4,839	39.51	
e. Concrete products for manholes	"	342	"	2. Direct production materials: total			22.43	
f. Reinforced concrete L type	"	282	"	a. Cement	Bags	28,850	302.3	
g. Reinforced concrete pipes	"	10	"	b. Calcium chloride	"	1,265	534.5	
h. Other concrete products	"	466	20,000	c. Oils to peel off moulds from steel forms	litre	2,600	60.0	
i. Scraps	000 ¥.	217	..	d. Gravel	M <sup>3</sup>	3,666	1296.6	
				e. Sand	"	2,289		
				f. Steel	ton	117.6	43,770	
<b>CAPACITY OUTPUT:</b> 10% higher than the 1964 actual production level with additional manhours 10,560 on 1st shift. The batcher plant presently constitutes a constraining factor; an investment of ¥. 3 million would raise the overall capacity by some 30% over the 1964 production level. Product-mix is flexible.				<b>3. Packaging materials: total</b>				-
Unit value of product: Market value f.o.b. before sales tax				<b>4. Work performed by sub-contractors ( See VIII )</b>				7.10
Unit value of material: Market price f.o.b. at producer's factory.				<b>5. Repairs &amp; maintenance</b>				
				Parts and materials				1.49
				Services purchased				1.94
				<b>6. Material inputs for auxiliary activities</b>				-
				<b>7. Non-factor service inputs: total</b>				7.70
				Of which transportation, insurance and storage services (including those involved in the purchase of materials)				7.11
<b>VI. VALUE ADDED</b>		TOTAL 1964 ( ¥. million )		<b>SELECTED COEFFICIENTS</b>		(in 1964 replacement value)		
1. Wages & salaries (before income tax)		30.84		- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥. 388,000				
- Employees in direct production		10.17		- Value added per employee: ¥. 865,000				
- Other employees		10.05		- Annual wage per employee in direct production: ¥. 391,000				
2. Other expenditures for employees		4.43		- Variable input costs/gross production ratio: 56.2%				
3. Annual depreciation allowance		2.83		- Gross profit/gross production ratio: 4.4% <sup>1/</sup>				
4. Rental paid		.03		- Level of production at break-even point is approximately 90 % of the 1964 actual level.				
5. Business tax		.34						
6. Other gross business income (before income tax)		2.98 <sup>1/</sup>						
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>2. Future Plan</b>				
1. Recent Expansion		Gross acquisition		a. Investment proposed for the period 1967 to 1970		Total value ( ¥. million )		
From 1962 to 1964		Scrapped or sold		Of which:		- Mach. & equipment		
a. Total Investment ( ¥. million )		14.89		- Land improv. & bldg.		10		
- Land		7.63		- Land		50		
- Land improvements		.35		- Others		10		
- Buildings		1.22		b. Net increase in no. of employees envisaged for the same period:		- Direct production: 30 persons		
- Other construction work		-		- Auxiliary: 10		"		
- Machinery & equipment		1.24		a. Purposes:		Introduction of new processes; largely balanced expansion of the existing capacity in a new locality.		
- Tools & instruments		1.87						
- Vehicles		2.46						
- Office furniture & fixtures		.13						
b. Corresponding increase:		From 1962 to 1964						
In no. of employees (decrease)		41						
In annual gross production		+ 10%						
<b>VIII. SUPPLEMENT</b>				Work performed by sub-contractors (details of V.4.);				
A sub-contractor with 20 employees under a short-term contract made 1,420 steel forms, steel being supplied by this enterprise.				The structure of the enterprise's liquid assets; end of 1964 ( ¥. million)				
Cash on hand and in bank 7.31; Marketable securities of bonds .25; Accounts receivable 14.72;				Expense payments and loans 1.71.				
Current liabilities								
Taxes payable 1.38; Accounts payable 21.65; Short-term borrowing 5.20.								
Excluding ¥. 703,000, a revenue from leasing machinery. With this included the gross profit/gross production ratio will be 5.0%.								



An enterprise, founded in 1955, producing concrete products. Annual capacity output is 60,000 t of concrete products on a 1-shift basis. All products sold at domestic market; only 2% of input materials (mainly patented wire) are imported. Located as part of a large complex of building industries.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)		739	881	-	-	246	58			
Buildings & land improvements		415	540	-	38	36	75			
Machinery & equipment		306	321							
Other capital assets		18	20							
<p><b>Major machinery crucial for determining the overall production capacity:</b></p> <p>Hollow concrete and pipes: machines for preparation and pouring of concrete (with small capacity) in partly mechanised process (Schlosser, Comet and Roesacometta): 1 shift.</p> <p>(About 18% of machinery and equipment was imported).</p>				<p>Calculated average age of fixed assets: 6.4 years</p> <p>Electric motors: 780</p> <p>Total installed capacity: _____ KW</p> <p>Of which actually operated in 1965:</p> <p>1st shift 100 %; 2nd shift - %; 3rd shift - %</p> <p><b>Technological features:</b> Consists of 3 halls (4,700 m<sup>2</sup>) producing various concrete products, and 5 yards (4,400 m<sup>2</sup>) equipped with semi-automatic closing devices. Mechanisation is satisfactory (about 80% of the European standard). Outdoor work is performed from April to November only.</p>						
II. LABOUR (1965)		TOTAL no. of employees: 269			Educational background of workers:					
		1st shift	2nd shift	3rd shift	Techn. Highb.	Low	Others	Total		
1. Factory workers:										
Total	239 persons	239	-	-	3	1	-	-	4	
	(558 thous. manhrs.)	(558)	( )	( )	-	-	-	-	-	
- Pre-stressed concrete products		48			-	-	-	-	-	
- Reinforced concrete products		32			4	3	-	4	11	
- Unreinforced concrete products		22			-	-	-	254	254	
- Hollow blocks		29								
- Separation plant and service shops		108								
2. Non-factory workers:		30 persons								
	(65 thous. manhours)	(65)								
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	IV. INTERMEDIATE INPUTS						
TOTAL actual revenue output 1965 *			872	Quantity		Value (Drs. Million)				
- Pre-stressed concrete products (poles, sleepers and slabs)		12,400 t	333	TOTAL actual consumption 1965						
- Reinforced concrete products		8,500 t	169	1. Energy inputs: total						
- Unreinforced concrete products		10,000 t	136	- Electricity						
- Hollow blocks		8,100 t	63	- Brown coal						
- Single-grained concrete		6,300 t	35	- Liquid fuel						
- Pre-stressed concrete ceramic carriers		60,100 m	40	TOTAL						
- Fractional products of separation		74,200 m <sup>3</sup>	91	2. Major production materials: total						
- Other products		..	5	- Cement						
* Includes turnover tax on sold products.				- Slag						
Capacity Output:				- Gravel						
Pre-stressed concrete		12,400 t	Overall rate of utilization is 87%.	- Concrete steel						
Reinforced concrete		9,400 t		- Wire (patented)						
Unreinforced concrete		10,000 t		- Wood for framing						
Hollow blocks and single grained concrete		28,000 t		- Water						
- Underutilisation due to insufficient demand.				- Other raw materials						
- Present number of workers is enough for the full capacity operation on the 1st shift.				- Auxiliary materials						
VI. SUPPLEMENT		Future Plans		3. Repairs & maintenances: total						
Introduction of steam engineering and central automatic preparation of pre-fabricated building elements.				4. service inputs						
1. of which Drs. 53 million belongs to the enterprise.				TOTAL (except turnover tax)						
2. Wages are considered to be 50% variable cost.				- Wages of factory workers						
3. Gross accumulation includes interests paid.				- Salaries of non-factory workers						
				- Depreciation						
				- Interests paid						
				- Other accumulation						
				- (Turnover tax)						
				TOTAL						
				- Mech. & equip. per factory worker on 1st shift: Drs. 1,343,000						
				- Value added per employee: Drs. 1,252,000						
				- Annual wage per factory worker: Drs. 523,000						
				- Variable input cost/gross production ratio: 2/3 56 %						
				- Gross accumulation/gross production ratio: 3/3 14.5 %						
				- Level of production at break-even point: 67 % of the 1965 actual level.						

A branch of a construction company, founded in 1952, producing concrete products for local market. Annual capacity output is over 50,000 t on a partial 3-shift basis. Uses materials of local origin only.

I. FIXED CAPITAL	(end of 1965)	Original	1965 re-	Capital expenditures in the past years: (Drs. million)				
		purchase value	placement value	1953-54	1955-57	1958-60	1961-63	
TOTAL (Drs. million)		844	936	Gross expenditures	8	56	277	443
Buildings & land improvements		193	251	Retirements	12	25	39	109
Machinery & equipment		651	685	Calculated average age of fixed assets: <u>4.6</u> years				
Other capital assets		-	-	<b>Electric motors:</b>				
<u>Major machinery crucial for determining the overall production capacity:</u>				Total installed capacity: <u>700</u> KW				
				Of which actually operated in 1965: _____				
Concrete semi-manufactured products: Machines for preparation and pouring of concrete (medium capacity) in a partially mechanised process (2 shifts).				1st shift <u>100</u> %; 2nd shift <u>29</u> %; 3rd shift <u>17</u> %				
				<b>Technological features:</b>				
(Only about 6 % of machinery and equipment was imported.)				Consumption designed for local needs. Production is affected by weather conditions and is reduced in winter and on rainy days in spring and autumn.				

II. LABOUR	(1965)	TOTAL no. of employees:			Educational background of workers:						
		1st shift	2nd shift	3rd shift	Tech. Econ.	Low	Others	Total			
1. Factory workers:		235	51	25	Univ. or higher	12	2	2	-	16	
Total	311 persons	(1,063 thous. manhrs.)	(799)	(180)	(84)	Tech. Higher sch.	-	2	-	1	3
- Concrete mixing and batching plant	14	8	-	-	Secondary sch.	45	11	-	4	60	
- Concrete shop	34	6	-	-	Primary school	-	-	-	333	333	
- Prefabricated concrete products	165	27	7	-	IV. INTERMEDIATE INPUTS						
- Internal transport	22	10	18	-	Quantity		Value (Drs. Million)				
2. Non-factory workers:	101 persons	(278 thous. manhrs.)	TOTAL actual consumption 1965								
				1. Energy inputs: total		599					
				- Electricity		29					
				- Liquid fuel		8					
						21					
				2. Major production materials: total		169					
				- Cement		112					
				- Gravel		61					
				- Concrete iron & steel		167					
				- Other materials		29					
				3. Repairs & maintenance: total		8					
				4. Other material & non-factor service inputs (of which about half services)		193					

III. ANNUAL PRODUCTION & CAPACITY	Quantity		Value
			(Drs. Million)
TOTAL actual revenue output 1965 *			902
- Concrete elements	17,490 t		469
- Railroad sleepers	6,170 t		166
- Transmission line poles	3,572 t		109
- Concrete pipes	3,909 t		56
- Slabs and edgings	7,232 t		83
- Other concrete products	1,683 t		19

\* Includes turnover tax on sold products.

Capacity output:

- Concrete elements	28,500 t	Overall rate of utilization is 70 %
- Railroad sleepers	9,000 t	
- Transmission line poles	6,000 t	
- Pipes, slabs and other concrete products	8,200 t	

Underutilization due to shortage of raw materials. Production is curtailed in rainy weather, especially in winter time.

The same number of workers as in 1963 is enough for full capacity operation on first shift.

VI. SUPPLEMENT

Future plans:

A new unit for concrete mixing is to be built at a new location, incorporating new technologies. The degree of mechanization will then be raised by some 30 % over the present level.

1/ Of which Drs. 29 million retained by the enterprise as its own fund.

2/ Gross accumulation includes interests paid.

SELECTED COEFFICIENTS

- Mech. & equip. per factory worker on 1st shift:	Drs. 2,910,000
- Value added per employee:	Drs. 719,000
- Annual wage per factory worker:	Drs. 483,000
- Variable input cost/gross production ratio:	61.1 %
- Gross accumulation/gross production ratio:	9.1 2/3 %
- Level of production at break-even point:	76 % of the 1965 actual level.

An enterprise producing concrete products for local consumption; founded in 1949. Annual capacity output is 215,000 pieces of concrete sleepers, piles and roofing slabs on a partial 3-shift basis. About a fourth of input materials is imported. Located in the immediate vicinity of the sources of basic raw materials and also close to the market.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)		235	285	-	-	37	82			
Buildings & land improvements		136	180	-	-	22	27			
Machinery & equipment		99	105							
Other capital assets		-	-							
<p>Major machinery crucial for determining the overall production capacity:</p> <p>Concrete semi-manufactures: capacity of machines for preparation and pouring of concrete (medium capacity); ( 2 shifts ).</p> <p>(About half of machinery and equipment was imported).</p>				<p>Gross expenditures</p> <p>Retirements</p> <p>Calculated average age of fixed assets: <u>7.2</u> years</p> <p>Electric motors: Total installed capacity: <u>185</u> KW Of which actually operated in 1963: 1st shift <u>100</u> %; 2nd shift <u>56</u> %; 3rd shift <u>-</u> %</p> <p>Technological features: The productive processes involved range from granulation of gravel to hydration, cutting, collecting and packing of concrete elements. Mechanisation is relatively poor.</p>						
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:					
		1st shift	2nd shift	3rd shift	Techn. High.	Elem. Sch.	Low	Others	Total	
1. Factory workers:		233	76	10	1	1	-	-	2	
Total	319 persons	( 752 thous. manhrs. )	( 548 )	( 180 )	( 24 )	1	-	-	1	
- Concrete sleepers		194	76	10	8	7	-	-	15	
- Piles for vineyards		18	-	-	-	-	-	352	352	
- Roofing slabs		21	-	-						
2. Non-factory workers:		51 persons								
		( 147 thous. manhours )								
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		IV. INTERMEDIATE INPUTS					
					Quantity	Value (Drs. Million)				
TOTAL actual revenue output 1963*			706		TOTAL actual consumption 1963					
- Concrete sleepers		108,000 pos	647		1. Energy inputs: total					
- Piles for vineyards		41,000 pos	44		- Electricity					
- Roofing slabs		459 pos	9		- Lignite					
- Vibrated concrete		94 t	1		- Liquid fuel					
- Foam concrete		268 t	5		2. Major production materials: total					
					- Cement (PC - 350)					
					- Patent wire $\phi$ 2.5					
					- Wood corks					
					- Gravel					
					3. Repairs & maintenance: total					
					4. Other material & non-factor service inputs (of which services 41)					
					5. VALUE ADDED (1963) (Drs. Million)					
					TOTAL (except turnover tax)					
					- Wages of factory workers					
					- Salaries of non-factory workers					
					- Depreciation					
					- Interests paid					
					- Other accumulation					
					(Turnover tax)					
VI. SUPPLEMENT		Future plans:			SELECTED COEFFICIENTS					
a) Introduction of a process for the closing of cement in bulk.					- Mach. & equip. per factory worker on 1st shift: Drs: 4,510,000					
b) Introduction of concrete tiles.					- Value added per employee: Drs. 918,000					
c) Expansion and further mechanisation of production of sleepers.					- Annual wage per factory worker: Drs. 383,000					
					- Variable input cost/gross production ratio: 56.3 %					
					- Gross accumulation/gross production ratio: 21.5 %					
					(at full capacity: 29.2 %)					
					- Level of production at break-even point: 54 % of the 1963 actual level.					
1/ Of which Drs. 40 million are funds belonging to the enterprise.					2/ Gross accumulation includes interest paid.					

An enterprise, founded in 1919, producing asbestos-cement products. The annual capacity is 58,600 t of asbestos-cement slabs and pipes on a 3-shift basis. 16% of products are exported while 29% of input materials, mainly asbestos, are imported. Located near the basic raw materials. Good communication lines with the market by rail, road and inland water transport.

I. FIXED CAPITAL (end of 1965)	Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)			
			1953-54	1955-57	1958-60	1961-63
TOTAL (Drs. million)	1,716	2,355				
Buildings & land improvements	477	580				
Machinery & equipment	1,232	1,765	11	64	201	795
Other capital assets	7	10	50	71	61	221
			Calculated average age of fixed assets: 6.5 years			
			<b>Electric motors:</b>			
			Total installed capacity: 1,725 kW			
			Of which actually operated in 1965:			
			1st shift 100 %; 2nd shift 98 %; 3rd shift 98 %			
			<b>Technological features:</b> Slabs are produced by the damp process of "HATSCHEK" type; pipes of 3.7m by the "CALLCONI" type of machine and pipes of 5m by the RCM machines. Mechanisation is rated at 75%, automation at 70%.			
<b>Major machinery crucial for determining the overall production capacity:</b>						
<b>Roofing material:</b> capacity of "HATSCHEK" type machines (3 shifts).						
<b>Penstock and collector pipes:</b> capacities of "CALLCONI" type machines and RCM (3 shifts). (About 60% of machinery and equipment were imported.)						

II. LABOUR (1965)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:			
Total 537 persons	285	126	126
(1,208 thous. manhrs.) (63%) (288) (288)			
- Roofing materials	144	68	68
- Pipes (3.2m)	55	20	24
- Pipes (5m)	56	25	22
- Collector pipes	30	13	12
2. Non-factory workers: 53 persons			
(119 thous. manhours)			

Educational background of workers:					Total
	Techn. Econ.	Law	Others		
Univ. or higher	4	1	1	-	6
Tech. Higher sch.	-	2	-	-	2
Secondary sch.	14	8	-	-	22
Primary school	-	-	-	560	560

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. million)
	TOTAL actual revenue output 1965*	
- Asbestos-cement roofing material	21,540 t	1,335
- Penstock	17,929 t	1,829
- Collector pipes	1,472 t	130
- Other material	1,280 t	116
* Includes turnover tax on sold products.		

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. million)
	TOTAL actual consumption 1965	
1. Energy inputs: total		63
- Electricity		43
- Coal	2,932 MWH 250 t	20
2. Major production materials: total		1,903
- Cement	33,647 t	437
- Asbestos	4,684 t	1,144
- Others	..	322
3. Repairs & maintenance: total		7
4. Other material & non-factor services inputs (of which arrives 68)		130

**Capacity output:**  
- Asbestos-cement slabs and pipes : 58,600 t Rate of utilisation is 72%.

Underutilisation due to lagging demand, and to the fact that capacities in different processes are not quite balanced. About 335 workers are required on 1st. shift for full capacity operation.

V. VALUE ADDED (1965)	(Drs. million)
TOTAL (except turnover tax)	942
- Wages of factory workers	352
- Salaries of non-factory workers	50
- Depreciation	118
- Interests paid	197
- Other accumulation (Turnover tax)	225 1/2

VI. SUPPLEMENT **Future plans:** a) Increased use of domestically produced asbestos.  
b) Increase of the capacity of roofing materials (slabs) production to 30,000 t per annum.  
c) Further mechanisation.

SELECTED COEFFICIENTS	
- Mech. & equip. per factory worker on 1st shift:	Drs. 6,193,000
- Value added per employee:	Drs. 1,597,000
- Annual wage per factory worker:	Drs. 655,000
- Variable input cost/gross production ratio:	76 %
- Gross accumulation/gross production ratio:	13.8 %
(at full capacity)	16.5 %
- Level of production at break-even point:	42 % of the 1965 actual level.

1/ All retained within the enterprise.

2/ Gross accumulation includes "interests paid".

**MAJOR PRODUCTS:** Steel plates, pipes and rails. Capable of producing more than 60,000 t on partial two shifts operation (one shift except for slitter and forming shop).

**REPORTING UNIT:** Branch of a 4-establishment enterprise, founded in 1955, with total capital assets ¥ 7.7 (of which net worth ¥ 1.3) million and 1,100 employees as in 1964. This establishment was founded in 1966 and has 184 employees as of 1964.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( ¥ million )	<u>1,943</u>	<u>1,604</u>
1. Land (23,510 m <sup>2</sup> )	654	654
2. Land improvements	-	-
5. Buildings	387	319
4. Other construction works	-	-
5. Machinery & equipment	844	609
6. Tools & instruments	40	16
7. Vehicles	18	6
8. Office furniture & fixtures	-	-

DETAIL OF I.5 (No.)	Total bk value	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Slitter line (1)	84.5	2	A	12.7	103.7
b. Medium-size forming machines (3)	42.6	2.5	"	"	59.9
c. Large-size forming machine (1)	29.7	"	"	"	38.6
d. Electric seam steel tube forming machine (1)	269.2	1.5	"	13.4	305.7
e. Corrugated pipe manufacturing equipment (1)	57.1	2	"	"	81.7
f. Plating equipment (1)	37.5	1.5	"	17.5	49.5
(Subtotal) ( 520.6 )					( 639.1 )

**II. INVENTORIES** (end of 1964)

	Actual	Normal
<b>TOTAL VALUE</b> ( ¥ million )	<u>322.6</u>	<u>- 20</u>
1. Direct production materials	156.7	+ 20
2. Other input materials	4.4	- 75
5. Work in process	14.1	- 30
4. Finished products	147.4	- 60

- Normal inventories of finished products 1.9 % of annual gross production

.. Seasonal variations:

	1	2	3	4
High (Feb.)	+50	+50	+50	+50
Low (Mar.)	-30	-70	-90	-50

Capacity of electr. motors: 1,800 KW  
Other prime movers: 300 HP  
Total load, capacity of trucks: 31 t

Machines (d) and (e) were imported; the rest domestically made.

Average age of machinery (62% of total) is 1.8 years.

**GENERAL CONDITIONS:** Water, gas and educational facilities excellent. Transportation and residential facilities fair. Health and recreational facilities, poor.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> <u>184</u>	<u>148</u>	<u>36</u>	<u>-</u>
1. Direct production ( all male )	<u>98</u>	<u>30</u>	<u>-</u>
Annual total manhours (000)	(257)	(110)	(-)
a. Technical shop	8	-	-
b. Slitter shop	7	5	-
c. Forming shop	78	25	-
d. Others	5	-	-
2. Auxiliary activities ( m. 47 f. 9 )	<u>50</u>	<u>6</u>	<u>-</u>
a. Business management	2	-	-
b. Technical management	2	-	-
c. General administration	12	6	-
d. Accounting	4	-	-
e. Purchase	5	-	-
f. Warehouse	25	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
12	8	106	58
<b>Management</b>			
3	1	-	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	20	20
<b>Semi-skilled</b>			
-	-	49	24
<b>Unskilled</b>			
-	-	13	2
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
8	5	5	4
<b>Semi-skilled</b>			
-	-	13	6
<b>Unskilled</b>			
1	2	6	2

- Normal work hours per day 7.5 hours.

- Normal work days per annum: 307 days.

- Actual hours worked per annum per direct production worker: 2,883 hours.

- Proportion of motors occupied 100% on 1st and 2nd shift

- **Technological features:**  
(b): Cutting into long narrow strips by auto - matic continuous process.  
(c): Automatic continuous process.

- Mechanization and automation, fair.

- **Skilled workers** in direct production are engaged in controlling production schedule, process control and supervision of machines. Those in auxiliary activities are planners, analysts, managers of technical and general affairs.

## IV. ANNUAL PRODUCTION (1964)

TOTAL VALUE OF PRODUCTION ( ¥ million )		3,057	
Product	Unit	Quantity	Unit Value ( ¥ 000 )
a. Light rail <sup>*</sup>	ton	40,026	43
b. Deck plates <sup>*</sup>	"	1,330	48
c. Pipes <sup>*</sup>	"	17,170	48
d. Corrugated culvert pipes <sup>*</sup>	"	1,099	87
e. Guard rails <sup>*</sup>	"	3,201	104
f. Slitting	"	1,081	15
g. Forming	(Scraps)	588	15
h. Plating	"	84	85

\* Internal consumption of ¥ 12.7 million is not included in the total value of production (see also V.2.4, 15% of (c), 1,453t of (a) and also nominal amounts of (b), (d) & (e) amounting ¥ 251.5 million are transferred to other establishments of the company, but included in the total value at the respective market prices.

## CAPACITY OUTPUT:

No increase over the 1964 actual production level on one shift operation. With increased demand, full two shifts can be operated, which would require 100,000 additional manhours on the 2nd shift. Product - mix is not flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price full o.i.f.

IV : (c) to (e) partly exported.

V.2: Delivery of (a) by seaborne; of (b) by roads.

(a) is obtained at a significantly lower price than is prevailing at the market thanks to a special arrangement with suppliers.

## V. INTERMEDIATE INPUTS (1964)

TOTAL VALUE OF CONSUMPTION ( ¥ million. )		2,556	
1. Energy & water: total	16		
	Quantity	Unit	Value ( ¥ 000 )
	Unit	used	( ¥ 000 )
- Electricity	000 KWH	1,557	7
- Liquid fuel	000 m <sup>3</sup>	368	8
- Water	000 m <sup>3</sup>	89	27
2. Direct production materials: total	2,343		
a. Strip coils	ton	57,000	33
b. Zinc	"	150	120
c. Light rails <sup>*</sup>	"	90	..
d. Deck plates <sup>*</sup>	"	35	..
e. Pipes <sup>*</sup>	"	142	..
f. Corrugated culvert pipes <sup>*</sup>	"	3	..
g. Guard rails <sup>*</sup>	"	1	..
h. Others	¥ million	444	..

\* Internally supplied.

3. Packaging materials: total	3		
- Paper and paper products	ton	51	62
4. Work performed by sub-contractors ( )	48		
5. Repairs & maintenance (materials & services purchased)	5		
- Parts	¥ 4,361,000		
- Services purchased	¥ 485,000		
6. Material inputs for auxiliary activities	-		
7. Non-factor service inputs: total	141		
Of which transportation, insurance and storage services purchased separately ¥ 132,750,000.			

## VI. VALUE ADDED TOTAL 1964 ( ¥ million ) 501

1. Wages & salaries (before income tax)	
- Employees in direct production	43
- Other employees	50
2. Other expenditures for employees	3
3. Annual depreciation allowance	131
4. Rental paid	-
5. Sales & other indirect taxes (less subsidies)	-
6. Other gross business income (before income tax)	274

## SELECTED COEFFICIENTS

- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 9,020,000
- Value added per employee: ¥ 2,723,000
- Annual wage per employee in direct production: ¥ 336,000
- Variable input costs/gross production ratio: 80%
- Gross profit/gross production ratio: %
- Level of production at break-even point is approximately 54 % of the 1964 actual level.

## VII. EXPANSION: HISTORY &amp; PLAN

1. Recent Expansion	Gross acquisition	Scrapped or sold
From 19 60 to 1963		
a. Total Investment ( ¥ million )	1,134.3	
- Land	500.0	1/
- Land improvements	-	
- Buildings	104.0	
- Other construction work	-	
- Machinery & equipment	519.2	
- Tools & instruments	7.5	
- Vehicles	2.8	
- Office furniture & fixtures	.8	
c. Corresponding increase:	From 19 60	to 19 63
In no. of employees	47	159
In annual gross production ( ¥ million )	521	3,728

## 2. Future Plan : None.

- a. Investment proposed for the period 19 to 19
- Total value ( )
- Of which: - Mach. & equipment
- Land improv. & bldg.
- Land
- Others
- b. Net increase in no. of employees envisaged for the same period: - Direct production:
- Auxiliary:

## a. Purposes:

## VIII. SUPPLEMENT

## Structure of liquid assets (end of 1964: ¥ million).

Cash on hand and in bank	1,040	Accounts payable	1,195
Marketable securities & bonds	246	Short-term borrowing from	890
Accounts receivable	350	commercial banks	
Short-term loans & prepaid expenses	137		

Other establishments of the enterprise: 2 establishments are engaged in processing products by the cold roll forming; 1 establishment produces coated wires.

1/ Transfer from other branches of the company.

**MAJOR PRODUCTS:** Cast steel pipes and tubes. Annual capacity output is about 36,000 t on one-shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with total capital assets of ¥ 1,300 (of which net worth ¥ 600) million and 555 employees as of 1964. Founded in 1937.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (¥ million)	<u>1,015.4</u>	<u>539.2</u>
1. Land (19,700 m <sup>2</sup> )	20.9	20.9
2. Land improvements	25.4	12.7
3. Buildings (total floor space: 19,200 m <sup>2</sup> )	249.9	184.6
4. Other construction works	30.5	30.5
5. Machinery & equipment	523.1	264.6
6. Tools & instruments	144.8	19.8
7. Vehicles	11.1	2.6
8. Office furniture & fixtures	9.7	3.5

DETAIL OF I.5 (No.)	Total	Avg.	Degr.	1964
	bk. value	Age	Oper. rate	replac.
	¥ mil.	(Yr.)	(%)	value
a. Puddling furnaces (3)	2.4	10	B	18.9
b. Puddling furnaces (2)	18.0	2	A	18.9
c. Annealing furnaces (1)	70.0	2	A	18.9
d. Desulphurizing equipment (1)	1.0	2	A	18.9
e. Shot blast (1)	7.5	2	A	18.9
f. Magnesium injection equipment (1)	2.2	2	A	18.9
g. Moulding machines (2)	12.9	2	A	18.9
h. 20 tone crane (1)	6.0	2	A	18.9
i. Charging machine (1)	1.6	2	A	18.9
j. Transformer (1)	12.0	2	A	18.9
(Subtotal)	(133.6)			(143.2)

**II. INVENTORY**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> (¥ million)	<u>274.0</u>	<u>+ 33 %</u>
1. Direct production materials	55.3	- 20
2. Other input materials	14.1	+ 0
3. Work in process	46.2	+ 50
4. Finished products	158.4	+ 50

- Normal inventories of finished products 12.4 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 600 KW  
Capacity of other prime movers: 500 HP  
Total load, capacity of trucks: 16 t

- All machines were domestically made.  
Average age of machinery (26 % of total) is about 2.7 years.

**GENERAL CONDITIONS:** Transportation and electricity, excellent. Water, gas and community facilities, fair.

**III. LABOUR** (1964 average)

	1st	2nd	3rd
	shift	shift	shift
<b>TOTAL EMPLOYED</b>	555	-	-
1. Direct production (male 435 fem. 10)	455	-	-
Annual total manhours (000)	(1,050)	( )	( )
a. Melting	40		
b. Casting	140		
c. Finishing	120		
d. Inspecting	70		
e. Painting	30		
f. Diepatching	15		
g. Shop control	40		
2. Auxiliary activities (m. 91, f. 19)	100		
a. Management and office work	100		

**EDUCATIONAL BACKGROUND** (No. of employees)

Engl- ness	Univ. or higher		Sr. High sch. or equiv.		Other	
	Other	Other	Other	Other	Other	Other
<b>TOTAL</b>	5	36	110	404		
<b>Management</b>	2	2	1	-		
<b>Direct Production</b>						
Skilled	3	-	17	280		
Semi-skilled	-	-	35	100		
Unskilled	-	-	-	20		
<b>Auxiliary Activities</b>						
Skilled	-	25	40	-		
Semi-skilled	-	9	17	4		
Unskilled	-	-	-	-		

- Normal work hours per day: 7.  
- Normal work days per annum: 300 days.  
- Actual hours worked per annum per direct production worker: 2,307 hours.

- Proportion of motors and furnaces occupied on first shift: 85 %.

**Technological features:**

- Hot-blast and water-cooled type of automated desulphurizing equipment.
- Sand-mould centrifugal casting method.
- Hydraulic pressure squeezing test.
- Tar coating.

Mechanization: (a), (b) & (d) excellent; (c) & (e) fair.  
Automation: (a) excellent; (b) to (e) fair.

Skilled workers in direct production are engaged in melting, moulding and shop control. Those in auxiliary activities are for sales and accounting.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( \$ million ) 1,911

Product	Unit	Quantity Prod.	Unit Value (\$ 000)
a. Cast steel pipes and tubes (straight)	t	27,200	55.3
b. Cast steel pipes and tubes (varied)	t	4,230	96.2

**CAPACITY OUTPUT:** 15% higher than the 1964 actual production level with no additional manhours. Product-mix is flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price full o.i.f.

V.2.: Direct production materials (a) to (a) are domestically produced with a significant amount of import contents and delivered by road; average freight rate 10% of o.i.f. value.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( \$ million ) 1,192

1. Energy & water: total	Quantity Unit	Unit Value (\$ 000)
- Electricity	000 kWh	3,100 4.4
- Heavy Oil	kl	3,540 7.1
- Water	000 tons	360 5.0
<b>2. Direct production materials: total</b>		<b>972</b>
a. Pig iron for casting	ton	10,020 25.5
b. Iron scrap	ton	7,010 21.0
c. Steel scrap	ton	13,210 18.5
d. Coks for casting	ton	5,450 18.6
e. Silicon	ton	410 72.4
f. Others	\$ million	194 ..
<b>3. Indirect materials: total</b>		<b>-</b>
<b>4. Work performed by sub-contractors ( )</b>		<b>-</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>		<b>92</b>
<b>6. Material inputs for auxiliary activities</b>		<b>-</b>
<b>7. Non-factor service inputs: total</b>		<b>89</b>
- Transportation, insurance and storage services		61
- Communications, advertising and other business services		27

**VI. VALUE ADDED TOTAL 1964 ( \$ million ) 719**

1. Wages & salaries (before income tax)	
- Employees in direct production	238
- Other employees	71
2. Other expenditures for employees	16
3. Annual depreciation allowance	93
4. Rental paid (land & buildings; incl. royalties of 4)	14
5. Business tax	29
6. Other gross business income (before income tax)	258

**SELECTED COEFFICIENTS**

- Mech., equip., instruments & tools per employee in direct production on 1st shift:	\$ 1,468,000 <sup>1/</sup>
- Value added per employee:	\$ 1,295,000
- Annual wage per employee in direct production:	\$ 523,000
- Variable input costs/gross production ratio:	53% <sup>2/</sup>
- Gross profit/gross production ratio:	13.4% <sup>2/</sup>
- (at full capacity:	18% <sup>2/</sup>
- Level of production at break-even point is approximately 71% of the 1964 actual level. <sup>2/</sup>	

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition	Scrapped or sold
From 1960 to 1962		
a. Total Investment ( \$ million )	<u>355.2</u>	
- Land	-	
- Land improvements	-	
- Buildings	71.4	
- Other construction work	-	
- Machinery & equipment	248.3	
- Tools & instruments	35.5	
- Vehicles	-	
- Office furniture & fixtures	-	
b. Corresponding increase:	From 1960	to 1962
In no. of employees (direct production only)	380	410
In annual gross production ( \$ million )	1,340	1,500

**2. Future Plan**

a. Investment proposed for the period 1964 to 1965	
Total value ( \$ million )	<u>534</u>
Of which:	
- Mech. & equipment	20 %
- Land improv. & bldg.	70
- Land	-
- Others (hand tools and instruments)	10
b. Net increase in no. of employees envisaged for the same period:	
- Direct production:	60 persons
- Auxiliary:	-
c. Purpose: Expansion of the capacity for ductile iron pipes	

**VIII. SUPPLEMENT**

Liquid assets & short-term liabilities (end of 1964; \$ million)

- Cash on hand and in bank	180.9	- Taxes payable	50.0
- Marketable securities & bonds	56.4	- Accounts payable	380.2
- Accounts receivable	239.3	- Short-term loans from commercial banks	59.0
- Prepaid expenses	11.4		

<sup>1/</sup> The figure would be slightly higher if the 1964 replacement value were used.  
<sup>2/</sup> Total wages and salaries are treated as fixed costs.



**MAJOR PRODUCTS:** Non ferrous metal castings. Annual capacity output 1,500 tons

**REPORTING UNIT:** An enterprise with two establishments both engaging in foundry; capital stock Fr. 2 million and employees 226 as of 1964. Founded in 1935.

I. FIXED CAPITAL ASSETS (end of 1964)		Before deprec.	After deprec.	II. INVENTORIES (end of 1964)	
TOTAL BOOK VALUE (Fr. 000)		7,328	2,654	TOTAL VALUE (Fr. 000)	Actual
1. Land		327	278	1. Direct production materials	630
2. Land improvements		-	-	2. Other input materials	470
3. Buildings		2,634	1,306	3. Work in process	177
4. Other construction works		-	-	4. Finished products	158
5. Machinery & equipment		3,140	527		
6. Tools & instruments		-	-	- Actual inventories of finished products	1.5% of annual gross production
7. Vehicles		71	27	- Seasonal variations:	..
8. Office furniture & fixtures		1,157	515		
<b>DETAIL OF I.5 (No.)</b>		<b>Av. Age (Yr.)</b>	<b>Oper. Cond.</b>	<b>1964 replace. value</b>	
a. Sanding equipment		20	B	..	
b. Moulding equipment		1-10	"	200	
c. Melting ovens		15	"	240	
d. Support ovens		10	"	100	
e. Thermic treatment ovens		10	A	100	
f. Hydraulic central		10	"	100	
g. Shell casing equipment		10	"	30	
h. Shell moulding equipment		2	"	30	
i. Core making machines		8	"	40	
j. Machines for projecting sand		3	"	40	
k. Drying ovens		15	B	200	
l. Scraping machines		10	B	500	

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				
TOTAL EMPLOYED		226			Univ. or higher	Sr. High sch. or eqv.	Other	Unskilled	
1. Direct production (all male)		176			4	1	5	216	
Annual total manhours (000)		(390)	( )	( )					
<b>a. Shell-casting department</b>									
	(Cadree)	3							
	(Operatives)	76							
<b>b. Sand-casting</b>									
	(Cadree)	2							
	(Operatives)	59							
<b>c. Thermal treatment, scraping, finishing and other services</b>									
	(Cadree)	4							
	(Operatives)	32							
<b>2. Auxiliary activities ( m. 28 f. 22 )</b>									
a. Control		50							
	Shell-casting department	11							
	Sand-casting department	11							
	Other common services	10							
b. Administration		18							

EDUCATIONAL BACKGROUND (No. of employees)		- Actual hours worked per annum per direct production worker : 2,217 hours.	
Management	Direct Production		
Semi-skilled	50		
Unskilled	100		
	26		
<b>Auxiliary Activities</b>			
Semi-skilled	-		
Unskilled	39		

- Proportion of motors occupied : 80% on the 1st shift.

- **Technological features:**

a): Manual, mechanized and automated.

b): Manual and mechanized moulding, manual, mechanized and hot box core making, and plate modeling.

- Mechanisation and automation is fair in (b) (except in manual casing), (c), and moulding; excellent in hot box core making, and poor in other core making and in metal modeling.

- **Skilled workers** in direct production are engaged in manual moulding, core making, plate modeling and finishing and adjusting of castings. Those in auxiliary activities are in administration, control, laboratory, maintenance (mechanics and electricians).

Capacity of electr. motors: 300 KW  
 Capacity of elect. furnaces: 600  
 Total load, capacity of trucks: 9 t  
 (h), (i) and (j) were imported; the rest all domestically produced.  
 Average age of machinery is 10 years.  
 Substantial (but gradual) expansion took place only after 1961.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( Fr. 000 ) <u>10,404</u>				TOTAL VALUE OF CONSUMPTION ( Fr. 000 ) <u>5,172</u>			
<u>Product</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Pre-Value (Fr.000)</u>				
				<u>1. Energy &amp; water: total</u>		<u>Quantity Unit consumed (Fr.)</u>	
a. Castings in light alloy:	Ton	505.1	10.21	- Electricity	000 kWh	2,932.5	88.3
- Sand cast				- Ordinary liquid fuel	000 litres	1,053.0	165
b. Castings in light alloy:	"	639.4	7.68	- Water	000 m <sup>3</sup>	331.5	165
- Shell cast				<u>2. Direct production materials: total</u>			<u>4,217</u>
c. Castings in copper - aluminum:	"	2.3	15.53	a. Metal	ton	1,430	2,500
- Sand cast				b. Gravel	"	1,000	18.6
d. Castings in copper - aluminum:	"	21.8	13.79	c. Affineurs	"	20	2,500
- Shell cast				d. Crucibles	000 pte.	100	600
				e. Binding materials	ton	50	..
				f. Others (incl. binding materials)	000 Fr.	513	..
<b>CAPACITY OUTPUT:</b>				<u>3. Packaging materials: total</u>			<u>--</u>
30% higher than the 1964 actual production level, given sufficient demand for the products and additional 50,000 manhours on the 1st shift. Product-mix is flexible according to the pattern of demand. (Optimal pattern of production is not achieved for a variety of reasons.)				<u>4. Work performed by sub-contractors ( )</u>			<u>--</u>
Unit value of product: Market value f.o.b. before sales tax				<u>5. Repairs &amp; maintenance (materials &amp; services purchased)</u>			<u>290</u>
Unit value of material: Market price c.i.f.				<u>6. Material inputs for auxiliary activities</u>			<u>61</u>
- Direct production materials are all of domestic origins and delivered by railroad and road.				<u>7. Non-factor service inputs: total</u>			<u>134</u>
				Transportation, insurance and storage purchased separately Fr. 43,000			
<b>VI. VALUE ADDED TOTAL 1964 ( Fr. 000 ) <u>5,232</u></b>				<b>SELECTED COEFFICIENTS</b>			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Fr. 17,850			
- Employees in direct production		3,300		- Value added per employee: Fr. 23,150			
- Other employees		920		- Annual wage per employee in direct production: Fr. 18,750			
2. Other expenditures for employees		160		- Variable input costs/gross production ratio: 76.8%			
3. Annual depreciation allowances		585		- Gross profit/gross production ratio: 2.2% (at full capacity : 7.2%)			
4. Rental paid (land)		33		- Level of production at break-even point is approximately 90 % of the 1964 actual level.			
5. Sales & other indirect taxes (less subsidies) (not included in total)		[2,270]					
6. Other gross business income (before income tax)		234					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u>				2. <u>Future Plan</u> : None			
From 1961 to 1964				a. Investment proposed for the period 19 to 19			
a. Total Investment ( Fr. 000 )		<u>2,250</u>		Total value ( )			
- Land		-		Of which: - Mach. & equipment		\$	
- Land improvements		-		- Land improv. & bldg.			
- Buildings		700		- Land			
- Other construction work		100		- Others			
- Machinery & equipment		1,300		b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments		-		- Direct production:			
- Vehicles		30		- Auxiliary:			
- Office furniture & fixtures		120		c. Purposes:			
b. Corresponding increase:		<u>From 1961 to 1964</u>					
In no. of employees		181	226				
In annual gross production			+ 40%				
<b>VIII. SUPPLEMENT</b>							

**MAJOR PRODUCTS:** Copper-aluminum foundry products. Annual capacity output is about 420 t of castings on one shift operation.

**EMPLOYING UNIT:** A one-establishment enterprise with capital stock Frs. 550,000 and 183 employees as of 1964. Founded in 1958.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Frs. 000 )	<u>1,863</u>	<u>904</u>
1. Land		
2. Land improvements		
3. Buildings		
4. Other construction works		
5. Machinery & equipment . . . . .	(1964 replacement value of machinery & equipment in the factory totals to Frs. 1,122 million)	
6. Tools & instruments		
7. Vehicles		
8. Office furniture & fixtures		

**DETAIL OF I.5 (No.)**

	Avr. Age (Yr.)	Oper. rate (%)	Depr. (\$)	1964 replace. value (Frs. 000)
a. Foundry equipment No. 1 (with three furnaces)	10	A	..	116
b. Foundry equipment No. 2 (with three furnaces)	10	A	..	103
c. Machine shop with three lathes, nine milling machines, one boring machine & other tools	5-10	A	..	494
d. Finishing shop with ten boring machines, four presses, seven milling machines, three lathes, grinders and others	5-10	A	..	409

**II. INVENTORIES** (end of 1964)

	Actual	Normal
<b>TOTAL VALUE</b> (Frs. 000 )	<u>331</u>	<u>..</u>
1. Direct production materials	331	..
2. Other input materials		
3. Work in process		
4. Finished products		

- Actual inventories of finished products 6.3% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 100 KW

Total load, capacity of trucks: 7 t

- Machinery in the machine shop was partly imported; all others were of domestic makes. Average age of machinery is estimated at about 8 years.

**ENVIRONMENTAL CONDITIONS:** Transportation and public utilities are excellent; community facilities are fair.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	<u>183</u>	-	-
1. Direct production ( .. )	<u>101</u>	-	-
Annual total manhours (000)	(234)	( )	( )
<b>Foundry</b>	<u>48</u>		
a. Foundry	3		
b. Chill-bending	33		
c. Pouring	6		
d. Material handling	1		
e. Cutting of castings	5		
<b>Machining</b>	<u>53</u>		
f. Manipulation	1		
g. Grinding	18		
h. Lathing	4		
i. Boring	16		
j. Pressing	6		
k. Filing	8		
2. Auxiliary activities ( .. )	<u>82</u>		
a. Dispatch	2		
b. Maintenance	1		
c. Provision of tools	20		
d. Administration & production control	59		

**EDUCATIONAL BACKGROUND** (No. of employees)

Educational Level	Univ. or higher		Sr. High sch. or equiv.		Other	
	Management	Direct Production	Management	Direct Production	Management	Direct Production
Skilled	3	2	14	164		
Semi-skilled						
Unskilled						
Auxiliary Activities						
Skilled			13	2		
Semi-skilled						
Unskilled						3
						56

- Actual hours worked per annum per direct production worker: 2,320 hours.

- Proportion of motors occupied: 85%.

- **Technological features:**

- Foundry employs metallic shells.

- Machining by lathe, fraise and boring machine.

- Mechanization is poor; no automation.

- Skilled production workers are manufacturing tools of foundry. Those in auxiliary activities are engaged in the study of tools.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( Frs. 000 ) 5,267

Product	Unit	Quantity	Unit Price	Value ( Frs. )
a. Copper-aluminum foundry products	ton	339	12,000*	
b. Other revenues from productive activities	Frs.000	566	..	

\* Average of individual prices which vary with type and size.

**CAPACITY OUTPUT:** 25 % higher than the 1964 actual production with sufficient demand and additional 25 % manhours on first shift. Product-mix is inflexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price o.i.f.

- Parts of the products are used for the production of goods for exports.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( Frs. 000 ) 1,732

1. **Energy & water: total** (included in 2.)           

	Quantity	Unit	Value ( Frs. )
- Electricity	000 kWh	101	..
- Liquid fuel	000 litre	300	..

2. **Direct production materials: total** 1,515

a. Copper	ton	340	3,100
b. Aluminum	"	40	2,400
c. Others (including energy and materials for auxiliary activities)	Frs. 000	465	..

3. **Finishing materials: total** 4.5

- Paper and paper products	Frs. 000	4.5
- Wooden materials	Frs. 000	4.0

4. **Work performed by sub-contractors** ( .. ) 162.0

5. **Repairs & maintenance (materials & services purchased)** 34.0

6. **Material inputs for auxiliary activities (included in 2.)**

7. **Non-factor service inputs: total** 16.0

- Transportation, insurance & storage	5.5
- Other services purchased	10.5

**VI. VALUE ADDED** TOTAL 1964 ( Frs. 000 ) 3,535

1. Wages & salaries (before income tax)	
- Employees in direct production	1,030
- Other employees	452
2. Other expenditures for employees	558 <sup>1/</sup>
3. Annual depreciation allowance	904
4. Rental paid	6
5. Sales & other indirect taxes (less subsidies) (not included in total)	[884]
6. Other gross business income (before income tax)	585

**SELECTED COEFFICIENTS**

(in 1964 replacement value)

- Mach., equip., instruments & tools/per employee in direct production on 1st shift: Frs. 11,100
- Value added per employee: Frs. 19,300
- Annual wage per employee in direct production: Frs. 10,200
- Variable input costs/gross production ratio: 51.5 %
- Gross profit/gross production ratio: 11.1 % (at full capacity: 18.5 %)
- Level of production at break-even point is approximately 77 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
<b>1. Recent Expansion</b>		
From 1963 to 1964		
a. Total Investment ( Frs. 000 )	179	-
- Land		
- Land improvements		
- Buildings		
- Other construction work	..	
- Machinery & equipment		
- Tools & instruments		
- Vehicles		
- Office furniture & fixtures		
b. Corresponding increase:	From 1963	to 1964
In no. of employees	123	183
In annual gross production		+ 11 %

**2. Future Plan**

a. Investment proposed for the period 1964 to 1968  
Total value ( ) Not decided yet  
Of which: - Mach. & equipment 50 \$  
- Land improv. & bldg. 30  
- Land 20  
- Others -

b. Net increase in no. of employees envisaged for the same period:  
- Direct production: } not decided yet  
- Auxiliary: }

c. Purpose: Introduction of new processes; largely balanced expansion in a new locality.

**VIII. SUPPLEMENT**

<sup>1/</sup> Include social security contributions from wages and salaries.

**MAJOR PRODUCTS:** Aluminium and copper sheets, strips, discs and wire (rollings from ingots). Annual capacity output is 2,200 - 2,300 tons on partial three shift operation (mostly contract work).

**REPORTING UNIT:** An enterprise with total assets Rs. 2.5 million (net worth Rs. 2 million) and 312 employees as of 1965. Founded in 1948.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
TOTAL BOOK VALUE (Rs. 000)	2,195	788
1. Land	-	-
2. Land improvements	-	-
3. Buildings	605	385
4. Other construction works	-	-
5. Machinery & equipment	1,473	341
6. Tools & instruments	-	-
7. Vehicles	26	5
8. Office furniture & fixtures	91	57

**DETAIL OF I.5 (No.)**

	Total Bk. value Rs. 000	Avg. Age (Yr.)	Oper. Cond. (%)	Deprec. rate (%)	1965 replace. value
a. Furnaces (13)	1,180	11	B	10	1,300
b. Moulds for billet casting (9)		11	A+B		
c. Slab milling machine (1)		1	A		
d. Hydraulic circular saw (1)		2	"		
e. Continuous casting machines (1)		2	"		
f. Hot rolling stands (6)		25	B+C		
g. Plate shearing machines (2)		2,25	A,C		
h. Cold rolling stands (3)		20	B+C		
i. Roller leveller (1)		9	A		
j. Bailing presses (2)		5,25	A+C		
k. Metallurgical microscope (1)	7	A			
l. Testing machines (2)	7	"			

**II. INVENTORIES**

	Actual	Normal
TOTAL VALUE (Rs. 000)	488	+ 24 %
1. Direct production materials	428	+ 20
2. Other input materials		
3. Work in process	-	-
4. Finished products	60	+ 55

- Normal inventories of finished products 4.3 % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 1,467 KW

Total load, capacity of trucks: 5 t  
e),f),h) and part of a),g) and j) were domestically made. The others were imported. Average age of machinery itemised (80% of total) is 13 years. The production capacity in the later 1940's was no less than 70% of the present level.

**ENVIRONMENTAL CONDITIONS:** Transportation, excellent. Public utilities and educational facilities, fair. Residential, health and recreational facilities, poor.

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
				Univ. or higher	Sr. High sch. or equiv.	Other	Others
TOTAL EMPLOYED	182	95	35	2	21	281	
1. Direct production ( m. 266 )	149	87	33	2	3	5	2
Annual total manhours ('000)	(374)	(219)	(82)				
a. Melting unit	28	28	13				
b. Annealing department	20	15	12				
c. Hot rolling department	31	10	-				
d. Circle cutting department	29	12	-				
e. Cold rolling department	23	12	-				
f. Repairs and maintenance	18	10	8				
2. Auxiliary activities ( all male )	33	8	2				
Supervisory and managerial staff							

- Actual hours worked in 1965 per direct production workers: 2,509 hours.

- Proportion of productive facilities occupied: for motors 70% on 1st. shift and 50% on 2nd. shift. For furnaces, 50% on 1st. and 2nd. shifts.

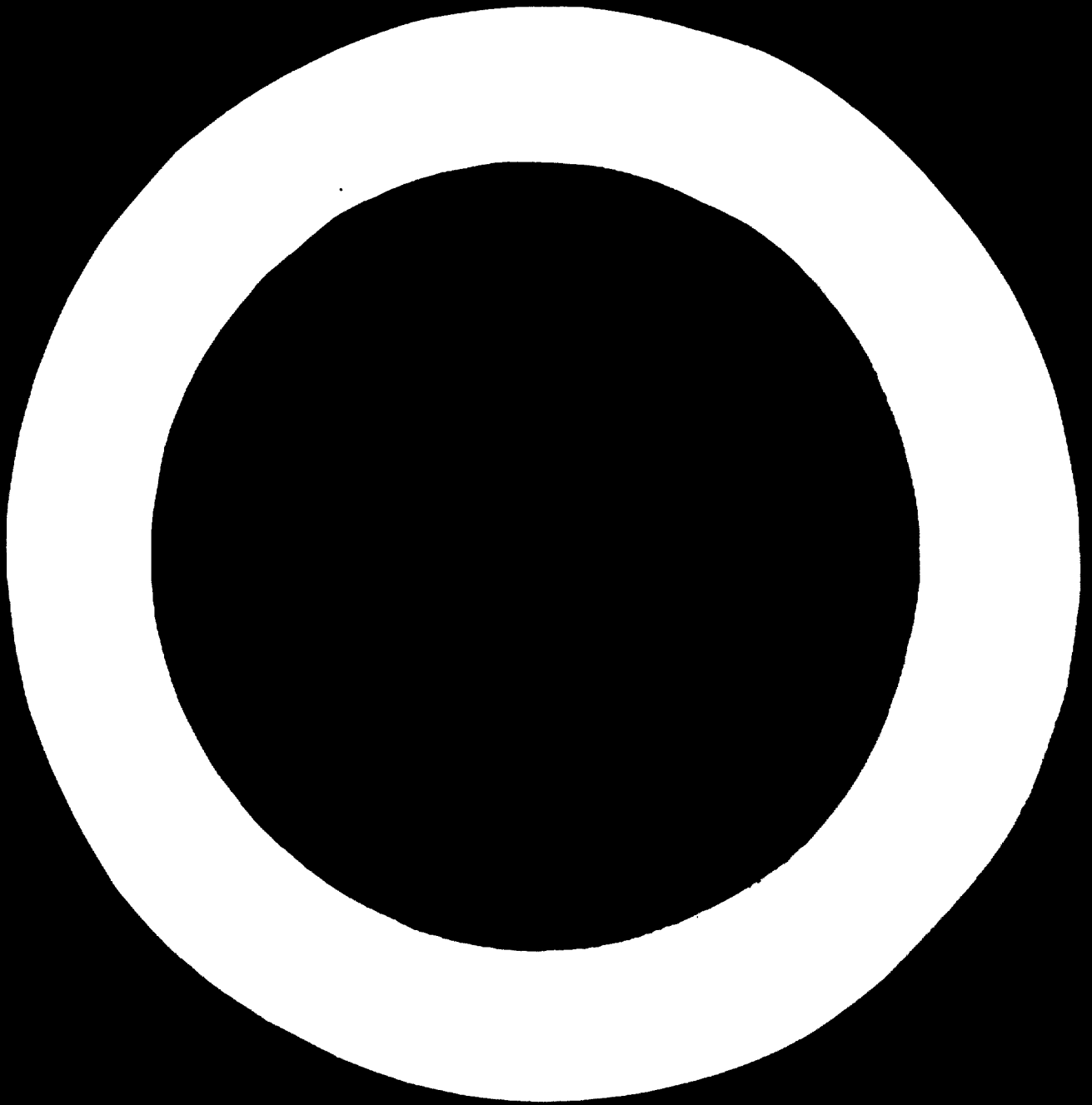
- Degree of mechanisation and automation is generally fair except in (d) which is rated as poor.

- Skilled workers in direct production are turners, fitters, electricians, gauge men, roll men, furnace men etc. These in auxiliary activities are administrative assistants, sales and purchase assistants, accountants etc.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION ( Rs. 000 )				TOTAL VALUE OF CONSUMPTION ( Rs. 000 )			
2,159				1,014			
Product	Unit	Quantity	Unit Value (Rs.)				
a. Aluminum sheets	Kg.	1,405	6.75	- Water	000 lit.	7,262	0.40
b. Aluminum wires	"	714	6.00	- Electricity	000 kWh	1,412	93
c. Aluminum discs and circles	"	54,123	5.00	- Petroleum	000 lit.	7.53	820
d. Copper sheets and strips	"	13,631	5.75	- Other fuel oils	000 lit.	76	180
e. Copper discs and circles	"	3,130	6.40	- Lubricating oil	000 lit.	8.28	1,220
f. Brass sheets and strips	"	19,208	6.20				
g. Brass discs and circles	"	3,283	6.15				
h. Others	000 Rs.	8	..				
i. Contract work (aluminium circles, sheets, etc.)	ton	1,631.9	995	2. Direct production materials: total			
j. Contract work (brass circles, sheets, etc.)	"	4.8		592			
* Rate of commission per ton.				a. Aluminium ingots	ton	57.0	4,210
				b. Copper ingots	"	31.2	6,210
				c. Brass scrap	"	13.0	5,740
				d. Zinc metal	"	9.5	1,700
				e. Aluminum chlorides	"	2.2	1,100
				f. Others	000 Rs.	65	..
				3. Packaging materials: total			
				432 Wooden boxes (Rs. 9.28/box)			
				100 gunny bags (Rs. 0.80/bag)			
				4. Work performed by sub-contractors ( )			
				5. Repairs & maintenance (materials)			
				6. Material inputs for auxiliary activities			
				Stationery and printing			
				7. Non-factor service inputs: total			
				96			
CAPACITY OUTPUT: 30% higher than the 1965 actual production level with additional man-hours of 12,000 each on 1st. and 2nd. shifts. Underutilisation was due to insufficient supply of raw and intermediate materials. Product mix is flexible.							
Unit value of product: Market value f.o.b. before sales tax							
Unit value of material: Market price o.i.f.							
- Aluminum discs and circles are partly exported.							
- Copper ingots and zinc metal are directly imported and delivered by road, railroad and sea. The rest are of domestic origin but have considerable import contents. Delivery is by railroad and road.							
VI. VALUE ADDED TOTAL 1965 ( Rs. 000 )				SELECTED COEFFICIENTS			
1,145							
1. Wages & salaries (before income tax)		729		- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 9,890			
- Employees in direct production		(..)		- Value added per employee: Rs. 3,670			
- Other employees		(..)		- Annual wage per employee in direct production: Rs. 2,340 <sup>2/</sup>			
2. Other expenditures for employees		85		- Variable input costs/gross production ratio: 66.9%			
3. Annual depreciation allowance		89		- Gross profit/gross production ratio: 11.2%			
4. Rental paid		-		- (at full capacity : 16.2%)			
5. Sales & other indirect taxes (less subsidies) (not included in total)		[32]		- Level of production at break-even point is approximately 66% of the 1965 actual level.			
6. Other gross business income (before income tax)		242					
VII. EXPANSION: HISTORY & PLAN							
1. Recent Expansion		Gross acquisition	Scrapped or sold	2. Future Plan			
From 1963 to 1965				a. Investment proposed for the period 1966 to 1969			
a. Total Investment (Rs. 000)		194		Total value (Rs. million)		2	
- Land		-		Of which: - Mach. & equipment		100	%
- Land improvements		-		- Land improv. & bldg.		-	
- Buildings		5		- Land		-	
- Other construction work		-		- Others		-	
- Machinery & equipment		185		b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments		-		- Direct production		-	
- Vehicles		-		- Auxiliary		-	
- Office furniture & fixtures		4		c. Purposes:			
b. Corresponding increases:		From 1963 to 1965		Introduction of aluminium strips & continuous casting process; modernising the processes of melting, casting and rolling; improvement and diversification of the existing products.			
In no. of employees		297	312				
In annual gross production (Rs. 000)		1,987	2,159				
VIII. SUPPLEMENT				Structure of liquid assets and short-term liabilities (end of 1965; Rs. 000).			
		Cash on hand and in bank	130			Taxes payable	2
		Accounts receivable	739			Accounts payable	354
		Loans and advances	270				
1/	10% higher in terms of the 1965 replacement value.						
2/	Wages and salaries divided by total number of employees.						
3/	80% of wages and salaries are considered as variable costs.						

An enterprise manufacturing drawn non-ferrous metal products. Annual capacity output is about 20,000 t of cables, insulated conductors and dynamo wires, copper and copper alloy products, aluminium, aluminium-ferrite, and steel ropes. About 10% of the materials (rubber, tin, steel wire, etc.) are imported, and 17% of products are exported. Founded in 1921. Located near the source of raw material supply.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)																																																						
				1953-54	1955-57	1958-60	1961-63																																																			
TOTAL (Drs. million)		4,145	4,613	56	633	695	1,222																																																			
Buildings & land improvements		1,041	1,353	57	236	274	637																																																			
Machinery & equipment		3,104	3,260																																																							
Other capital assets		-	-																																																							
Major machinery crucial for determining the overall production capacity: <ul style="list-style-type: none"> <li>- Copper blocks: Schmidt's furnaces (3 shifts)</li> <li>- Brass blocks: Induction furnaces (3 shifts)</li> <li>- Cables and conductors: Semi-automatic machines of small capacity for rolling, drawing, winding and insulating (partly 2 shifts).</li> <li>- Steel, aluminium and copper ropes: Semi-automatic machines for winding. (2 shifts)</li> </ul> - 30% of machinery was imported.				Calculated average age of fixed assets: <u>7.3</u> years																																																						
II. LABOUR (1963) TOTAL no. of employees: <u>1,640</u>				<b>Electric motors:</b> Total installed capacity: <u>2,000</u> KW Of which actually operated in 1963: _____ 1st shift <u>100</u> %; 2nd shift <u>95</u> %; 3rd shift <u>80</u> %																																																						
1. Factory workers:		1st shift	2nd shift	<b>Technological features:</b> Castings, rolling and drawing of copper; manufacture of steel and copper ropes, extrusion of rubber and plastic materials; mechanical processing of papers and cotton. The degree of mechanization and automation is no higher than the Yugoslav standard.																																																						
Total <u>1,209</u> persons		<u>528</u>	<u>422</u>	<b>Educational background of workers:</b>																																																						
( <u>2,965</u> thous. manhrs. )		( <u>1,296</u> )	( <u>1,036</u> )	<table border="1"> <thead> <tr> <th></th> <th>Techn.</th> <th>Spec.</th> <th>Low</th> <th>Others</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Univ. or higher</td> <td>24</td> <td>6</td> <td>2</td> <td>1</td> <td><u>33</u></td> </tr> <tr> <td>Tech. Higher sch.</td> <td>3</td> <td>4</td> <td>1</td> <td>1</td> <td><u>9</u></td> </tr> <tr> <td>Secondary sch.</td> <td>70</td> <td>26</td> <td>-</td> <td>9</td> <td><u>105</u></td> </tr> <tr> <td>Primary school</td> <td>-</td> <td>-</td> <td>-</td> <td>1,493</td> <td><u>1,493</u></td> </tr> </tbody> </table>					Techn.	Spec.	Low	Others	Total	Univ. or higher	24	6	2	1	<u>33</u>	Tech. Higher sch.	3	4	1	1	<u>9</u>	Secondary sch.	70	26	-	9	<u>105</u>	Primary school	-	-	-	1,493	<u>1,493</u>																					
	Techn.	Spec.	Low	Others	Total																																																					
Univ. or higher	24	6	2	1	<u>33</u>																																																					
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Primary school	-	-	-	1,493	<u>1,493</u>																																																					
- Cable department		221	183	<b>IV. INTERMEDIATE INPUTS</b>																																																						
- Metallurgical department		112	93	<table border="1"> <thead> <tr> <th></th> <th>Quantity</th> <th>Value (Drs. Million)</th> </tr> </thead> <tbody> <tr> <td>TOTAL actual consumption 1963</td> <td></td> <td><u>11,034</u></td> </tr> <tr> <td>1. Energy inputs: total</td> <td></td> <td><u>218</u></td> </tr> <tr> <td>- Electricity</td> <td></td> <td><u>127</u></td> </tr> <tr> <td>- Brown coal</td> <td>8,218 MWH</td> <td><u>22</u></td> </tr> <tr> <td>- Petroleum</td> <td>3,974 t</td> <td><u>69</u></td> </tr> <tr> <td>- Petroleum</td> <td>873 t</td> <td><u>69</u></td> </tr> <tr> <td>2. Major production materials: total*</td> <td></td> <td><u>7,987</u></td> </tr> <tr> <td>- Copper</td> <td>6,799 t</td> <td><u>3,739</u></td> </tr> <tr> <td>- Lead</td> <td>369 t</td> <td><u>61</u></td> </tr> <tr> <td>- Steel wire</td> <td>3,074 t</td> <td><u>851</u></td> </tr> <tr> <td>- Polyvinyl-chloride masses</td> <td>2,022 t</td> <td><u>1,173</u></td> </tr> <tr> <td>- Rubber</td> <td>278 t</td> <td><u>140</u></td> </tr> <tr> <td>- Aluminium wire</td> <td>1,321 t</td> <td><u>727</u></td> </tr> <tr> <td>- Zinc</td> <td>496 t</td> <td><u>95</u></td> </tr> <tr> <td>- Tin</td> <td>87 t</td> <td><u>191</u></td> </tr> <tr> <td>- Others</td> <td></td> <td><u>1,010</u></td> </tr> </tbody> </table>					Quantity	Value (Drs. Million)	TOTAL actual consumption 1963		<u>11,034</u>	1. Energy inputs: total		<u>218</u>	- Electricity		<u>127</u>	- Brown coal	8,218 MWH	<u>22</u>	- Petroleum	3,974 t	<u>69</u>	- Petroleum	873 t	<u>69</u>	2. Major production materials: total*		<u>7,987</u>	- Copper	6,799 t	<u>3,739</u>	- Lead	369 t	<u>61</u>	- Steel wire	3,074 t	<u>851</u>	- Polyvinyl-chloride masses	2,022 t	<u>1,173</u>	- Rubber	278 t	<u>140</u>	- Aluminium wire	1,321 t	<u>727</u>	- Zinc	496 t	<u>95</u>	- Tin	87 t	<u>191</u>	- Others		<u>1,010</u>
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- Rops department		54	45	* Not including those internally supplied.																																																						
- Maintenance		72	60	3. Repairs & maintenance: total <u>193</u>																																																						
- Control		29	23	4. Other material & non-factor service inputs <u>2,636</u>																																																						
- Transport		40	18	<b>V. VALUE ADDED (1963) (Drs. Million)</b>																																																						
2. Non-factory workers: <u>431</u> persons				TOTAL (except turnover tax) <u>3,664</u>																																																						
( <u>712</u> thous. manhours )				- Wages of factory workers <u>697</u> - Salaries of non-factory workers <u>338</u> - Depreciation <u>304</u> - Interests paid <u>489</u> - Other accumulation <u>1,836</u> (Turnover tax) <u>1,457</u>																																																						
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)																																																							
TOTAL actual revenue output 1963*			<u>16,155</u>																																																							
- Cast non-ferrous metals 1/		890 t	<u>610</u>																																																							
- Rolled copper products 1/		1,050 t	<u>739</u>																																																							
- Rolled brass products 1/		1,700 t	<u>600</u>																																																							
- Drawn aluminium wire 1/		1,073 t	<u>1,267</u>																																																							
- Drawn copper wire		2,608 t	<u>3,064</u>																																																							
- Drawn copper bars, tubes & sections		224 t	<u>379</u>																																																							
- Other drawn copper products		405 t	<u>504</u>																																																							
- Drawn brass wire		47 t	<u>50</u>																																																							
- Drawn brass bars, tubes & sections		954 t	<u>643</u>																																																							
- Bare aluminium & Al-Pe ropes		1,566 t	<u>891</u>																																																							
- Bare copper ropes 1/		2,318 t	<u>1,898</u>																																																							
- Steel ropes		2,587 t	<u>1,270</u>																																																							
- Other insulated conductors		3,150 t	<u>3,823</u>																																																							
- Dynamo wires from cotton paper		961 t	<u>1,420</u>																																																							
- Lead cable with polyvinylchloride insulation		666 t	<u>377</u>																																																							
- Other cables for high voltage current		4,505 t	<u>3,734</u>																																																							
1/ Internal use.		* Excluding internal use but including turnover tax on sold products.																																																								
Capacity output:		Overall rate of utilisation is 80%.																																																								
- Insulated conductors, cables 11,000 t and dynamo wire																																																										
- Copper & copper alloy products 4,100 t																																																										
- Aluminium, aluminium-ferrite, and steel ropes 5,000 t																																																										
Underutilization due to insufficient supply of raw material full capacity operation would require 800 workers on 1st shift.																																																										
VI. SUPPLEMENT Future plans: <ul style="list-style-type: none"> <li>a) Introduction of new products; insulated materials (PEI) and high tension cables.</li> <li>b) Introduction of process of continuous impregnation.</li> <li>c) Purchase of new extruders for plastic materials.</li> <li>d) Purchase of more up-to-date auxiliary machinery and raising mechanization by about 30%.</li> </ul> 1/ Of which Drs. 709 million was retained by the enterprise as its own fund. 2/ Half of IV.4 is regarded as variable cost. 3/ Gross accumulation includes interests paid.				<b>SELECTED COEFFICIENTS</b> - Mach. & equip. per factory worker on 1st shift: Drs. 6,178,000 - Value added per employee: Drs. 2,234,000 - Annual wage per factory worker: Drs. 576,500 - Variable input cost/gross production ratio: <u>2/ 63.6 %</u> - Gross accumulation/gross production ratio: <u>3/ 15.8 %</u> (at full capacity) <u>2/ 18.9 %</u> - Level of production at break-even point: <u>2/ 48 %</u> of the 1963 actual level.																																																						





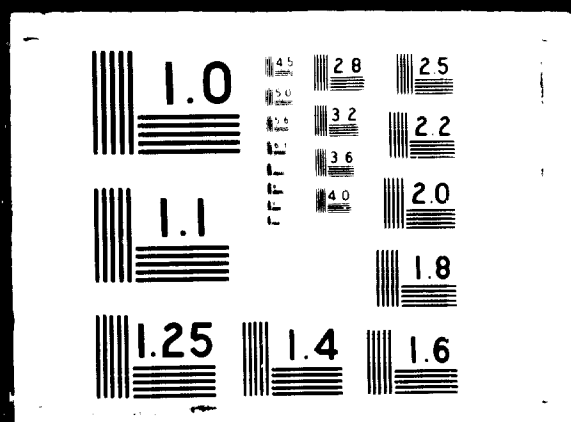


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Frans : 350 - (7)

**MAJOR PRODUCTS:** Boilers, electronic fixtures, other metal fittings and photographic apparatus. Capable of producing Frs. 12 million worth above products (or equivalent of some 550 t of ferrous and non-ferrous metals) on one shift.

**REPORTING UNIT:** An independent one-establishment enterprise with capital stock Frs. 0.9 million and employees 300 as of 1964. Founded in 1932.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( Frs. 000 )	<u>4,104</u>	<u>1,253</u>
1. Land (6000 m <sup>2</sup> )	104	104
2. Land improvements	-	-
3. Buildings (8,500 m <sup>2</sup> )	1,173	476
4. Other construction works	-	-
5. Machinery & equipment	2,345	338
6. Tools & instruments	308	308
7. Vehicles	33	9
8. Office furniture & fixtures	140	19

**DETAIL OF I.5 (No.)**

Polishers (3); Lathes (3); Milling machines (2); Presses: 18 t (5), 32 t (6), 50 t (1); Folding machines (2); Shearing machine (1); Polishing wheels (4); Painting cabins (5); Painting tunnel oven (1); Argon welding posts (4); Automators (50); Drills (10); Telsflex chain (1); Group compressor (1).

**II. INVENTORIES**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> ( Frs. 000 )	<u>2,175</u>	<u>..</u>
1. Direct production materials	368	..
2. Other input materials	-	..
3. Work in process	994	- 20
4. Finished products	814	- 50
- Normal inventories of finished products 4.2 % of annual gross production		
- Seasonal variations: ..		

Capacity of electr. motors: 350 kW  
Capacity of electr. furnaces similar 3.5 kW  
Total load, capacity of trucks: 4 t

- A substantial expansion took place during 1956 - 1958. Prior to this expansion the level of employment and output were 73 % and 38 % respectively, of the 1964 levels.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities, excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	<u>300</u>	-	-
1. Direct production ( all male )	<u>252</u>	-	-
Annual total manhours (000)	(450.2)	( )	( )
a. Metal cutting	10	-	-
b. Metal forming	17	-	-
c. Boiler assembly	35	-	-
d. Plastic assembly	3	-	-
e. General mechanics	29	-	-
f. Photo assembly	83	-	-
g. Electronic assembly	46	-	-
h. Maintenance	9	-	-
i. Control	10	-	-
j. Tooling	10	-	-

2. Auxiliary activities ( m.40, f.8 ) 48**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	
		Other	Other
Engi- ners			
<b>TOTAL</b>	2	4	294
<b>Management</b>			
-	2	1	15
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	30
<b>Semi-skilled</b>			
-	-	-	10
<b>Unskilled</b>			
-	-	-	212
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	3	-	21
<b>Semi-skilled</b>			
-	-	-	6
<b>Unskilled</b>			
-	-	-	-

- Actual hours worked per annum per direct production worker: 1,787 hours.

- Proportion of motors occupied: 70 %.

**Technological features:**

(o): Aluminum boiler works. Poorly mechanised but fairly automated.

(f) & (g): Assembly in series. Fairly mechanised and automated.

- Skilled workers in direct production are tool men and general mechanics.

Those in auxiliary activities are engaged in research.

IV. ANNUAL PRODUCTION (1964)			
TOTAL VALUE OF PRODUCTION ( Frs. 000 ) <u>7,740</u>			
Product	Unit	Quantity Produced	Unit Value ( Fr. )
a. Photographic apparatus	000 units	233	7,680
b. Boilers	unit	2,286	7.0
c. Electronic fixtures	000 Frs.	2,841	..
d. Secondary products	"	1,440	..
e. Scraps	"	29	..

**CAPACITY OUTPUT:** 50% higher than the 1964 actual production level with no addition to manhours. The underutilization is mainly due to seasonally insufficient demand for the products. Proportion of the production of gas boilers and electronic fixtures can be easily changed.

Unit value of product: Market value f.o.b. after sales tax  
 Unit value of material: Market price c.i.f.  
 - Brass and copper contain a significant amount of imports. Direct production materials are all delivered by road.

V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF CONSUMPTION ( Frs. 000 ) <u>2,835</u>			
<b>1. Energy &amp; water: total</b> <u>102</u>			
	Unit	Quantity consumed	Unit value ( Fr. )
- Coal	ton	8.0	258.2
- Electricity	000 kWh	438.8	95.5
- Liquid fuel	000 l	62.0	158.0
- Gas	000 m <sup>3</sup>	181.8	191.0
- Water	"	16.3	800.0
<b>2. Direct production materials: total</b> <u>2,544</u>			
a. Steel	ton	224	800
b. Stainless steel	ton	28	9,000
c. Aluminum	ton	100	3,850
d. Brass and copper	ton	10	8,000
e. Others			
(including item 3. & 6.)		000 Frs.	1,648 ..
<b>3. Packaging materials: total</b> (included in 2.e.) _____			
<b>4. Work performed by sub-contractors</b> ( ) _____			
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> <u>57</u>			
<b>6. Material inputs for auxiliary activities</b> (included in 2.e.) _____			
<b>7. Non-factor service inputs: total</b> <u>132</u>			
Of which transportation, insurance and storage purchased separately Frs. 69,000.			

VI. VALUE ADDED		TOTAL 1964 ( Frs. 000 ) <u>4,905</u>
1. Wages & salaries (before income tax)		
- Employees in direct production	4,114	
- Other employees	499	
2. Other expenditures for employees	-	
3. Annual depreciation allowance (incl. royalties)	252	
4. Rental paid (capital assets other than Buildings.)	40	
5. Sales & other indirect taxes (less subsidies) (not included in total)	[2,060]	
6. Other gross business income (before income tax)	- 1/	

**SELECTED COEFFICIENTS**

- Mech., equip., instruments & tools per employee in direct production on 1st shift: Frs. 10,535
- Value added per employee: Frs. 16,345
- Annual wage per employee in direct production: Frs. 16,340
- Variable input costs/gross production ratio: 34.2% 2/
- Gross profit/gross production ratio: - (at full capacity: 21.9%)
- Level of production at break-even point is approximately 100% of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN			Gross acquisition
<b>1. Recent Expansion</b>			
From 1965 to 1964			
a. Total Investment ( Frs. 000 )		<u>649</u>	
- Land		-	
- Land improvements		-	
- Buildings		-	
- Other construction work		-	
- Machinery & equipment		324 3/	
- Tools & instruments		308	
- Vehicles		4	
- Office furniture & fixtures		13	
<b>c. Corresponding increase:</b>			
In no. of employees		248	300
In annual gross production ( Frs. 000 ) (incl. tax)		7,125	9,800

2. Future Plan	
<b>a. Investment proposed for the period 1964 to 1970</b>	
Total value ( Frs. 000 )	<u>1,000</u>
Of which: - Mech. & equipment	75 \$
- Land improv. & bldg.	25
- Land	-
- Others	-
<b>b. Net increase in no. of employees envisaged for the same period:</b>	
- Direct production:	550
- Auxiliary:	150
<b>c. Purpose:</b> Introduction of new products; other selective expansion of existing capacity concentrating on electronics. Overhauling part of existing shop; and largely balanced expansion of existing capacity in same location.	

**VIII. SUPPLEMENT**

1/ The establishment reported zero profit for the year of 1964. In 1963, when the revenue output was on the whole comparable to the 1964 level but wage costs about 10% lower than in 1964, the enterprise had a small positive figure (Frs. 61,000) for VI.6. Actually, it is believed that the unspecified cost of Frs. 1.6 million in V.2.e) "Others" includes interests paid and non-wage payments to employees.

2/ Excluding wages and salaries from the variable cost.

3/ Of which Frs. 103,000 was the cost of internal works.

Frans : 350 - (8)

**MAJOR PRODUCTS:** Metal frames, locksmitheries, joinery, zinc and copper wares, etc. Capable of producing annually Frs. 6 million worth of these products (including some 30 % commission work) on one shift.

**REPORTING UNIT:** A one-establishment enterprise with capital stock Frs. 242,000 and employees 127 as of 1964. Founded in 1899; factory recently rebuilt.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( Frs. 000 )	1,073	741
1. Land (8,000 m <sup>2</sup> )	121	121
2. Land improvements	-	-
3. Buildings (total floor space: 4,000 m <sup>2</sup> )	135	75
4. Other construction works	150	79
5. Machinery & equipment	558	386
6. Tools & instruments	-	-
7. Vehicles	73	59
8. Office furniture & fixtures	36	21

**DETAIL OF I.5 (No.)**

	Total Bk. value bef. depr.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Folding press (1)	115	0.5	A	..	100
b. Arc welding plant (20)	100	5	A	..	70
c. Stamping machines (5)	95	2-10	A	..	60
d. Compressors (2)	50	1-2	A	..	45
e. Guillotine shear (1)	55	2	A	..	40
f. Transformer (1)	48	4	A	..	40
g. Power generating set (1)	33	0.5	A	..	30
(subtotal)	(496)				(385)

\* Interpreted as "resale value".

**II. INVENTORY**

	Actual	Normal
<b>TOTAL VALUE</b> ( Frs. 000 )	5,127	...
1. Direct production materials	397	
2. Other input materials	-	
3. Work in process	1,729	
4. Finished products	-	

- Actual inventories of finished products 32.1% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 100 KW

Total load, capacity of trucks: 60 t

- All the machines itemized are of local manufacture. The factory has recently been rebuilt on a new site.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities are all excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	127	-	-
1. Direct production ( all male )	114	-	-
Annual total manhours (000)	(279)	( )	( )
(Including supervisors and cadres working at the factory)			
a. Planning	3		
b. Supply	7		
c. Reproduction	3		
d. Boring	3		
e. Stamping	6		
f. Rivetting	2		
g. Assembly	36		
h. Painting	4		
i. Mounting	42		
j. Forwarding	2		
k. Others	6		
2. Auxiliary activities (a. 12; f. 1)	13		

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or other	Other	Unskilled
2	1	8	116
<b>Management (incl. supervision)</b>			
2	1	3	5
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	2	3
<b>Semi-skilled</b>			
-	-	-	70
<b>Unskilled</b>			
-	-	-	31
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	-	3	7
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	-	-

- Average working hours per annum per direct production worker: 2,440 hours.

- Degree of mechanization is fair in the metal carpentry (frames), locksmith's shop and metal joinery shop; poor in the copper ware shop.

- Skilled workers in direct production are mostly in shops (a) to (e), (g) and (i). Transport crew are classified as auxiliary workers.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)					
TOTAL VALUE OF PRODUCTION ( Frs. 000 ) <u>5,386</u>				TOTAL VALUE OF CONSUMPTION ( Frs. 000 ) <u>3,177</u>					
<u>Product</u>	<u>Unit</u>	<u>Quantity Produced</u>	<u>Unit Value ( Frs. )</u>	<u>1. Energy &amp; water: total</u>		<u>Quantity consumed</u>	<u>Unit value ( Frs. )</u>		
a. Metal frames	ton	1,536	1,700	- Electricity	000 kWh	128	160		
b. Locksmith's works	}			- Coal	ton	4.8	190		
c. Metal joinery				}	}	- Liquid fuel	cu.m.	43.2	180
d. Various coverings						ton	230	3,500	- Water
e. Zinc wares				<u>2. Direct production materials: total*</u> <u>2,530</u>					
f. Sheet metal products, copper wares & other miscellaneous metal products	(000 Frs)		1,020	a. Metals (iron & steel, zinc, copper, etc.)		..	..		
g. Ferrrous scraps	ton	52	150	b. Oxygen	cu.m.	3,639	1.58		
h. Revenue from commission work	(000 Frs)		1,700	c. Acetylene	cu.m.	806	5.96		
i. Revenue from repair work	(000 Frs)		103	d. Others		..	..		
<b>CAPACITY OUTPUT:</b> 10 % higher than the 1964 actual production level. The underutilization is mostly due to difficulties in materials handling.				* Including packaging materials and materials used for auxiliary activities.					
Unit value of product: Market value f.o.b. before sales tax Unit value of material: Market price c.i.f.				<u>3. Packaging materials: total</u> (included in P.M.)					
- Direct production materials are all of domestic origins; freight rates amount to 3 % of the c.i.f. value on the average; delivery by road and railroad.				<u>4. Work performed by sub-contractors ( .. )</u> <u>215</u>					
				<u>5. Repairs &amp; maintenance (materials &amp; services purchased)</u> <u>95</u>					
				<u>6. Material inputs for auxiliary activities</u> (included in P.M.)					
				<u>7. Non-factor service inputs: total</u> <u>306</u>					
				Of which transport, insurance and storage services purchased separately <u>240</u>					
<b>VI. VALUE ADDED TOTAL 1964 ( Frs. 000 ) <u>2,209</u></b>				<b>SELECTED COEFFICIENTS</b>					
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift:	Fr.	4,900			
- Employees in direct production		1,181		- Value added per employee:	Fr.	17,394			
- Other employees		619		- Annual wage per employee in direct production:	Fr.	10,370			
2. Other expenditures for employees		204		- Variable input costs/gross production ratio:		73.5 %			
3. Annual depreciation allowances		70		- Gross profit/gross production ratio:		2.5 %			
4. Rental paid		-		(at full capacity:)		4.7 %			
5. Sales & other indirect taxes (less subsidies) (not included in total)		[663]		- Level of production at break-even point is approximately		91 %	of the 1964 actual level.		
6. Other gross business income (before income tax)		135							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>2. Future Plan</b>					
1. <u>Recent Expansion</u>				a. Investment proposed for the period 1966 to 1967					
From 1963 to 1964				Total value ( Frs. 000 )		<u>2,400</u>			
a. Total Investment ( Frs. 000 )		<u>630</u>	<u>1,921</u>	Of which: - Mach. & equipment		30	%		
- Land				- Land improv. & bldg.		50			
- Land improvements		507 1/2	1,900	- Land		12			
- Buildings				- Others		8			
- Other construction work		4		b. Net increase in no. of employees envisaged for the same period:					
- Machinery & equipment		220		- Direct production:		14			
- Tools & instruments		35		- Auxiliary:		1			
- Vehicles		50	21	c. Purpose: Selective expansion of metal frames, locksmith, joinery, sheet metal products and copper wares.					
- Office furniture & fixtures		14							
b. Corresponding increase:		<u>From 1963</u>	<u>to 1964</u>						
In no. of employees		110	127						
In annual gross production			+ 30 %						
<b>VIII. SUPPLEMENT</b>				1/ Includes non-capitalised expenditure on buildings.					

France : 350 - (9)

**MAJOR PRODUCTS:** Sheet metal cuttings and stampings (for automobile and tractor parts). Capable of processing 2,000 t of steel sheet annually on one shift operation.

**EMPLOYING UNIT:** Branch of a 2-establishment enterprise with capital stock Frs. 4 million and employees 800 as of 1964. Founded in 1938. The other establishment is also a stamping factory producing parts for the same automobile manufacturers.

I. FIXED CAPITAL ASSETS (end of 1964)		Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( Frs. 000 )		10,703	4,832
1. Land		2,027	2,027
2. Land improvements		-	-
3. Buildings		2,980	1,934
4. Other construction works		-	-
5. Machinery & equipment )		5,310	715
6. Tools & instruments )		113	58
7. Vehicles		273	50
8. Office furniture & fixtures			

**DETAIL OF 1.5 (No.)**

	Avg. Age (Yr.)	Oper. Cond.
a. Machines for tool making	12	A
b. Presses	10-25	A
c. Painting equipment		A
d. Thermal treatment equipment		A
e. Equipment for control and metrology		A

II. INVENTORY (end of 1964)		
	Actual	Normal
<b>TOTAL VALUE</b> (Frs. 000 )	2,322	.. \$
1. Direct production materials	856	..
2. Other input materials	-	..
3. Work in process	912	..
4. Finished products	554	..

- Actual inventories of finished products 3.6 % of annual gross production (incl. value added tax)  
 - Seasonal variations: ..

Capacity of electr. motors: 750 KW

Total load, capacity of trucks: 15 t

- All the machines itemized are of domestic make.

- Since 1961 when the factory was rejuvenated, the employment and output have remained practically at the same level.

**GENERAL CONDITIONS:** Transportation and public utilities are excellent. Among community facilities, education are excellent; residential and health are fair.

III. LABOUR (1964 average)	1st shift	2nd shift	3rd shift
	<b>TOTAL EMPLOYED</b>	305	
1. Direct production ( F: 170 )	200		
Annual total manhours (000)	300	( )	( )
a. Tool manufacturing	35		
b. Sheet metal shop	60		
c. Stamping	105		
2. Auxiliary activities (m. 80 f. 25 )	105		

EDUCATIONAL BACKGROUND (No. of employees)			
Engi- neers	Other	Univ. or higher	Sr. High sch. or equiv. Others
		TOTAL	1
<b>Maintenance</b>			
		1	14
<b>Direct Production</b>			
		-	70
		-	40
		-	90
<b>Auxiliary Activities</b>			
		-	70
		-	20
		-	-

- Average working hours per annum per direct production worker: 1,500 hours.

- Proportion of motors occupied: 50% on the 1st shift.

- Degree of mechanization is high for (c) and fair for (a) and (b).

- Skilled workers in direct production are engaged in manufacturing of tools, sheet metal work and tuning of machines. Those in auxiliary activities are for maintenance and administration.

France : 350 - (9)	
<b>IV. ANNUAL PRODUCTION (1964)</b>	
TOTAL VALUE OF PRODUCTION ( Frs. 000 )	13,125
<b>Product</b>	<b>Unit</b> <b>Quantity</b> <b>Unit Value</b>
1. Molding and stamping tools	Frs. 000    1,500    ..
2. Moulders	"    3,000    ..
3. Sheets of sheet metal products	"    6,000    ..
4. Flanged and cut pieces	"    2,000    ..
5. Other primary and secondary products (incl. scrap)	"    2,000    ..
<p>These products are too diversified to list separately; only approximate value of production (including value added tax) are given. Total value of production excludes value added tax, however.</p>	
<b>CAPACITY OUTPUT:</b> Close to the 1964 actual production level.	
<p>This establishment, as well as its sister branch, works for a large automobile manufacturer under a long-term contract.</p>	
<p>Unit value of product: ...  Unit value of material: Market price c.i.f.</p>	
<p>- Products (a) to (d) are partly exported.  - Tool sheet produced domestically with a significant amount of import content; delivery by road.</p>	
<b>VI. VALUE ADDED TOTAL 1964 (Frs. 000) 7,019</b>	
1. Wages & salaries (before income tax)	
- Employees in direct production	6,025
- Other employees	
2. Other expenditures for employees	
3. Annual depreciation allowance	741
4. Rental paid	135
5. Sales & other indirect taxes (less subsidies) (not included in total)	[2,368]
6. Other gross business income (before income tax)	118
<b>V. INTERMEDIATE INPUTS (1964)</b>	
TOTAL VALUE OF CONSUMPTION ( Frs. 000 )	6,106
1. <b>Energy &amp; water: total</b>	158
	<b>Quantity</b> <b>Unit Value</b>
	<b>Unit</b> <b>Consumed</b> <b>(Frs.)</b>
- Electricity	000 Kwh    1,000    100
- Others	Frs. 000    58    ..
2. <b>Direct production materials: total</b>	4,927 *
Steel sheet	ton    2,000    700-3,000
* Including materials for packaging and other auxiliary activities.	
3. <b>Packaging materials: total</b> (included in 2.)	
4. <b>Work performed by sub-contractors</b> ( )	-
5. <b>Repairs &amp; maintenance</b> (materials & services purchased)	325
6. <b>Material inputs for auxiliary activities</b> (included in 2.)	
7. <b>Non-factor service inputs: total</b>	696
Of which Frs. 68,000 are transportation, insurance and storage purchased separately.	
<b>SELECTED COEFFICIENTS</b>	
- Mach., equip., instruments & tools per employee in direct production on 1st shift: Frs. 26,550	
- Value added per employee: Frs. 23,013	
- Annual wage per employee: Frs. 19,754 1/2	
- Variable input costs/gross production ratio: 61.6% 2/	
- Gross profit/gross production ratio: 6.9%	
- Level of production at break-even point is approximately 97 % of the 1964 actual level.	
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>	
1. <b>Recent Expansion</b>	<b>Gross acquisition</b> <b>Scrapped or sold</b>
From 19 64 to 19 65	
a. Total Investment ( Frs. 000 )	1,120
- Land	
- Land improvements	( all on machinery, equipment, tools and instruments)
- Buildings	
- Other construction work	
- Machinery & equipment	
- Tools & instruments	
- Vehicles	
- Office furniture & fixtures	
b. Corresponding increase:	<b>From 19 63 to 19 65</b>
In no. of employees	305    305
In annual gross production (incl. tax) ( Frs. 000 )	1,300    1,500
<b>2. Future Plan</b>	
a. Investment proposed for the period 1964 to 1969	
Total value ( Frs. 000 )	10,000
Of which:	
- Mach. & equipment	80 %
- Land improv. & bldg.	15
- Land	-
- Others	5
b. Net increase in no. of employees envisaged for the same period:	
- Direct production:	70
- Auxiliary:	30
c. Purposes: Introduction of new process and new products and expansion of the tool making shop (lathes, etc.).	
<b>VIII. SUPPLEMENT</b>	
- Excluding "Other business expenditures for employees".	
- Amount of wages and salaries (including other expenditures for employees) is regarded as variable cost.	



France : 350 - (10)

**MAJOR PRODUCTS:** Bolts, nuts, screws and washers. Annual capacity is about 2,300 tons on one shift.**REPORTING UNIT:** A newly founded (in 1965) independent one-establishment enterprise with capital stock Frs. 10,000 and employees 225 as of 1966.**I. FIXED CAPITAL ASSETS** (end of 1966)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( 000 Frs. )	396	284
1. Land	4	4
2. Land improvements	-	-
3. Buildings	61	61
4. Other construction works	-	-
5. Machinery & equipment	305	196
6. Tools & instruments	-	-
7. Vehicles	16	14
8. Office furniture & fixtures	10	9

**DETAIL OF I.5 (No.)**

	Oper. Cond.	1966 replace value (000 Frs.)
1. Bolt making machines (200) (machines de reprise)	B	60-120
2. Presses (horizontal and vertical) (30)	B	15-40
3. Screw-cutting lathes (30)	B	..
4. Tapping machines (20)	B	..

**II. INVENTORY**

(end of 1966)	Actual	Normal
<b>TOTAL VALUE</b> ( 000 Frs. )	1,806	..
1. Direct production materials	272	-
2. Other input materials	-	-
3. Work in process	210	-
4. Finished products	1,324	-

- Actual inventories of finished products 17% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 150 KW

Total load, capacity of trucks: - t

While the initial capacity installation is not quite completed, the establishment has rapidly increased its output.

**ENVIRONMENTAL CONDITIONS:** Transportation and public utilities are excellent; community facilities are fair.**III. LABOUR** (1966 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	225	-	-
1. Direct production ( .. )	205	-	-
Annual total manhours (000)	(450)	( )	( )

1. Production 190

2. Maintenance 15

2. Auxiliary activities ( .. ) 20

1. Management 3

2. Administrative and commercial 17

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
Engi-neers			
<b>TOTAL</b>	17	205	
<b>Management</b>			
1			
<b>Direct Production</b>			
Skilled		64	
Semi-skilled		116	
Unskilled		15	
<b>Auxiliary Activities</b>			
Skilled	13		
Semi-skilled	4		
Unskilled			
-			

- Average working hours per annum per direct production workers: 2,195 hrs.

- Motors are fully occupied.

- Conventional process.

- Skilled workers in direct production are engaged in supervisory jobs and machine maintenance.

IV. ANNUAL PRODUCTION (1966)				V. INTERMEDIATE INPUTS (1966)			
TOTAL VALUE OF PRODUCTION ( 000 Frs. ) 7,210 *				TOTAL VALUE OF CONSUMPTION ( 000 Frs. ) 5,334			
Product	Unit	Quantity Produced ( )	Unit Value ( Frs. )		Quantity consumed ( )	Unit value ( Frs. )	
1. Standard bolts	}	1900	4,000	1. Energy & water: total (included in 2.d.)	108	..	
2. Special bolts				- Electricity			
3. Nuts				2. Direct production materials: total *	4,570		
4. Washers				a. Wire rod	860	700	
5. Screws				b. Drawn steel (round and hexagonal)	720	1,000	
6. Threaded rods				c. Laminated steel	860	700	
7. Special nuts				d. Others *	1,645	..	
* Including miscellaneous revenues				* Including energy costs and materials for auxiliary activities.			
CAPACITY OUTPUT: 20% higher than the 1966 actual production level. Underutilization was largely due to the deficiency in production organization. Additional manhours required for the full capacity production: 10,000 hrs.				3. Packaging materials: total 48 Paper and paper products (Frs. 1.4/kg) Wooden boxes (Frs. 4.3/kg)			
Unit value of product: Market value f.o.b. before sales tax Unit value of material: Market price c.i.f.				4. Work performed by sub-contractors ( )			
- all the products are partly exported.				5. Repairs & maintenance (materials & services purchased) 1,061			
- all direct production materials are domestically sourced and delivered by road.				6. Material inputs for auxiliary activities (included in 2.d.)			
VI. VALUE ADDED TOTAL 1966 ( 000 Frs. ) 1,976				SELECTED COEFFICIENTS			
1. Wages & salaries (before income tax) - Employees in direct production ) 1,184 - Other employees )				- Mech., equip., instruments & tools per employee in direct production : Frs. 1,400			
2. Other expenditures for employees 51				- Value added per employee: Frs. 1,200			
3. Annual depreciation allowance 113				- Annual wage per employee: Frs. 5,000/1			
4. Rental paid 66				- Variable input costs/gross production ratio: 74.2%			
5. Sales & other indirect taxes (less subsidies) (not included in total) [1,500]				- Gross profit/gross production ratio: 1.3% (at full capacity: 5.0%)			
6. Other gross business income (before income tax) 103				- Level of production at break-even point is approximately 75% of the 1966 actual level.			
VII. EXPANSION. HISTORY & PLAN				Gross acquisition or scrapped			
1. Recent Expansion				2. Future Plan : Not available			
From 1965 to 1966				a. Investment proposed for the period 1965 to 1966			
a. Total Investment ( )				Total value ( )			
- Land				Of which: - Mach. & equipment			
- Land improvements				- Land improv. & bldg.			
- Buildings				- Land			
- Other construction work				- Others			
- Machinery & equipment				b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments				- Direct production:			
- Vehicles				- Auxiliary:			
- Office furniture & fixtures				c. Purposes:			
Corresponding increase:				From 1965 to 1966			
In no. of employees in direct prod. 50 200				In annual gross production ( 000 Frs. ) 1,321 7,210			
VIII. SUPPLEMENT				1/ Wages and salaries divided by total number of employees.			
				2/ Total wages are included in the variable costs.			
Erratum to France 350 - (6), PROFILES VOL. I.							
Wages and salaries for employees in direct production given in VI (Frs. 4,749,000) include those for workers engaging in repair and maintenance and material handling. Accordingly, annual wage per employee in direct production in SELECTED COEFFICIENTS should be revised to Fr. 15,500.							

France : 350 - (11)

**MAJOR PRODUCTS:** Bath-tubs and tanks of cast iron. Annual capacity output is over 200,000 pieces of various models of bath-tubs on partial three shifts.

**REPORTING UNIT:** Branch of a fourteen-establishment enterprise with capital stock about France 50 million and employees 9,200 as of 1964. This branch was founded in 1900. (See VIII for activities of other branches)

**I. FIXED CAPITAL ASSETS** (end of 1964)

TOTAL BOOK VALUE (Fr.s.thous.)	Before deprec.	After deprec.
	7,935	1,368
1. Land (56,379 m <sup>2</sup> )	104	104
2. Land improvements	-	-
3. Buildings (total floor space: 16,820 m <sup>2</sup> )	2,194	430
4. Other construction works	497	110
5. Machinery & equipment	4,785	359
6. Tools & instruments	-	-
7. Vehicles	343	64
8. Office furniture & fixtures	12	1

Total Bk. value bef. depr. 4,572  
 Avr. Age (Yr.) 2-20  
 Oper. Cond. 1, B

**DETAIL OF I.5 (No.)****Production Equipment**

of which:

	No.	Age (Yr.)	Oper. Cond.
a. Sand Brinder EM4	100	3	A
b. Enamel Brinder GOKg	19	7	A
c. Boulding machines	289	5	A
d. Trimming machines "Norton"	7	18	B
e. Shaking machines	124	12	B
f. Rotatory ovens 400 Kg	11	14	B
g. Rotatory ovens for enamel	26	12	B
h. Enamel driers	4	17	B
i. Enamel drying room	21	11	A
j. Magnetic enamel separator	5	10	A
k. Machines "Durlach"	225	15	B
l. Centrifugal drainer (for enamel)	9	15	B
m. Enamel mixer	4	12	A
n. Scouring tunnel (before coring)	344	7	A

**Other Equipment:** Installations for enamel, desanding, trimming, foundry, yard for casting, coring, materials handling, and the electric equipment (transformers, motors, etc.).

**II. INVENTORIES**

(end of 1964)	Actual	Normal
TOTAL VALUE (Fr.s.thous.)	32,207	..
1. Direct production materials	3,227	
2. Other input materials	4,750	
3. Work in process	-	
4. Finished products	24,230	

- Actual inventories of finished products 41.2% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 1,320 KW

Total load, capacity of trucks: - t

**EXTERNAL CONDITIONS:** Long distances transportation, electricity and gas facilities, excellent; water and residential facilities, fair; local transportation, health, recreation and educational facilities, poor.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED 577	138	142	119
1. Direct production (m. 5, f. 15)	165	172	178
Annual total manhours (000)	(1,121)	(1,121)	(1,121)
a. Melting	5	5	4
b. Sanding	9	9	-
c. Modelling	1	1	1
d. Coring	-	-	13
e. Casting	44	44	19
f. Pouring	6	6	-
g. Discharging	8	8	-
h. Desanding	3	3	-
i. Trimming	17	17	2
j. Polishing	6	6	-
k. Hammering	4	4	-
l. Enamelling	28	28	27
m. Enamel	11	11	15
n. Materials handling	4	4	2
o. Maintenance of equipment	6	13	5
p. Warehouse	13	13	36
2. Auxiliary activities (m. 45, f. 17)	7	11	44
a. Administration and commercial services	-	-	30
b. Control	5	5	4
c. Other miscellaneous services	2	6	4

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other
Engi-neers		
Other		
TOTAL	4	569
Management	4	1
Direct Production Skilled	-	17
Semi-skilled	-	6
Unskilled	-	353
Auxiliary Activities Skilled	-	1
Semi-skilled	-	2
Unskilled	2	96
	-	93

- Actual hours worked per annum per direct production worker: 2,176 hours.

- Proportion of motors occupied: 100% in 1st and 2nd shifts.

**Technological features:**

- a): Cold air crucible  
 b): Sanding with unique sand  
 d): Drawing machine  
 e): Shaking machine  
 f): Manual operation  
 g): Shaking-out  
 i),k),l): Manual  
 m): Rotative ovens

- Generally fairly mechanized; but e), f), m) and n) are rated as poor to outmoded in mechanization.

- Skilled workers in direct production do: upkeeping of model plaques, marbling, and enamelling.

IV. ANNUAL PRODUCTION (1964)		TOTAL VALUE OF PRODUCTION ( Frs.million )		58.84	
Product	Unit	Quantity Produced	Unit Value (Francs)		
<b>a. Baignoires of cast iron:</b>					
- Model group I	Unit	29,130	220 to 238		
- Model group II	"	56,250	240 to 248		
- Model group III	"	62,940	250 to 256		
- Special Model IV	"	136	486.7		
- Special Model V	"	2,352	526.2		
- Special Model VI	"	3,080	713.6		
<b>b. Tanks:</b>					
- Universal	"	8,166	191.68		
- "Parisians"	"	4,481	189.00		
- "Anjou"	"	11,595	173.68		
- Others	Frs.mill.	14.49	..		

V. INTERMEDIATE INPUTS (1964)		TOTAL VALUE OF CONSUMPTION ( Francs mill. )		44.88	
<b>1. Energy &amp; water: total</b>					
	Unit	Quantity consumed	Unit value (Francs)		
- Foundry coke	ton	2,900	142.7		
- Electricity	Kwh	5,113	100.0		
- Metallurgical coke	ton	3,800	120.7		
- Domestic liquid fuel	ton	800	15.2		
- Heavy liquid fuel	ton	900	131.1		
<b>2. Direct production materials: total</b>					
a. Phosphorous cast iron	ton	3,000	304.1		
b. Old cast iron	"	11,300	230.9		
c. Semi-phosphorous cast iron	"	3,000	334.6		
d. Ferro-silicon	"	140	680.3		
e. Spiegel iron	"	300	413.6		
f. Enamel and other materials (including 3,5 and 6 below)	Frs. mill.	36.01	..		
<b>3. Packaging materials: total</b>					
(included in 2.f.)					
<b>4. Work performed by sub-contractors ( )</b>					
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>					
(included in 2.f.)					
<b>6. Material inputs for auxiliary activities</b>					
(included in 2.f.)					
<b>7. Non-factor service inputs: total</b>					
2.62					

**CAPACITY OUTPUT:** 15% higher than the 1964 actual production level with no addition to manhours, but with an investment of Frs. 885,000 on discharging machines and melting ovens, which presently constitute a bottleneck. Product-mix is not flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price f.o.b.

1. This branch received about 9,000 units of tubs and tanks from one of the sister branches (also producing tubs and tanks). These intrafirm transfers are not included in the value of production nor in the value of material consumption. The intrafirm accounting prices applied to the transferred products are 40-45% of the market prices f.o.b. before tax.

2. (a) to (k) partly exported.  
2. (a) to (e) all of domestic origin.

VI. VALUE ADDED		TOTAL 1964 (Frs. mill.)		13.76	
<b>1. Wages &amp; salaries (before income tax)</b>					
- Employees in direct production	)			7.88	
- Other employees	)				
<b>2. Other expenditures for employees</b>					
<b>3. Annual depreciation allowance</b>					
<b>4. Rental paid</b>					
<b>5. Sales &amp; other indirect taxes (less subsidies)(not included in total)</b>					
[14.74]					
<b>6. Other gross business income (before income tax)</b>					
5.66					

VII. EXPANSION: HISTORY & PLAN		Gross acquisition		Scrapped or sold	
<b>1. Recent Expansion</b>					
From 1963 to 1964					
a. Total Investment ( Frs.thous. )		431	-		
- Land		-	-		
- Land improvements		-	-		
- Buildings		10	-		
- Other construction work		-	-		
- Machinery & equipment		395	-		
- Tools & instruments		-	-		
- Vehicles		76	-		
- Office furniture & fixtures		-	-		
<b>b. Corresponding increase:</b>					
In no. of employees		556	577		
In annual gross production (Frs.million)		47.14	58.84		

VIII. SUPPLEMENT		activities of other establishments of the company (No. of establishments):	
radiators (2, one of which is France 35-(4) in Vol. I.); boilers (1); heating equipment (3); sanitary ceramics (3); cast bath-tubs (1); brass-founding (2); equipment for chemical industry (1).			
1. Average of wages and salaries.			
2. Incalculable because of the aggregated data.			

SELECTED COEFFICIENTS	
- Mach., equip., instruments & tools per employee in direct production on 1st shift: Frs. 29,000	
- Value added per employee: Frs. 24,200	
- Annual wage per employee: Fr. 13,640	1/
- Variable input costs/gross production ratio:	.. 2/
- Gross profit/gross production ratio: 9.5%	
- Gross profit/assets ratio:	.. 2/
- Level of production at break-even point is approximately .. % of the 196 actual level.	2/

FUTURE PLAN		Not yet finalized (especially with regard to the distribution among factories).	
<b>a. Investment proposed for the period 19 to 19</b>			
Total value ( )			
Of which: - Mach. & equipment			
- Land improv. & bldg.			
- Land			
- Others			
<b>b. Net increase in no. of employees envisaged for the same period:</b>			
- Direct production:			
- Auxiliary:			
<b>c. Purposes:</b> Overhauling part of the existing shops and largely balanced expansion of the existing capacity in the same location.			

France : 350 - (12)

**MAJOR PRODUCTS:** Office furniture (metal) and metal oaks. Annual capacity output is 53,000 pcs. of office furniture and 1,200,000 oaks on one shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with capital stock Frs. 4 million and employees 625 as of 1964. Founded in 1910.

I. FIXED CAPITAL ASSETS (end of 1964)		Before deprec.	After deprec.		
TOTAL BOOK VALUE (Frs. 000)		9,559	2,775		
1. Land (42,035 m <sup>2</sup> )		526	526		
2. Land improvements		-	-		
3. Buildings (total floor space 20,905 m <sup>2</sup> )		4,336	1,391		
4. Other construction works		74	37		
5. Machinery & equipment	}	4,283	712		
6. Tools & instruments					
7. Vehicles		133	46		
8. Office furniture & fixtures		207	63		
		<b>Total</b>	<b>Avg. Age</b>	<b>Depr. rate</b>	<b>1964 replace. value</b>
<b>DETAIL OF I.5 (No.)</b>		<b>bef. depr.</b>	<b>(Yr.)</b>	<b>Cond. (%)</b>	<b>value</b>
a. Production machinery	3,383	14	A	6.5	6,766
b. Equipment for general services	900	"	"	5.5	1,800

II. INVENTORIES (end of 1964)		Actual	Normal
TOTAL VALUE (Frs. 000)		4,678	-15 %
1. Direct production materials	3,408	-20	
2. Other input materials	95	-	
3. Work in process	410	-	
4. Finished products	765	-	
- Normal inventories of finished products 2.0 % of annual gross production			
- Seasonal variations: ..			

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift
TOTAL EMPLOYED		625	-	-
1. Direct production ( .. )	498			
Annual total manhours (000)	904			
<b>Furniture</b>	<b>200</b>			
a. Shears and presses	45			
b. Machining	20			
c. Assembly and steel-sheet mill	60			
d. Painting	25			
e. Finishing	20			
f. Warehouse for spare parts	5			
g. Dispatch	15			
h. Others	10			
<b>Oaks</b>	<b>174</b>			
i. Steel-sheet mill, light oaks	52			
j. Steel-sheet mill, heavy oaks	12			
k. Painting	19			
l. Galvanization	18			
m. Accessories	11			
n. Finishing and dispatch	23			
o. Repairs and maintenance	5			
p. Others	34			
<b>Others</b>	<b>124</b>			
2. Auxiliary activities ( .. )	127			

EDUCATIONAL BACKGROUND (No. of employees)		Univ. or higher		Sr. High sch. or equiv.		Other	
TOTAL		Management		Direct Production		Auxiliary Activities	
		Skilled		Semi-skilled		Unskilled	
		Skilled		Semi-skilled		Unskilled	
		Skilled		Semi-skilled		Unskilled	
		Skilled		Semi-skilled		Unskilled	

- Actual hours worked per annum per direct production worker: 1,815 hours.

- Proportion of motore occupied: 86..

- Technological features:

(a) Guillotine shears and mechanical and hydraulic presses.

(c) 30% of assembly work is on line system.

(d) Classical airless pistole.

(i) and (j) Mechanical presses for all operations on lide and oaks; machine for fabrication and assembly.

(k) Interior coating by automatic or semi-automatic machine operated with air for pulverization.

- Mechanization is fair for furniture and oaks.

Automation for oaks is fair too. No automation is applied for furniture.

No information is available on educational background of employees. Skill composition of direct production workers is estimated as: skilled 10%, semi-skilled 85%, unskilled 5%. Skilled workers are mainly engaged in tooling, maintenance, machine regulation and prototype making.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( Frs. 000 ) 37,808

Product	Unit	Quantity Produced	Unit Value (Fr.000)
a. Office furniture, metal	000 units	45.95	271.9
b. Caske	"	1,053.42	23.3
c. Scraps	Frs. 000	310	..
d. Revenue from contract and commission work (galvanization).	"	370	..
e. Other revenues arising from productive activities.	"	90	..

- Unit value relates to average price.  
Products are too diversified to list them separately.

**CAPACITY OUTPUT:** 15, higher than the 1964 actual production level with additional 10,000 manhours on 1st shift. Seasonally insufficient demand for the products is responsible for the underutilization. Although no change in product-mix is envisaged, one product (furniture or caske) could be increased at the sacrifice of the other by shifting equipment and workers from one to the other.

Unit value of product: Market value f.o.b. before sales tax.  
Unit value of material: Market price c.i.f.

- Office furniture is partly exported.

**V. INTERMEDIATE INPUTS (1964)**TOTAL VALUE OF CONSUMPTION ( Frs. 000 ) 24,901  
352

1. Energy & water: total	Quantity consumed	Unit value (Fr.)
- Electricity	000 Kwh	2,878
- Coal	ton	407
- Liquid fuel	m <sup>3</sup>	1,352
- Gas	000 m <sup>3</sup>	38
2. Direct production materials: total		20,182
a. Steel sheet for caske	ton	16,684
b. Steel sheet for furniture	"	3,818
c. Iron	"	1,336
d. Others 1/	Frs. 000	4,115

1/ Includes packaging materials and liquid fuel.

3. Packaging materials: total (included in 2d)		
4. Work performed by sub-contractors (		-
5. Repairs & maintenance (materials & services purchased)		1,720
Of which services purchased Fr. 1,499,000.		
6. Material inputs for auxiliary activities		576
7. Non-factor service inputs: total		2,061
Of which transportation, insurance, storage (purchased separately) Fr. 1,302,000.		

**VI. VALUE ADDED TOTAL 1964 ( Frs. 000 ) 12,907**

1. Wages & salaries (before income tax)	11,365
- Employees in direct production	(..)
- Other employees	(..)
2. Other expenditures for employees	162
3. Annual depreciation allowance	702
4. Rental paid (land 9, buildings 2)	11
5. Sales & other indirect taxes (less subsidies) (not included in total)	[7,745]
6. Other gross business income (before income tax)	667

**SELECTED COEFFICIENTS (in 1964 replacement value)**

- Mach., equip., instruments & tools/per employee in direct production on 1st shift: Fr. 17,150
- Value added per employee: Fr. 20,700
- Annual wage per employee: Fr. 18,190 1/
- Variable input costs/gross production ratio: 74.5% 2/
- Gross profit/gross production ratio: 1.8%
" " " at full capacity: 4.8%
- Level of production at break-even point is approximately 93 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
1. Recent Expansion		
From 1963 to 1964		
a. Total Investment ( Frs. 000 )	2,983	79
- Land	-	-
- Land improvements	-	-
- Buildings	108	-
- Other construction work	314	-
- Machinery & equipment )	2,465	-
- Tools & instruments )		
- Vehicles	51	74
- Office furniture & fixtures	45	5
b. Corresponding increase:	From 1962	to 1964
In no. of employees	538	625
In annual gross production ( Frs. 000 )	32,800	37,808

**2. Future Plan**

a. Investment proposed for the period 1964 to 1968	
Total value ( )	..
Of which: - Mach. & equipment	50 %
- Land improv. & bldg.	-
- Land	-
- Others	20
b. Net increase in no. of employees envisaged for the same period:	
- Direct production:	-
- Auxiliary:	-
c. Purpose: Introduction of new products and processes.	

**VIII. SUPPLEMENT**

- 1 Average wages and salaries per employee.
- 2 Two thirds of wages and salaries is included in variable cost.

Finance : 350 - (14)

**MAJOR PRODUCTS:** Metal cuttings, stamping and tools. Capacity revenue output is annually Fr. 4.7 million of these products (or about 2,500t in terms of cold rolled steel sheet processed) on one shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with capital stock Frs. 510,000 and employees as of 1964. Founded in 1930.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.		
<b>TOTAL BOOK VALUE</b> (Fr. 000)	2,370	1,039		
1. Land (4,000 m <sup>2</sup> )	43	43		
2. Land improvements	-	-		
3. Buildings (total floor space 1,766m <sup>2</sup> )	320	201		
4. Other construction works	525	205		
5. Machinery & equipment	1,331	505		
6. Tools & instruments				
7. Vehicles	83	58		
8. Office furniture & fixtures	68	27		
	<b>Total</b>	<b>Avg. depr. rate</b>	<b>1964</b>	<b>replac. value</b>
		<b>Age (Yr.)</b>	<b>Cond. (%)</b>	

**DETAIL OF I.5 (No.)**

Machines for cuttings and stampings

- a. Presses, 15 to 300t (55)  
b. Finishing machine (1)

Machines for tooling shop

- c. Lathes (25)  
d. Milling machines  
e. Etax-limeure  
f. Others

1,331 6 B 25 3,180

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE (Fr. 000)</b>	209	.. \$
1. Direct production materials	137	
2. Other input materials	-	
3. Work in process	22	
4. Finished products	50	
- Actual inventories of finished products		1.3 % of annual gross production
- Seasonal variations:	..	

Capacity of electr. motors: 509 KW  
Total load, capacity of trucks: 3 t

All the machines are of domestic make.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> m. 22	80		
1. Direct production (f. 50)	72		
Annual total manhours (000)	146.6		
a. Rolling	12		
b. Finishing presses	41		
c. Cleaning	5		
d. Lathing, assembly and soldering	8		
e. Maintenance and repair	4		
f. Others	2		
2. Auxiliary activities (f. 3)	8		

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	Unskilled
9	71		
<b>Management</b>			
	4		
<b>Direct Production</b>			
Skilled	5	10	
Semi-skilled		3	
Unskilled			54
<b>Auxiliary Activities</b>			
Skilled		3	
Semi-skilled			1
Unskilled			

- Actual hours worked per annum per direct production worker: 2,036 hours.

- Proportion of motors occupied; 80%.

- Mechanization is excellent in (a), fair in (d) and (e), and poor in (b) and (c). No automation.

- Skilled workers in direct production are engaged in tooling of press for cutting and stamping and assembly of fabricated parts for tools (esp. gauge). Those in auxiliary activities are engaged in accounting, administration and sales and purchases.

IV. ANNUAL PRODUCTION (1964)		TOTAL VALUE OF PRODUCTION ( Frs. 000 )		3,752	
Product	Unit	Quantity Produced	Unit Value ( Frs. )		
Total cuttings and stampings	Fr. 000	3,524	..		
..	"	190	..		
..	"	38	..		
The products are too diversified for meaningful analysis.					
<b>CAPACITY OUTPUT:</b> 25% higher than the 1964 actual production level with additional 30,000 manhours on 1st shift; sufficient demand for the products should be assumed.					
Unit value of product: Market price f.o.b. before sales tax.					
Unit value of material: Market price c.i.f.					
V. INTERMEDIATE INPUTS (1964)		TOTAL VALUE OF CONSUMPTION ( Frs. 000 )		2,018	
<b>1. Energy &amp; water: total</b>					
		Quantity consumed	Unit value ( Frs. )		
- Electricity	000 Kwh	169.6	135.0		
- Fuel oil	ton	27.3	173.2		
- Gas	000 therm	6.3	800.0		
- Water	000 m <sup>3</sup>	1.8	860.0		
<b>2. Direct production materials: total</b>				<b>1,678</b>	
<b>a. Cold rolled steel sheet for stamping: 4 to 6.7% thick</b>					
	ton	2,050	800		
<b>b. Others</b>					
	Frs. 000	38	..		
<b>3. Packaging materials: total</b>					
				<b>32</b>	
Metal containers (Fr. 100/unit)		300			
Wooden materials (Fr. 8/case)		200	18		
<b>4. Work performed by sub-contractors ( .. )</b>					
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>					
				<b>88</b>	
Of which services purchased Fr. 55,000					
<b>6. Material inputs for auxiliary activities</b>					
				<b>38</b>	
<b>7. Non-factor service inputs: total</b>					
				<b>130</b>	
Of which transportation, insurance and storage (purchased separately) Fr. 64,000.					
VI. VALUE ADDED		TOTAL 1964 ( Frs. 000 )		1,734	
<b>1. Wages &amp; salaries (before income tax)</b>					
- Employees in direct production		916			
- Other employees		437			
<b>2. Other expenditures for employees</b>					
		60			
<b>3. Annual depreciation allowance</b>					
		160			
<b>4. Rental paid</b>					
		-			
<b>5. Sales &amp; other indirect taxes (less subsidies) (not included in total)</b>					
		1,925			
<b>6. Other gross business income (before income tax)</b>					
		161			
VII. EXPANSION: HISTORY & PLAN		Gross acquisition		Scrapped or sold	
<b>1. Recent Expansion</b>					
From 1961 to 1965					
a. Total investment ( Frs. 000 )		1,061	32		
- Land		-	-		
- Land improvements		-	-		
- Buildings		102	-		
- Other construction work		209	-		
- Machinery & equipment		619	32		
- Tools & instruments		-	-		
- Vehicles		83	-		
- Office furniture & fixtures		49	-		
<b>b. Corresponding increase:</b>					
In no. of employees		From 1961	To 1965		
In annual gross production ( Frs. 000 )		2,800	3,900		
<b>2. Future Plan (the period not yet determined)</b>					
<b>a. Investment proposed for the period 19.. to 19..</b>					
Total value ( )					
Of which:					
- Mach. & equipment		90	%		
- Land improv. & bldg.		10			
- Land		-			
- Others		-			
<b>b. Net increase in no. of employees envisaged for the same period:</b>					
- Direct production:		-			
- Auxiliary:		-			
<b>c. Purposes: Overhauling part of existing shops (cutting, stamping and tool making).</b>					
VIII. SUPPLEMENT					
1. Using the 1964 replacement value.					



France : 35 - (14)

**MAJOR PRODUCTS:** Sprinklers, teapots, buckets and other farm and household metalware. Capable of processing annually 45 ton iron and copper sheets on a one-shift basis.

**REPORTING UNIT:** A small but old enterprise with capital stock of Fr. 61,500 and 20 employees as of 1964. Founded in 1864.

I. FIXED CAPITAL ASSETS (end of 1964)			II. INVENTORIES (end of 1964)	
	Before deprec.	After deprec.	Actual	Normal
<b>TOTAL BOOK VALUE</b> (Fr. 000)	140	48.5	150	.. 5
1. Land (rented)	-	-		
2. Land improvements	-	-		
3. Buildings	31	7.5		
4. Other construction works	-	-		
5. Machinery & equipment	83	23.5		
6. Tools & instruments	16	16.0		
7. Vehicles	10	1.0		
8. Office furniture & fixtures	-	-		
	<b>Avr. Age (Yr.)</b>	<b>Oper. Cond.</b>	<b>1964 replace. value</b>	
<b>DETAIL OF I.5 (No.)</b>				
a. Mechanical presses, 5-30 tons (5)	20	B	Fr. 100,000	
b. Shearing machines (2)	10	A	10,000	
c. Spot welding machine (1)	10	A	10,000	
d. Embossing lathes (4) (tours & repousseur)	5	A	8,000	
e. Polishing lathes (5) (tours & polir)	5	A	10,000	
			<b>Capacity of electr. motors:</b> 15 KW	
			<b>Total load, capacity of trucks:</b> - t	
The power presses were domestically produced; all other items were imported.				
- Average age of machinery is about 13 years.				
No substantial expansion took place for long years.				
<b>GENERAL CONDITIONS:</b> Transportation and public utilities are excellent; health and recreation is fair; residential and educational facilities are poor.				

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
<b>TOTAL EMPLOYED</b>	m. 14	20	-	-	Univ. or higher	Sr. High sch. or equiv.	Other	
1. Direct production (f. 1)		15	-	-	Engi-ners			
Annual total manhours (000)		(33)	( )	( )	TOTAL			
a. Stamping		6	-	-	Management			
b. Polishing		3	-	-	Direct Production			
c. Electrolytic treatment		2	-	-	Skilled			
d. Sheet-iron shop		4	-	-	Semi-skilled			
					Unskilled			
					Auxiliary Activities			
					Skilled			
					Semi-skilled			
					Unskilled			
2. Auxiliary activities (m. 3 f. 2)		5	-	-				
					- Actual hours worked per annum per direct production workers: 2,200 hours.			
					- Proportion of motors occupied: 62%.			
					- Degree of mechanization: Fair in all shops, except electrolytic shop where it is considered as poor.			
					- Skilled workers in direct production deal with embossing, tooling and controlling. In auxiliary activities they are accountants and store-keepers.			

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION (Fr. 000 )		538.0	
Product	Unit	Quantity Produced	Unit Value (Fr.)
a. Sprinklers	No.	8,000	7.64
b. Monofilters	"	5,700	6.00
c. Teapots	"	900	28.00
d. Ice buckets	"	700	40.00
e. Champagne buckets	"	900	16.00
f. Milking buckets	"	5,897	6.40
g. Feeding bottles for calves	"	1,900	6.40
h. Other various products including sales of scrap.	Fr. 000	406	..

**CAPACITY OUTPUT:**

The present production is practically identical with the capacity output.

Unit value of product: market value f.o.b. before sales tax.  
Unit value of material: Market price c.i.f.

- Production material are all domestically produced, but b) contains a significant amount of import content.
- Both are transported by road.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( Frs. 000 )		246.9	
1. Energy & water: total	Unit	Quantity consumed	Unit value (Fr.)
- Water	cu.m.	1,800	..
- Electricity	Kwh	7,500	..
- Liquid fuel	ton	4	..
- Gas	cu.m.	1,100	..
<b>2. Direct production materials: total</b>			<b>177.0</b>
a. Iron sheet	ton	33	..
b. Copper sheet	ton	12	..
<b>3. Packaging materials: total</b>			<b>6.6</b>
<b>4. Work performed by sub-contractors ( )</b>			<b>-</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>			<b>4.9</b>
<b>6. Material inputs for auxiliary activities</b>			<b>26.2</b>
<b>7. Non-factor service inputs: total</b>			<b>24.4</b>
- Transportation, insurance, storage			8.9
- Other services purchased			15.5

**VI. VALUE ADDED TOTAL 1964 ( Frs. 000 ) 341.1**

1. Wages & salaries (before income tax)		
- Employees in direct production	150.5	
- Other employees	85.0	
2. Other expenditures for employees	93.0	
3. Annual depreciation allowance	-	
4. Rental paid (land)	8.9	
5. Sales & other indirect taxes (less subsidies) (not included in total)	132.0	
6. Other gross business income (before income tax)	3.7	1

**SELECTED COEFFICIENTS (in 1964 replacement value)**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Frs. 92,100
- Value added per employee: Frs. 17,055
- Annual wage per employee in direct production: Frs. 10,033
- Variable input costs/gross production ratio: 58%
- Gross profit/gross production ratio: 0.6%
- Level of production at break-even point is approximately 98 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
<b>1. Recent Expansion</b>		
From 1960 to 1965	80	
a. Total investment (Fr. 000 )		
- Land	-	
- Land improvements	-	
- Buildings	48	
- Other construction work	-	
- Machinery & equipment	32	
- Tools & instruments	-	
- Vehicles	-	
- Office furniture & fixtures	-	
b. Corresponding increase:	From 1960	to 1965
In no. of employees	17	21
In annual gross production (Fr. 000 )	500	680

**2. Future Plan**

- a. Investment proposed for the period 1966 to 1968/69  
Total value ( France 000 ) 500 \$  
Of which: - Mach. & equipment 100 \$  
- Land improv. & bldg. 90  
- Land -  
- Others -
- b. Net increase in no. of employees envisaged for the same period: - Direct production: 8  
- Auxiliary: 2
- c. Purposes: Introduction of gold and silver table-wares; largely balanced expansion of the existing capacity in a new locality; improvement of working conditions.

**VIII. SUPPLEMENT**

In 1963 the annual production was about 5% less than that of 1964 and the enterprise ran a deficit of about Fr. 5,000. However, these figures are believed to be net of interests paid.

**MAJOR PRODUCTS:** Metal containers, metal caps and closures and other small metalware. Capable of processing 3,900 tons of tin and aluminum plates, sheets and strips on two shifts.

**REPORTING UNIT:** A branch of a multi-establishment metal engineering enterprise, founded in 1935, with total net worth Rs. 67 million and employees 7,000 as of 1964 (see V111). This branch was founded in 1960.

**I. FIXED CAPITAL ASSETS**

	End of 1963 After deprec.	End of 1964 After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. million)	2.02	1.91
1. Land (25,800 sq.m.)	.12	.12
2. Land improvements	-	-
3. Buildings	.86	.85
4. Other construction works	-	-
5. Machinery & equipment	.77	.71
6. Tools & instruments	-	-
7. Vehicles	.27	.23
8. Office furniture & fixtures	-	-

DETAIL OF I.5 (No.)	Total Bk. value Aft. deprec. (end of 1963)	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
<b>Printing section</b>					
a. Printing machines (2)	.24	8	B	6	.25
b. Drying ovens (2)					
<b>Tool room section</b>					
c. Lathes (5)	.19	8	A	7	.21
d. Milling machines (3)					
e. Drilling machine (1)					
f. Shaping machine (1)					
g. Surface grinding machine (1)					
h. Cylindrical grinding machine (1)					
<b>Manufacturing section</b>					
i. Power presses (7)	.30	15	B	6	.33
j. Notching machines (7)					
k. Flanging machines (7)					
l. Seaming machines (7)					
m. Slitting machines (6)					

**II. INVENTORIES**

(end of 196)	Actual	Normal
<b>TOTAL VALUE</b> ( )		
1. Direct production materials		
2. Other input materials		
3. Work in process		
4. Finished products		
- Normal inventories of finished products % of annual gross production		
- Seasonal variations: The data on the inventories of the establishment is not available, since they are controlled by the company. But in 1964, practically no change in the inventory of finished goods was reported.		

Capacity of electr. motors: 178 KW  
" " " furnaces: 56 KW  
Total load, capacity of trucks: 11 t

Machines in the tool room section were domestically produced. The rest were either imported or internally made. Most of the machines were bought second hand; average age of machinery (95% of total) is 11 years. An extensive expansion programme is currently being initiated.

**ENVIRONMENTAL CONDITIONS:** Transportation and water, excellent. Health and recreational facilities, fair. Electricity, residential and educational facilities, poor.

**III. LABOUR**

(1964 average)	1st shift	2nd shift	3rd shift
	<b>TOTAL EMPLOYED</b> 652	449	203
1. Direct production ( all male )	320	203	--
Annual total manhours (000)	(732)	(490)	( )
a. Manufacturing	210	150	
b. Printing	25	15	
c. Dispatch	15	6	
d. Stores	15	7	
e. Repairs and maintenance	55	25	
2. Auxiliary activities ( all male )	129	--	--
Technical and managerial control			

**EDUCATIONAL BACKGROUND**  
(No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others	
				Engrs
TOTAL	8	25	56	563
Management	8	15	12	--
Direct Production				
Skilled	--	--	6	81
Semi-skilled	--	--	--	174
Unskilled	--	--	--	262
Auxiliary Activities				
Skilled	--	10	38	38
Semi-skilled	--	--	--	--
Unskilled	--	--	--	8

- Average working hours per annum per direct production worker: 2,337 hours.

- Proportion of productive facilities occupied: 80% on the 1st. shift and 70% on the 2nd. shift for both motore and furnaces.

**Technological features:**  
a): Involves such operation as notching, flanging and seaming (manual body making system).  
b): Printing of tin plates.

- Degree of mechanisation and automation for (a) and (b); fair.

- **Skilled workers** in direct production : assistant - foremen, setters, fitters, machine operators, die makers, turners, shapers, welders, printers, carpenters, etc.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION (Rs. million)		12.17		TOTAL VALUE OF CONSUMPTION (Rs. million)		9.63	
Product	Unit	Quantity Produced	Unit Value (Rs.)		Quantity consumed	Unit value (Rs.)	
a. Metal containers (round, irregular and seamless rounds)	000 Nos.	8,761*	1,144	1. Energy & water: total (incl. 3,459 litres (Rs. 1.60/lit.) lubricants and 89,336 lit. (Rs. 0.45/lit.) other fuel oils).			-.14
b. Metal caps and closures	"	22,267	55	- Electricity	000 KWH	449	70
c. Flask outers	"	329	1,150	- Petrol (gasoline)	000 litres	34	900
d. Advertising materials	"	350	330	- Gas	000 Rs.	29	80
e. Metal scraps	ton	522	325	- Water	000 litres	12	8.36
* Of which :				2. Direct production materials: total			
178 x 203 mm	000 Nos.	4,731	1,550	a. Tin plates			
142 x 163 mm	"	1,490	1,050	b. Aluminium plates, sheets and strips	ton	3,209	2,250
				c. Lining compound + solder	"	23	9,000
				d. Paints and varnishes	Rs. mil.	.01	..
				e. Components for containers and materials like cork, mild steel wires, etc.	"	.92	..
<b>CAPACITY OUTPUT:</b>				** Part of cork is transferred from the other establishment of the firm. The rest (Rs. 0.16 million) is purchased from outside at Rs. 25/100 metres. (Of which 8% is freight cost).			
20% higher than the 1964 actual production level with additional man-hours of 146,000 on the 1st. shift and 100,000 on the 2nd. shift. The underutilisation of capacity was due to insufficient demand for the product and insufficient supply of raw and intermediate materials. Product-mix is not flexible.				3. Packaging materials: total			
Unit value of product: Market value f.o.b. before sales tax				Paper products Rs. 71,000			
Unit value of material: Market price c.i.f.				Wooden materials Rs. 102,000			
- Metal containers are partly used for packing products for exports.				4. Work performed by sub-contractors ( )			
- Tin plates are produced domestically but contain a significant amount of import contents and delivered by rail & road; freight cost 8% of c.i.f. value. The rest have little import contents; delivered by railroad and road, freight cost 3% for (b) + negligible for (c).				5. Repairs & maintenance (materials & services purchased)			
				Of which: materials Rs. 160,000			
				services Rs. 30,000			
				6. Material inputs for auxiliary activities			
				For water supply, general administration, etc.			
				7. Non-factor service inputs: total			
				Of which transportation, insurance and storage (purchased separately) Rs. 20,000			
<b>VI. VALUE ADDED</b>				<b>RELATED COEFFICIENTS</b>			
TOTAL 1964 (Rs. million)		2.54		- Mech., equip., instruments & tools per employee in direct production on 1st shift: Rs. 2,406 (Rs. 4,400 1/)			
1. Wages & salaries (before income tax)				- Value added per employee: Rs. 3,896			
- Employees in direct production		.90		- Annual wage per employee in direct production: Rs. 1,721			
- Other employees		.51		- Variable input costs/gross production ratio: 78.7%			
2. Other expenditures for employees		.06		- Gross profit/gross production ratio: 7.9%			
3. Annual depreciation allowance		.11		(at full capacity : 10.1%)			
4. Rental paid		-		- Level of production at break-even point is approximately 63 % of the 1964 actual level.			
5. Sales & other indirect taxes (less subsidies) (not included in total)		[.26]					
6. Other gross business income (before income tax)		.96					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. Recent Expansion		Gross acquisition		% of simple repair and maintenance		2. Future Plan	
From 1961 to 1964						a. Investment proposed for the period 1964 to 1968	
a. Total Investment (Rs. million)		.943		Total value (Rs. million)		2.5	
- Land		.004		Of which: - Mech. & equipment		72 %	
- Land improvements		-		- Land improv. & bldg.		26	
- Buildings		.130	.027	- Land		-	
- Other construction work		-	-	- Others		-	
- Machinery & equipment		.482	.038	b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments		.153	-	- Direct production: 105			
- Vehicles		.074	.100	- Auxiliary: 26			
- Office furniture & fixtures		.100	.011	c. Purpose: Introduction of new processes and largely balanced expansion of existing capacity in the same location.			
b. Corresponding increase:							
In no. of employees		410	652				
In annual gross production (Rs. million)		3.4	12.2				
<b>VIII. SUPPLEMENT</b>				<b>Features of the parent enterprise:</b>			
The parent company has altogether 13 establishments: they manufacture metal containers (7 establishments), metal containers and other hardware (4), engineering products and flexible packages (1), metal and paper containers (1); two establishments are exclusively engaged in research and technical development. They operate by and large independently. A headquarters, with 252 employees, is separately located. Its annual operating costs in 1964 are Rs. 1.6 million for wages and salaries and Rs. 0.5 million for others. See India 350 - (7) for a sister establishment manufacturing metal containers.							
1/ The numerator is calculated by using annual depreciation rate of 6% and average age 11 years.							

**MAJOR PRODUCTS:** Metal containers, crown corks and miscellaneous metal products. Annual capacity output is Rs. 60 to 65 million worth of the above products on three shift operation.

**REPORTING UNIT:** An eldest sister branch of India 350-(6); the parent enterprise has total net worth Rs. 67 million and employees 7,000 as of 1964. The branch was founded in 1935 as the original core of the enterprise which now has altogether 13 establishments.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. million)	<u>14.45</u>	<u>8.45</u>
1. Land (rented)	-	-
2. Land improvements	-	-
3. Buildings	4.71	3.99
4. Other construction works	-	-
5. Machinery & equipment	8.71	4.18
6. Tools & instruments	-	-
7. Vehicles	.39	.07
8. Office furniture & fixtures	.64	.21

**DETAIL OF I.5 (No.)**

	Total Bk. value	Avg. Age (Yr.)	Oper. rate (%)	Depr. rate (%)	1964 replace value
a. Strip feed presses (5)	.30	14	B	6.6	.40
b. Auto rotary line and drier (1)	.10	1	A	"	.10
c. Fork lift trucks (6)	.30	10	B	"	.40
d. Auto sheet feeders (2)	.20	9	B	"	.30
e. Presses (10)	.60	6	B	"	.70
f. Printing machines (6)	.40	9	B	"	.50
g. Grinders (3)	.10	3	A	"	.10
h. Drying ovens (6)	.90	10	B	"	1.10
i. Univeral camera (1)	.10	3	A	"	.10
j. Body makers (2)	.30	13	B	"	.40
k. Tandem slitters (4)	.10	5	A	"	.10
l. Tube trimmers and threaders (4)	.10	1	A	"	.10
m. Slip and repeat machines (2)	.10	9	B	"	.10
n. Irregular seamers (6)	.10	19	B	"	.20
o. Chain block (1)	.10	15	B	"	.20
p. Blanket casting machine (1)	.04	1	A	"	.05
q. Internal laquering machines (2)	.05	2	A	"	.06
r. Tube annealing furnace (1)	.02	8	B	"	.03

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Rs. million)	<u>15.30</u>	<u>..</u>
1. Direct production materials	12.27	..
2. Other input materials	.83	..
3. Work in process	1.51	..
4. Finished products	.69	+ 0

- Normal inventories of finished products 1.2 % of annual gross production

- Seasonal variations: Not significant.

Capacity of electr. motors: 1,378 KW  
Capacity fo electr. furnaces: 135 KW  
Total load, capacity of trucks: 31 t

All machines were imported.

Average age of machinery (45 % of total ) is 9.0 years.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 2,818	1,758	863	197
1. Direct production (all male )	1,051	605	128
Annual total manhours (000)	(2,100)	(1,771)	(382)
a. General line	582	372	15
b. Special products	259	120	45
c. Open top	47	39	34
d. Printing	129	62	33
e. Photo lithographing	34	12	1
2. Auxiliary activities ( all male )	707	258	69
a. Repairs and maintenance	252	146	32
b. Technical and managerial control	265	31	16
c. Storee and other shops	190	81	21

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or	Other	
		semi	Other
7	85	197	2,529
<b>Maintenance</b>			
7	14	20	15
<b>Direct Production</b>			
-	40	57	333
-	-	-	738
-	-	-	616
<b>Auxiliary Activities</b>			
-	31	120	217
-	-	-	129
-	-	-	481

- Actual hours worked per annum per direct production worker: 2,384 hours.

- Proportion of motore and furnaces occupied: 100% on 1st. and 2nd. shifts, and 50% on 3rd. shift.

**Technological features:**

(a): Decorated tin plate is cut into various sizes and stampings are made for various components from which seamless containers are made. Built-up containers are assembled in different shops.

(b): Decorated tin and aluminium are cut into sizes and stamped into crown corks and pilfer-proof closures which subsequently go through secondary operations and are

assembled with cork discs. In this shop extruded products are also manufactured by extrusion process.

(c): Processed tin sheets are cut into sizes and fabricated into cases for processed food.

(d): Tin plates are printed by offset process.

(e): Preparing plates for printing.

- Mechanisation: (b) and (c), excellent. The rest fair.

- Automaton: All fair.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)						
TOTAL VALUE OF PRODUCTION (Rs. million) <u>57.22</u>				TOTAL VALUE OF CONSUMPTION (Rs. million) <u>36.96</u>						
Product	Unit	Quantity Produced (QCRs.)	Unit Value (Rs.)		Quantity Consumed	Unit Value (Rs.)				
a. Open top containers	Mil.No.	25.27	261	1. <u>Energy &amp; water: total</u>			<u>.69</u>			
b. Rolled seal closures	"	88.09	46	(incl. 52 m <sup>3</sup> of water at Rs. .08/m <sup>3</sup> 31,000 l of lubricating oil at Rs. 1.5/l.						
c. Crown corks	"	3,774.30	1.8	- Coal gas	cu. m.	13,174	20			
d. Extruded products	"	36.46	127	- Electricity	000 KWH	2,965	60			
e. General line products *	"	103.64	332	- Coal	ton	4	42			
f. Scrap **	Rs. Mil.	.74	..	- Fuel oils other than petrol	000 litres	309	380			
* : Consists of tin containers, seamless necks, metal trays, display and advertising tablets, screw caps etc.				2. <u>Direct production materials: total</u> <u>32.01</u>						
** : Consists of aluminium scrap, tin plates, discs, strips spoiled and rejected tins, etc.				a. Tin plate				ton	14,245	1,739
				b. Aluminum sheet and foil				"	260	7,872
				c. Aluminum slug				"	106	6,504
				d. Pure tin				"	3	28,536
				e. Lead				"	170	2,578
				f. Coating and varnish				"	245	6,058
				g. Lining compound				"	131	..
				h. Cork discs				Mil. No.	1,288	..
				i. Solder				Rs. Mil.	.32	..
				j. Flux				"	.03	..
				3. <u>Packaging materials: total</u> <u>.92</u>						
				Paper and paper products				Rs. 0.28 million		
				Wooden materials				Rs. 0.64 million		
				4. <u>Work performed by sub-contractors (</u>						
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>						<u>.69</u>
				Consumable stores for machinery				Rs. 0.61 million		
				Minor materials for repair and maintenance				Rs. 0.08 million		
				6. <u>Material inputs for auxiliary activities</u>						<u>.81</u>
				Repair of office buildings, equipment + electrical system				Rs. 0.40 million. Stationery + other consumables -		
				7. <u>Non-factor service inputs: total</u>				Rs. 0.41 million. 1.84		
				Of which transportation, insurance and storage (purchased separately)				Rs. 0.70 million.		
CAPACITY OUTPUT: 10% higher than the 1964 actual production level with additional 200,000, 180,000 and 35,000 manhours on 1st, 2nd, and 3rd shifts, respectively. This is constrained by a bottleneck at the printing shop. A Rs. 52,000 investment on the printing shop would raise the total capacity by 16% over the 1964 actual level. The underutilisation is also in part due to insufficient demand for the products as well as insufficient supply of materials.				VI. VALUE ADDED TOTAL 1964 (Rs. million) <u>20.26</u>				SELECTED CONCLUSIONS		
Unit value of product: Market value f.o.b. before sales tax.				1. <u>Wages &amp; salaries (before income tax)</u>				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 8,287 (Rs. 8,530 1/2)		
Unit value of material: Market price c.i.f.				- Employees in direct production				- Value added per employee: Rs. 7,184		
- 1/ (a) to (e) are partly exported.				- Other employees				- Annual wage per employee in direct production: Rs. 1,861		
- 2/ (a) and (h) are partly imported; (d) is totally imported. The rest is domestically produced. (a) is delivered by railroad, road and sea; (d) by sea; (i) by railroad and road; the rest by road. Freight costs per c.i.f. value for (h) and domestically produced part of (a) are 5% and 4%, respectively. Negligible for the rest.				3. Annual depreciation allowance				- Variable input costs/gross production ratio: 64.3%		
				4. Rental paid				- Gross profit/gross production ratio: 17.6% (at full capacity: 19.3%)		
				5. Sales taxes (not included in total) (less subsidies)				- Level of production at break-even point is approximately 51% of the 1964 actual level.		
				6. Other gross business income (before income tax)						
				VII. EXPANSION: HISTORY & PLAN						
1. <u>Recent Expansion</u>				Gross acquisition		Scrapped or sold				
From 19 60 to 19 64										
a. Total Investment (Rs. million)				2.77		.11		2. <u>Future Plan</u> : None		
- Land				-		-		a. Investment proposed for the period 19 to 19		
- Land improvements				-		-		Total value ( )		
- Buildings				.08		-		Of which: - Mach. & equipment		
- Other construction work				-		-		- Land improv. & bldg.		
- Machinery & equipment				2.29 2/		.03		- Land		
- Tools & instruments				-		-		- Others		
- Vehicles				.22 2/		.06		b. Net increase in no. of employees envisaged for the same period:		
- Office furniture & fixtures				.18		.02		- Direct production:		
b. Corresponding increase:				From 19 60		to 1964		- Auxiliary:		
In no. of employees				2,435		2,818		c. Purposes:		
In annual gross production (Rs. million)				36.95		57.22				
VIII. SUPPLEMENT										
1/ The numerator is the 1964 replacement value; the denominator includes those engaged in repairs and maintenance.										
2/ Gross purchases of machinery and vehicles during the period are Rs. 2.56 billion and Rs. 0.20 million, respectively. Rs. 0.27 million of machinery was transferred to the other sister establishment, and Rs. 0.02 million of vehicles were acquired from them.										

India : 350 - ( 8 )

**MAJOR PRODUCTS:** Bolts, nuts and screws. Installed annual capacity is about 1,500 tons of these wire products on 2 shift operation. Also capable of earning some Rs. 160,000 annually from making small machines.

**REPORTING UNIT:** A one-establishment enterprise with total assets Rs. 1.5 million (net worth Rs. 0.9 million) and 226 employees as of 1964. Founded in 1948.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. 000)	<u>686.07</u>	<u>474.23</u>
1. Land	16.13	16.13
2. Land improvements	-	-
3. Buildings	72.90	57.10
4. Other construction works	1.85	1.24
5. Machinery & equipment	516.63	338.36
6. Tools & instruments		
7. Vehicles	30.44	26.40
8. Office furniture & fixtures	48.12	35.00

Total	Avr.	Depr.	1964
bk. value	Age	Oper. rate	replac.
bef. deprec.	(Yr.)	Cond. (%)	value
Rs. 516 thousand	14	B	15%
			Rs. 638 thousand

**DETAIL OF I.5 (No.)**

- a. Roll thread machines (3)
- b. Slotting machines (4)
- c. Thread cutting machines (3)
- d. Heading machines (2)
- e. Trimming machines (2)
- f. Nut cutting machines (2)
- g. Lathes (4)
- h. Drilling machines (2)
- i. Power press (1)
- j. Hack saws (3)
- k. Electric furnaces (2)
- l. Wire drawing plant (1)
- m. Galvanising plant (1)

Rs. 516 thousand      14      B      15%      Rs. 638 thousand

**II. INVENTORIES**

(end of 1964)	Actual	Normal
<b>TOTAL VALUE</b> (Rs. 000)	<u>402.93</u>	<u>+ 25 %</u>
1. Direct production materials	293.61	+ 30
2. Other input materials		
3. Work in process	3.48	-
4. Finished products	105.86	+ 3

- Normal inventories of finished products 4.1 % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 250 KW

Total load, capacity of trucks: - t

- Machines were mostly domestically produced.

- The firm started its commercial production at about 20% of its present scale. A major expansion to the present level took place during 1954/55 with an investment of Rs. 0.6 million.

**GENERAL CONDITIONS:**

All external conditions are excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 226	145	81	--
1. Direct production (all male)	126	74	
Annual total manhours (000)	(275)	(190)	( )
a. Roll thread shop	15	8	
b. Heading shop	16	9	
c. Wood screw shop	14	10	
d. Work shop and maintenance	16	10	
e. Polishing	17	12	
f. Packing	15	7	
g. Galvanising	16	10	
h. Nut manufacturing	17	8	
2. Auxiliary activities (all male)	19	7	
Managerial and technical control	19	7	

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Other
Engi-neers			
<b>TOTAL</b>	3	7	189
<b>Management</b>	3	7	-
<b>Direct Production</b>			
Skilled		15	37
Semi-skilled			42
Unskilled			106
<b>Auxiliary Activities</b>			
Skilled		12	-
Semi-skilled			-
Unskilled			4

- Actual hours worked per annum per direct production worker: 2,325 hours.

- Proportion of productive facilities occupied: 95 % of motors and 100 % of furnaces as on 1st. shift; 60% of both on 2nd. shift.

- **Technological features:** Names of shops are indicative of the applied processes.

- Mechanisation: fair in all shops.

- Automation: poor in all shops.

- **Skilled workers** in direct production are turners, fitters, machine operators, etc.

In auxiliary activities they deal with administration, welfare, stores, etc.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( Re. 000 )				TOTAL VALUE OF CONSUMPTION ( Re. 000 )			
2,674.5				1,229.6			
Product	Unit	Quantity Produced	Unit Value (Rs.)				
a. Bolts and nuts	ton	720	1,418	1. <u>Energy &amp; water: total</u> 52.28			
b. Machine screws	"	316	2,425	Quantity Unit Value (Rs.)			
c. Wood screws	"	148	5,137	Unit summed			
d. Machinery	Re. 000	127	..	- Lubricating oil litre 8,713 0.87			
				- Electricity 000 KWH 257 130			
				- Coke ton 51 88			
				- Petroleum litre 3,088 0.90			
				- Other fuel oils litre 10,060 0.40			
				2. <u>Direct production materials: total</u> 1,735.50			
				a. Plate sheets and strips ton 43 830			
				b. M.S. wire " 1,105 950			
				c. Brass wire " 91 5,400			
				d. Pig iron etc. for machine manufacture Rs. 000 17 ..			
				e. Consumable stores " 143 ..			
				3. <u>Packaging materials: total</u> 89.35			
				- Mill board ton 17 359			
				- Glass materials No. 000 25 2,750			
				- Others Rs. 000 14.5 ..			
				4. <u>Work performed by sub-contractors</u> ..			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> 12.97			
				- Parts and materials 2.60			
				- Services purchased 10.37			
				6. <u>Material inputs for auxiliary activities</u> 27.34			
				- Stationery and printing 5.67			
				- Administration and welfare 21.67			
				7. <u>Non-factor service inputs: total</u> 11.14			
				- Transportation, insurance and storage 3.63			
				- Other services purchased 7.51			

**CAPACITY OUTPUT:**

30% higher than the actual 1964 production level with sufficient supply of raw materials. No additional man-hours would be required for the full capacity operation. Product mix is flexible with respect to wood screws and nuts.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

All production materials are domestically produced and delivered by railroad and road with freight cost ranging from 3 to 4% of c.i.f. value.

VI. VALUE ADDED	TOTAL 1964 ( Re. 000 )	744.9
1. Wages & salaries (before income tax)		
- Employees in direct production	297.0	
- Other employees	79.9	
2. Other expenditures for employees	65.3	
3. Annual depreciation allowance	17.4	
4. Rental paid (on plants and machinery)	86.8	
5. Sales & other indirect taxes (less subsidies) (not included in total)	83.0	
6. Other gross business income (before income tax)	198.6	

SELECTED COEFFICIENTS	(in 1964 replacement value)
- Mach., equip., instruments & tools/per employee in direct production on 1st shift:	Rs. 4,680
- Value added per employee:	Rs. 3,293
- Annual wage per employee in direct production:	Rs. 1,485
- Variable input costs/gross production ratio:	70%
- Gross profit/gross production ratio:	7.4%
(at full capacity : 12.7%)	
- Level of production at break-even point is approximately	75% of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN	Gross acquisition	% of repair
1. <u>Recent Expansion</u>		
From 1962 to 1964	46.51	
a. Total Investment ( Re. 000 )		
- Land	-	-
- Land improvements	-	-
- Buildings	4.05	2
- Other construction work	-	-
- Machinery & equipment	15.29	5
- Tools & instruments	-	-
- Vehicles	20.70	-
- Office furniture & fixtures	6.47	-
b. Corresponding increase:	From 19	to 19
In no. of employees	205	226
In annual gross production (Rs. million)	1.86	2.67

2. <u>Future Plan</u> : No future plans.
a. Investment proposed for the period 19 to 19
Total value ( )
Of which: - Mach. & equipment \$
- Land improv. & bldg.
- Land
- Others
b. Net increase in no. of employees envisaged for the same period:
- Direct production:
- Auxiliary:
c. Purpose:

VIII. SUPPLEMENT	Structure of liquid assets and current liabilities (end of 1964; Rs. 000).			
Cash on hand and in bank	25	Taxes and accounts payable	340	
Accounts receivable	405	Borrowing from commercial banks	71	



India : 350 - ( 9 )

**MAJOR PRODUCTS:** Bolts, nuts, nails, rivets, screws, pins, etc. Annual capacity is about 1,600 tons of these products on a one - shift basis.

**REPORTING UNIT:** A small one - establishment enterprise, founded in 1958, with total assets Rs. 15 million, (net worth Rs. 10 million) and 171 employees as of 1965.

I. FIXED CAPITAL ASSETS		End of 1964 After deprec.	End of 1965 After deprec.*	II. INVENTORIES (end of 1965)	
<b>TOTAL BOOK VALUE</b> (Rs. 000 )		536	522	<b>TOTAL VALUE</b> (Rs. 000 )	Actual Normal
1. Land		12	12	1. Direct production materials	741 - 47 %
2. Land improvements		-	-	2. Other input materials	660 - 56
3. Buildings		128	116	3. Work in process	11 - 45
4. Other construction works		-	-	4. Finished products	70 - 33
5. Machinery & equipment		343	349	- Normal inventories of finished products	1.9 % of annual gross production
6. Tools & instruments		-	-	- Seasonal variations:	
7. Vehicles		33	28	No seasonal variations.	
8. Office furniture & fixtures		20	17		
* Including new additions installed during 1965		Total	Avg. Depr. 196 5		
		Rs. value	Age Oper. rate replace		
<b>DETAIL OF I.5 (No.)</b>		After deprec.	(Yr.) Cond. (%)	value	
e. Electric furnaces (2)	} Rs. 349 thousand	6	A	15%	Rs. 450 thousand
b. Wire drawing plant (1)					
c. Roll threading machines (3)					
d. Slotting machines (4)					
e. Threading cutting machines (3)					
f. Heading machines (2)					
g. Turning machines (2)					
h. Nut cutting machines (2)					
i. Lathes (4)					
j. Drilling machines (2)					
k. Power press (1)					
l. Hack saws (3)					
m. Galvanizing plant (1)					

Capacity of electr. motors: 225 KW  
Electric furnaces : 2 KW  
Total load, capacity of trucks: - t

Part of (e), (g), (j) and (k) were internally made; the rest were all imported.

**EXTERNAL CONDITIONS:**

All external conditions are excellent.

III. LABOUR (1965 average)	1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				- Actual hours worked per annum per direct production worker 2,383 hours.
				Univ. or higher	Sr. High sch. or equiv.	Other	Others	
<b>TOTAL EMPLOYED</b>	171	-	-	-	-	-	-	-
1. Direct production ( all male )	167	-	-	-	-	-	-	-
Annual total manhours (000)	(398)	( )	( )	-	-	-	-	-
e. Bolts and nuts department	20	-	-	-	-	-	-	-
b. Wire and nails department	40	-	-	-	-	-	-	-
c. Rivet department	20	-	-	-	-	-	-	-
d. Coach screw and roofing screw department	27	-	-	-	-	-	-	-
e. Pavel pin department	25	-	-	-	-	-	-	-
f. Shoe tacks and nails department	35	-	-	-	-	-	-	-
2. Auxiliary activities ( all male )	4	-	-	-	-	-	-	-
Managerial and technical control	4	-	-	-	-	-	-	-

EDUCATIONAL BACKGROUND (No. of employees)			
Univ. or higher	Sr. High sch. or equiv.	Other	Others
Engi-neers	-	-	-
<b>TOTAL</b>	1	9	161
<b>Management</b>			
-	1	-	-
<b>Direct Production</b>			
Skilled	-	7	45
Semi-skilled	-	-	34
Unskilled	-	-	81
<b>Auxiliary Activities</b>			
Skilled	-	2	-
Semi-skilled	-	-	-
Unskilled	-	-	1

- Proportion of production facilities occupied: 95% of motors and 100% of furnaces.

- Mechanization is fair in all shops.

- Automation is poor in general.

- Skilled workers in direct production are mechanics, turners, machine operators, fitters, etc.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION (Rs. 000)		2,473		TOTAL VALUE OF CONSUMPTION (Rs. 000)		1,832	
Product	Unit	Quantity Produced	Unit Value (Rs.)		Quantity consumed	Unit value (Rs.)	
a. Bolts and nuts	ton	368	1,905	1. Energy & water: total			66
b. Wire nails	"	168	1,437	- Electricity	000 KWH	168	120
c. Rivets	"	124	1,670	- Coal	ton	180	75
d. Coach screws and roofing screws	"	101	2,255	- Fuel oils	K. litre	58	200
e. Pavel pins	"	259	2,487	- Lubricating oils	"	15	1,100
f. Shoe tacks	"	149	2,207	2. Direct production materials: total			1,393
g. Shoe nails	"	91	1,350	a. Brass and brass rods	ton	520	750
<b>CAPACITY OUTPUT:</b>				b. Head barbed wire	"	753	1,250
30% higher than the actual 1965 production level, with 12,000 additional man-hours.				c. Chemicals and auxiliary materials	Rs. 000	17	..
Product - mix is completely flexible.				d. Consumable stores	Rs. 000	46	..
Unit value of product: Market value f.o.b. before sales tax.				3. Packaging materials: total			127
Unit value of material: Market price o.i.f.				- Gunny bags	1,000 No.	27	1,800
- Production materials (a) and (b) are produced domestically; (a) is transported by railroad only; (b) by railroad and road. Freight costs amount to 4% and 4½%, respectively, of their o.i.f. values.				- Wooden boxes	1,000 No.	16	1,100
				- Others	Rs. 000	7	..
				4. Work performed by sub-contractors			..
				5. Repairs & maintenance (materials & services purchased)			43
				- Services : Rs. 14,000			
				- Materials : Rs. 29,000			
				6. Material inputs for auxiliary activities			33
				- Stationery and printing : Rs. 4,000			
				- Administration and others : Rs. 29,000			
				7. Non-factor service inputs: total			170
				- Transportation, insurance and storage	Rs. 164,000		
				- Other services purchased	Rs. 6,000		
<b>VI. VALUE ADDED TOTAL 1965 (Rs. 000) 641</b>				<b>SELECTED CONCLUSIONS (in 1964 replacement value)</b>			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 2,700			
- Employees in direct production 315				- Value added per employee: Rs. 3,750			
- Other employees 4				- Annual wage per employee in direct production: Rs. 8,886			
2. Other expenditures for employees 144				- Variable input costs/gross production ratio: 76.7%			
3. Annual depreciation allowance 56				- Gross profit/gross production ratio: 4.9%			
4. Rental paid -				(at full capacity : 9.3%)			
5. Sales & other indirect taxes (less subsidies) (not included in total) [ 75 ]				- Level of production at break-even point is approximately 78 % of the 1965 actual level.			
6. Other gross business income (before income tax) 122							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>2. Future Plan</b>			
1. Recent Expansion				a. Investment proposed for the period 1968 to 1970			
From 1963 to 1965				Total value (Rs. 000) 300			
a. Total Investment (Rs. 000)		172		Of which: - Mach. & equipment 80 %			
- Land		-		- Land improv. & bldg. 20			
- Land improvements		-		- Land -			
- Buildings		49	2	- Others -			
- Other construction work		-		b. Net increase in no. of employees envisaged for the same period:			
- Machinery & equipment		95	5	- Direct production: 40 persons			
- Tools & instruments		-		- Auxiliary: -			
- Vehicles		12	-	c. Purpose: Expansion of existing capacity in the same location.			
- Office furniture & fixtures		16	-				
b. Corresponding increase:		From 1963 to 1965					
In no. of employees		97	171				
In annual gross production (Rs. 000)		1,373	2,473				
<b>VIII. SUPPLEMENT</b>				Structure of liquid assets as at end of 1965: (Rs. 000).			
				Cash on hand and in bank 30   Accounts payable 71			
				Accounts receivable 183			

India : 350 - ( 10 )

**MAJOR PRODUCTS:** Household metal wares (utensils, circles, rivets, strips, wires, etc. Annual capacity is about 1,900 tons of various metal wares on one - shift operation.

**REPORTING UNIT:** A one establishment enterprise, founded in 1911, with total assets about Rs. 20 million (net worth Rs. 13 million) and 503 employees as of 1965.

I. FIXED CAPITAL ASSETS (end of 1965)		Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. 000 )		1,825	2,233
1. Land			
2. Land improvements }		1,273	888
3. Buildings			
4. Other construction works		-	-
5. Machinery & equipment		2,189	1,134
6. Tools & instruments		-	-
7. Vehicles		126	65
8. Office furniture & fixtures		237	146
	<b>Total</b>		
	<b>bk. valu.</b>	<b>Age</b>	<b>Depr. rate</b>
	<b>inf. desc.</b>	<b>(Yr.)</b>	<b>Cond. (%)</b>
			<b>1965 replace value</b>

## DETAIL OF I.5 (No.)

- a. Presses (48)  
 b. Spinning lothes (53)  
 c. Polishing machines (114)  
 d. Circling machines (6)  
 e. Fitting machines (29)  
 f. Machine shop (25)  
 g. Riveting and screw department (29)  
 h. Foundry equipment

Rs. 1,760 thousand .. .. 15% Rs. 1,940 thousand

II. INVENTORY (end of 1965)		Actual	Normal
<b>TOTAL VALUE</b> (Rs. million)		9.96	- 23 %
1. Direct production materials	}	7.75	- 20
2. Other input materials			
3. Work in process		0.07	± 0
4. Finished products		2.14	- 30
- Normal inventories of finished products 10 % of annual gross production			
- Seasonal variations: ..			

Capacity of electr. motors: 235 KW

Total load, capacity of trucks: 15 t

- Part of (b), (c) and (g) were domestically made; the rest imported. The enterprise started its first commercial production at 5,000 tons-per-annum scale of production (1911).

**GENERAL CONDITIONS:**

All external conditions are excellent.

## III. LABOUR (1965 average)

	1965 average		
	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> n. 414	503	-	-
1. Direct production ( f. 10 )	424	-	-
Annual total manhours (000)	(1,070)	( )	( )
a. Pressing department	72		
b. Spinning department	63		
c. Polishing department	69		
d. Circling department	32		
e. Fitting department	48		
f. Machine shop	36		
g. Riveting and screw department	54		
h. Foundry	50		
2. Auxiliary activities ( all male )	79		
Technical and managerial and other activities	79		

## EDUCATIONAL BACKGROUND (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	
		Unskilled	Skilled
3	7	30	463
<b>Management</b>			
3	7	10	-
<b>Direct Production</b>			
-	-	-	77
<b>Skilled</b>			
-	-	-	123
<b>Semi-skilled</b>			
-	-	-	224
<b>Unskilled</b>			
<b>Auxiliary Activities</b>			
-	-	20	10
<b>Skilled</b>			
-	-	-	10
<b>Semi-skilled</b>			
-	-	-	19
<b>Unskilled</b>			

- Actual hours worked per annum per direct production worker : 2,523 hours.

- Proportion of motore occupied : 75 %

- **Technological features:** Names of shops indicate processes applied.

- Mechanization and automation, fair in all shops.

- **Skilled workers** in direct production are mechanics, welders, fitters, etc. In auxiliary production they deal with administration, sales, purchases, dispatch, accounts, etc.

IV. ANNUAL PRODUCTION (1965)		TOTAL VALUE OF PRODUCTION (Rs. million)		15.11
Product	Unit	Quantity Produced	Unit Value (Rs.)	
a. Aluminium utensils	ton	979	8,214	
b. Aluminium circles	"	229	7,166	
c. Aluminium rivets	"	24	12,060	
d. Brass utensils	"	23	10,866	
e. Brass strips	"	34	6,710	
f. Copper rivets	"	21	13,820	
g. Copper strips	"	27	14,578	
h. Copper wires	"	25	11,520	
i. Stainless steel utensils	"	124	26,845	
j. Others	Rs.000	629	..	

V. INTERMEDIATE INPUTS (1965)		TOTAL VALUE OF CONSUMPTION (Rs. million)		11.48
1. Energy & water: total		Quantity consumed	Unit value (Rs.)	0.09
	Unit			
- Water	000 litres	8,354	0.40	
- Electricity	000 KWH	224	140	
- Cokes	ton	31	115	
- Petroleum	000 litres	14	600	
- Other fuel oils	"	14	150	
- Lubricating oils	"	10	970	
2. Direct Production materials: total				8.31
a. Aluminium ingots	ton	1,413	3,953	
b. Aluminium scrap	"	386	4,159	
c. Aluminium wire	"	10	6,501	
d. Brass scrap	"	69	3,000	
e. Copper wire bars	"	74	9,960	
f. Brass wire	"	35	3,534	
g. Stainless steel sheets	"	170	4,162	
h. Black steel and M.S. wire	"	47	1,052	
i. Caustic soda	"	32	1,065	
j. Acids	"	16	1,330	
k. Others	Rs. 000	180	..	
3. Packaging materials: total				0.16
- Wooden boxes	Nos.	3,466	22	
- Gunny bags	000 Nos.	12	1,260	
- Others	000 Rs.	48	..	
4. Work performed by sub-contractors				..
5. Repairs & maintenance (materials & services purchased)				0.05
6. Material inputs for auxiliary activities				0.03
Stationery and printing				
7. Non-factor service inputs: total				1.05

CAPACITY OUTPUT:	
25% higher than the actual 1965 production level with sufficient supply of raw and intermediates materials and 123,200 additional annual man-hours on 1st. shift.	
Product - mix is flexible.	

UNIT VALUE OF PRODUCT: Market value f.o.b. before sales tax	
Unit value of material: Market price o.i.f.	
- Production materials (e), (f) and (g) have a significant amount of import contents. All others are of domestic origin.	

VI. VALUE ADDED		TOTAL 1965 (Rs. million)	3.63
1. Wages & salaries (before income tax)			
- Employees in direct production		1.15	
- Other employees	{ .. }		
2. Other expenditures for employees	{ .. }		
3. Annual depreciation allowance		0.50	
4. Rental paid		0.23	
5. Sales & other indirect taxes (less subsidies)(not included in total)	[ 0.32 ]		
6. Other gross business income (before income tax)		1.75	

VII. EXPANSION: HISTORY & PLAN		Gross acquisition	Scrapped or sold
1. Recent Expansion			
From 1963 to 1965			
a. Total Investment ( Rs. 000 )		327	51
- Land		-	-
- Land improvements		-	-
- Buildings		-	-
- Other construction work		-	-
- Machinery & equipment		128 1/2	-
- Tools & instruments		-	-
- Vehicles		87 1/2	45
- Office furniture & fixtures		112 1/2	-
b. Corresponding increase:		From 1963	to 1965
In no. of employees		430	503
In annual gross production (Rs. million)		12.7	15.1
2. Future Plan			
a. Investment proposed for the period 1967 to 1970			
Total value			Rs. 5 million
Of which:			
- Mach. & equipment		60	%
- Land improv. & bldg.		40	
- Land		-	
- Others		-	
b. Net increase in no. of employees envisaged for the same period:			
- Direct production:		500	
- Auxiliary:		50	
c. Purposes:			
Expansion on the same sites. Introduction of new types of utensils; selective expansion, especially, of press department and machine shop.			

VIII. SUPPLEMENT		Structure of liquid assets and current liabilities (end of 1965; Rs. million)	
Cash on hand and in bank	1.7	Taxes payable	1.7
Accounts receivable	2.0	Accounts payable	2.1
Loans and advances	2.3	Borrowing from commercial banks	2.1

1/	10% of the expenditure in machinery, equipment, tools and instruments, 7% in vehicles, and 3% in office furniture and fixtures are for repair and maintenance.
2/	Wages and salaries divided by total number of employees.
3/	Two-thirds of wages and salaries regarded as variable cost.

Israel : 350 - (6)

**MAJOR PRODUCTS:** Solar heat absorbers and storage furniture. Annual capacity in value terms is about I£ 2.0 million, on the basis of one-shift operation.

**PRODUCING UNIT:** An independent one-establishment enterprise with total assets I£ 3.0 million and employees 50 as of 1964. Founded in 1953.

I. FIXED CAPITAL ASSETS (end of 1964)		Before deprec.	After deprec.				
TOTAL BOOK VALUE* (000 I£ )		1,170	1,150	Total bk. value	Avg. Age (Yr.)	Depr. rate (%)	1964 replace value
1. Land	}						
2. Land improvements		514	514				
3. Buildings							
4. Other construction works							
5. Machinery & equipment	}	430	430				
6. Tools & instruments							
7. Vehicles		226	206				
8. Office furniture & fixtures							
* Revalued in 1964.							
DETAIL OF 1.5 (No.)							
a. Shear; 1.5 m x 3 m		..	11	A	10		20
b. Shear; 1.5 m x 2 m		6	2	"	"		6
c. Brake press; 100 tons, 3.5 m length		..	10	"	"		40
d. Brake press; 50 ton, 2 m length		..	2	"	"		8
e. Brake press; 20 ton, 1 m length		..	2	"	"		4
f. Eccentric press; 100 ton		..	8	"	"		3
g. Eccentric press; 60 ton		..	..	"	"		..
h. Eccentric press; 20 ton (3)		..	..	"	"		..
i. Welding machine, 1 ton		..	2	"	"		4
j. Welding machines (2)		..	2-4	"	"		2

II. INVENTORY (end of 1964)		Actual	Normal
TOTAL VALUE (000 I£ )		919	-
1. Direct production materials		470	-
2. Other input materials		-	-
3. Work in process		188	-
4. Finished products		261	-
- Normal inventories of finished products 15.8% of annual gross production			
- Seasonal variations: -			
Capacity of electr. motors: 100 HP			
Capacity of electr. furnaces 30 KW			
Total load, capacity of trucks: 3.5 t			
All the machines itemized were imported. Average age of machinery itemized is estimated as 8 years.			
<b>GENERAL CONDITIONS:</b>			
Transportation, public utilities and community facilities are excellent.			

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
TOTAL EMPLOYED 50		50	-	-	Univ. or higher	Sr. High sch. or equiv.	Other	Other
1. Direct production ( m. 45 )		45	-	-				
Annual total manhours (000)		(99)	(-)	(-)				
too								
The process is of simple nature to be divided into shops.								
						18	32	
						5		
						10	30	
						3	2	
2. Auxiliary activities ( m. 4 / 1 )		5						

- Average working hours per annum per direct production worker: 2,200 hrs.

- Proportion of motors occupied is 50%; proportion of furnaces occupied is 100%.

- Degree of mechanization is poor. No automation.

IV. ANNUAL PRODUCTION (1964)			
TOTAL VALUE OF PRODUCTION ( 000 IE ) <u>1,650</u>			
Product	Unit	Quantity Produced	Unit Value ( IE )
a. Solar heat absorbers	pc.	4,562	76
b. Various storage furniture	000 IE	1,300	..

**CAPACITY OUTPUT:**  
 About 20% higher than the 1964 actual level given sufficient demand. No additional labor input is required. Product-mix is flexible.

Unit value of product: Market value f.o.b. before sales tax  
 Unit value of material: Market price c.i.f.  
 (V.2.a.) and (V.2.b.) are imported.

V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF CONSUMPTION ( 000 IE ) <u>1,132</u>			
<b>1. Energy &amp; water: total</b> <u>18</u>			
		Quantity consumed	Unit value ( IE )
- Electricity	000 kwh	130	45
<b>2. Direct production materials: total</b> <u>782</u>			
a. Black iron sheets	ton	36	500
b. Galvanized iron sheets	"	12	800
c. Galvanized pipes	000 m	8	1,400
d. Unclassified	000 IE	743	..
<b>3. Packaging materials: total</b> <u>-</u>			
<b>4. Work performed by sub-contractors ( )</b> <u>11</u>			
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> <u>10</u>			
<b>6. Material inputs for auxiliary activities</b> <u>5</u>			
<b>7. Non-factor service inputs: total</b> <u>306</u>			

VI. VALUE ADDED		TOTAL 1964 ( 000 IE )
1. Wages & salaries (before income tax)		<u>518</u>
- Employees in direct production	352	
- Other employees	55	
2. Other expenditures for employees	14	
3. Annual depreciation allowance	18	
4. Rental paid	4	
5. Sales & other indirect taxes (less subsidies) (not included in total)	<u>127</u>	
6. Other gross business income (before income tax)	75	

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: IE 9,556
- Value added per employee: IE 10,360
- Annual wage per employee in direct production: IE 7,822
- Variable input costs/gross production ratio: 70%
- Gross profit/gross production ratio: 4.5%
- Gross profit/gross production ratio at full capacity: 10.0%
- Level of production at break-even point is approximately 83 % of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN			
1. Recent Expansion		Gross acquisition	Scrapped or sold
From 19 61 to 19 65			
a. Total Investment ( 000 IE )		570	-
- Land		-	-
- Land improvements		-	-
- Buildings		270	-
- Other construction work		-	-
- Machinery & equipment		200	-
- Tools & instruments		-	-
- Vehicles		100	-
- Office furniture & fixtures		-	-
b. Corresponding increase:		From 19 61	to 19 65
In no. of employees		35	45
In annual gross production ( 000 IE )		1,500	1,800

2. Future Plan		Notes
a. Investment proposed for the period 19	to 19	
Total value ( )		
Of which:		
- Mach. & equipment		\$
- Land improv. & bldg.		
- Land		
- Others		
b. Net increase in no. of employees envisaged for the same period:		
- Direct production:		
- Auxiliary:		
c. Purpose:		

**VIII. SUPPLEMENT**

Japan : 350 - ( 10 )

**MAJOR PRODUCTS:** Steel wires from wire rods. Annual capacity output is about 42,000 tons of various types of steel wire on three shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise founded in 1938 with total assets ¥ 5,400 million and employees 810 as of 1964.

### I. FIXED CAPITAL ASSETS (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (¥ million)	<u>3,096.7</u>	<u>2,530.1</u>
1. Land (total acreage 205,190 m <sup>2</sup> )	237.9	237.9
2. Land improvements	219.0	192.7
3. Buildings (total floor space 39,500 m <sup>2</sup> )	931.7	852.5
4. Other construction works	30.5	30.5
5. Machinery & equipment	1,560.5	1,158.3
6. Tools & instruments	74.3	34.0
7. Vehicles	31.5	14.5
8. Office furniture & fixtures	11.3	9.7

	Total bk. value	Avg. age	Oper. cond.	Depr. % mil.	1964 replace value
<b>DETAIL OF 1.5 (No.)</b>					

a. Direct - heating patenting furnaces (16)	229.4	3	A	17.6	230.0
b. Wire straightening machines (87)	684.5	3-4	A	48.6	685.0
c. Galvanising plants using heavy oil (7)	23.5	3-4	A	2.7	23.5
d. Crossers (34)	30.4	3-10	A,B	1.5	35.0
e. Universal testing machines (31)	12.8	3-7	A,B	1.0	15.0

### II. INVENTORY

	Actual	Normal
<b>TOTAL VALUE</b> (¥ million)	835.1	+ 5 %
1. Direct production materials	235.0	-
2. Other input materials	97.6	-
3. Work in process	201.5	-
4. Finished products	301.0	+ 20

- Normal inventories of finished products 11 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 7,500 KW  
Capacity of electr. furnaces: 100 KW  
Total load, capacity of trucks: 10 t

- Part of (b) was imported. The rest domestically made.

- Average age of machinery (63% of total) is slightly over 3 years.  
(Most of the key process machines were installed in 1961/62.)

#### GENERAL CONDITIONS:

Transport, electricity and gas, excellent. Community facilities, fair. Water, poor.

### III. LABOUR (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 810 m. 520	415	198	197
1. Direct production ( f. 30 )	255	178	177
Annual total manhours (000)	(409.5)	(361.7)	(361.7)
a. Patenting	40	38	37
b. Acid pickling and deceler drying	19	18	18
c. Wire forming	80	70	70
d. Cold strip	10	9	9
e. Electroplating	28	27	27
f. Wire rope making	18	16	16
2. Auxiliary activities ( m. 180 f. 80 )	160	20	20
a. Factory and technological control	80	20	20
b. Management	140	-	-

#### EDUCATIONAL BACKGROUND (No. of employees)

Univ. or higher	Sr. High sch. or other	Lowly	Other
54	71	573	112
2	1	-	-
<b>Direct Production</b>			
30	-	207	15
10	-	177	40
<b>Auxiliary Activities</b>			
5	-	40	26
5	45	70	12
2	23	55	14
-	2	24	5

- Actual working hours in 1964 per direct production worker : 2,060 hours.

- Proportion of motore and furnaces occupied: 85% on 1st shift and 80% on 2nd and 3rd shifts.

- **Technological features:**  
a) Rapid cooling in a melted lead tub after heating in one gas and one kerosene direct heating furnace.  
b) Acid pickling and special hot-air drying with sulfuric, hydrochloric, nitric and mixing acid.  
c) 30" x 5H straight line continuous wire forming.  
e) Galvanising using heavy oil, and gilding of copper, chrome, nickel, brass, bronze and tin.

f) Twisting of steel wires by 12" x 6F crosser and 24" x 6F strider.

- Mechanisation and automation are excellent in all shops

- **Skilled workers** in direct production are engaged in patenting and wire forming. Those in auxiliary activities are for quality control and accounting.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( ¥ million )				TOTAL VALUE OF CONSUMPTION ( ¥ million )			
3,285.0				2,473.6			
Product	Unit	Quantity Produced ( '000 )	Unit Value ( '000 ¥ )	1. Energy & water: total	Quantity consumed ( '000 )	Unit value ( '000 ¥ )	
a. Piano wire	ton	9,512	100.8	- Electricity	000 KWH	16,500	4.5
b. Hard wire	"	21,941	73.0	- Liquid fuel	Kl.	4,920	9.0
c. Oil tempered steel wire	"	1,672	117.0	- Gas	000 m <sup>3</sup>	78	20.0
d. Stainless steel wire	"	760	432.0	2. <u>Direct production materials: total</u>			2,013.0
e. Wire rope	"	166	579.0	a. Piano wire rods	ton	6,071	83
f. Miscellaneous steel wire	"	932	7.0	b. Hard wire rods	"	33,505	34
g. Wire rod scrap	"	2,700	40.0	c. Oil tempered wire rods	"	1,804	70
				d. Stainless steel wire rods	"	937	250
				e. Others	¥ mil.	9.4	..
				3. <u>Finishing materials: total</u>			69.3
				Paper and paper products ( ¥ 165,000/t. ) 420 t.			
				4. <u>Work performed by sub-contractors ( see VIII )</u>			4.5
				5. <u>Repairs &amp; maintenance materials &amp; services purchased</u>			77.4
				Parts and materials 35.7			
				Services purchased 41.7			
				6. <u>Material inputs for auxiliary activities</u>			--
				7. <u>Non-factor service inputs: total</u>			189.3
				Of which transport, insurance and storage purchased separately. 87.1			
<b>CAPACITY OUTPUT:</b>				<b>SELECTED COEFFICIENTS</b>			
20% higher than the 1964 actual production level with no addition to man-hours. product-mix is not flexible.				- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 6,400,000			
Unit value of product Market value f.o.b. before sales tax.				- Value added per employee: ¥ 1,000,000			
Unit value of material: Market price c.i.f.				- Annual wage per employee in direct production: ¥ 522,000			
About half of products (a) to (c) and part of (d) are exported. All products used for the production of exports.				- Variable input costs/gross production ratio: 67%			
Direct production materials are all produced domestically but have some significant amount of import contents. Delivered by sea with freight rate 10% c.i.f. values.				- Gross profit/gross production ratio: 6.3% (at full capacity : 10.8%)			
				- Level of production at break-even point is approximately 80 % of the 1964 actual level.			
<b>VI. VALUE ADDED TOTAL 1964 ( ¥ million )</b>				<b>SELECTED COEFFICIENTS</b>			
811.4				- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 6,400,000			
1. Wages & salaries (before income tax)				- Value added per employee: ¥ 1,000,000			
- Employees in direct production 286.9				- Annual wage per employee in direct production: ¥ 522,000			
- Other employees 97.5				- Variable input costs/gross production ratio: 67%			
2. Other expenditures for employees 30.7				- Gross profit/gross production ratio: 6.3% (at full capacity : 10.8%)			
3. Annual depreciation allowance 153.4				- Level of production at break-even point is approximately 80 % of the 1964 actual level.			
4. Rental paid (land 2.7; building 2.9) 5.6							
5. other indirect taxes 31.9 (less subsidies)							
6. Other gross business income (before income tax) 205.4							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>SELECTED COEFFICIENTS</b>			
1. <u>Recent Expansion</u>				2. <u>Future Plan</u> : None			
From 1961 to 1963				a. Investment proposed for the period 1964 to 1965			
a. Total Investment ( ¥ million )				Total value ( ¥ million )			
2,230				Of which: - Mach. & equipment			
- Land 315				- Land improv. & bldg.			
- Land improvements 155				- Land			
- Buildings 726				- Others			
- Other construction work				b. Net increase in no. of employees envisaged for the same period:			
- Machinery & equipment 1,006				- Direct production:			
- Tools & instruments 23				- Auxiliary:			
- Vehicles 5				c. Purposes:			
- Office furniture & fixtures							
b. Corresponding increase: From 1961 to 1963							
In no. of employees 460 800							
In annual gross production ( ¥ million ) 920 2,300							
<b>VIII. SUPPLEMENT</b>				<b>Structure of liquid assets and current liabilities ( end of 1964 ¥ 000 million. )</b>			
Cash on hand and in bank .72				Accounts payables 1.50			
Accounts receivable 1.09				Borrowing from commercial banks 1.46			
Advances .09				Borrowing from others .48			
<p><u>Work performed by subcontractors:</u> A small subcontractor with 10 employees manufactured 700 tons of steel wire from steel wire rods provided by this establishment. (The subcontractor is solely dependent on this establishment.)</p>							



Japan : 350 - ( 11 )

**MAJOR PRODUCTS:** Wire springs and flat springs. Annual capacity output is about 400 million pieces of metal springs on one shift operation.

**REPORTING UNIT:** One-establishment enterprise with total assets about ¥ 450 million (net worth ¥ 240 million) and employees 170 as of 1964. Founded in 1946.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( ¥ million )	<u>245.8</u>	<u>210.0</u>
1. Land (total acreage 2,170 m <sup>2</sup> )	64.0	64.0
2. Land improvements	.2	.1
3. Buildings (total floor space 3,020 m <sup>2</sup> )	91.2	85.4
4. Other construction works	2.0	2.0
5. Machinery & equipment	72.8	49.9
6. Tools & instruments	9.5	4.7
7. Vehicles	5.1	3.3
8. Office furniture & fixtures	1.0	.6

**DETAIL OF I.5 (No.)**

	Total Bk. value 100,000 ¥	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Coiling machines (42)	20	2-5	A	17	20
b. Torsion machines (22)	22	"	"	"	22
c. Press machines (18)	10	"	"	"	10
d. Electric furnace (1)	10	2	"	"	10

**II. INVENTORIES**  
(end of 1964)

	Actual	Normal
<b>TOTAL VALUE</b> ( ¥ million )	<u>28.9</u>	-
1. Direct production materials	8.2	-
2. Other input materials	-	-
3. Work in process	9.2	-
4. Finished products	11.5	-

- Normal inventories of finished products  
2.8 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 200 KW  
Capacity of electr. furnaces: 100 KW  
Total load, capacity of trucks: - t

Part of (a), (b) and (c) were imported.  
The rest are domestic makes.  
Most of machines were installed during  
the recent expansion period.

**GENERAL CONDITIONS:**

Transport, public utilities and health,  
recreational and educational facilities,  
excellent. Residential facilities, fair.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	170	--	--
1. Direct production ( m. 55 f. 70 )	125	( )	( )
Annual total manhours (000)	(382.5)	( )	( )
a. Coiling	36		
b. Edge finishing	16		
c. Plastic operation & punching	26		
d. Tempering & hardening	16		
e. Surface treating	21		
f. Testing ( conditioning )	10		
2. Auxiliary activities ( m. 30 f. 15 )	45		
a. Management	37		
b. Factory control	8		

**EDUCATIONAL BACKGROUND**  
(No. of employees)

Engl- BASE	Other	Sr. High sch. or equiv. OTHER		
		Sr. High sch.	Other	
TOTAL	3	15	57	95
<b>Management</b>				
(included in auxiliary)				
<b>Direct Production</b>				
			8	60
			20	30
<b>Auxiliary Activities</b>				
			13	-
			11	-
			5	-

- Annual work hours per direct  
production workers: 3,050 hrs.

- Technological features:

- Automatic production of wire spring by forming machines, coiling machines and other machines.
- Machine processing of top edge and automatic in-laying of springs.
- Automatic continuous pressing.
- 30 KW round tempering furnace and indirect salt-bath furnaces.
- Automatic vibrating grinding.
- Test of tension and hardness.

- Mechanisation, excellent; automation, fair.

**Skilled workers** in direct production are engaged in heat treatment and electroplating.  
Those in auxiliary activities are quality control and accounting staff.

Japan : 350 - ( 11 )

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( ¥ million )				TOTAL VALUE OF CONSUMPTION ( ¥ million )			
429.2				230.0			
	Product	Unit	Quantity Pre- Value ( ¥ )		Quantity Unit con- sumed ( ¥ )		Unit value ( ¥ )
a.	Wire springs	Mil. pcs.	342.2	1/pc.			
b.	Flat springs	"	43.3	2/pc.			
c.	Scrap	Kg.	1,600	250			
<b>1. Energy &amp; water: total</b>				<b>2.8</b>			
- Electricity				000 KWH	460	6,000	
<b>2. Direct production materials: total</b>				<b>53.4</b>			
a.	Hard steel wire C	Kg.	3,380	103			
b.	Piano wire rods 0.6	"	623	577			
c.	Phosphor bronze wire 0.8	"	43	680			
d.	Stainless steel wire 0.7	"	1,977	550			
e.	Others (miscellaneous items)	¥ mil.	51.6				
<b>3. Packaging materials: total</b>				<b>.1</b>			
Corrugated cardboard boxes ( ¥ 30/pc. )				34,000			
<b>4. Work performed by sub-contractors ( see V111 )</b>				<b>143.6</b>			
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>				<b>8.4</b>			
Parts and materials				.6			
Services purchased				7.8			
<b>6. Material inputs for auxiliary activities</b>				<b>-</b>			
<b>7. Non-factor service inputs: total</b>				<b>21.7</b>			
Of which transport, insurance and storage purchased separately : ¥ 4.9 million.							
<b>CAPACITY OUTPUT:</b>							
Same as the 1964 actual production.							
Unit value of product: Market value f.o.b. before sales tax							
Unit value of material: Market price c.i.f.							
- Wire and flat springs are partly used for the production of exports.							
- All direct production materials are made domestically but contain significant import contents; delivery mostly by road; freight rate 15% of c.i.f.							
<b>VI. VALUE ADDED TOTAL 1964 ( ¥ million )</b>				<b>199.2</b>			
1.	Wages & salaries (before income tax)						
-	Employees in direct production		40.7				
-	Other employees		20.8				
2.	Other expenditures for employees		3.8				
3.	Annual depreciation allowance		2.8				
4.	Rental paid		-				
5.	Other indirect taxes (less subsidies)		25.0				
6.	Other gross business income (before income tax)		106.1				
<b>SELECTED CONVEYANCES</b>							
- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 610,000							
- Value added per employee: ¥ 1,170,000							
- Annual wage per employee in direct production: ¥ 326,000							
- Variable input costs/gross production ratio: 56%							
- Gross profit/gross production ratio: 24.7%							
- Level of production at break-even point is approximately 44 % of the 1964 actual level.							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
<b>1. Recent Expansion</b>				<b>2. Future Plan :</b>			
From 1960 to 1962				a. Investment proposed for the period 1964 to 1965			
a.	Total Investment ( ¥ million )		185	Total value		¥ 72 million	
-	Land		50	Of which: - Mach. & equipment		45	¥
-	Land improvements		-	- Land improv. & bldg.		35	
-	Buildings		80	- Land		20	
-	Other construction work		-	- Others		-	
-	Machinery & equipment		50	b. Net increase in no. of employees envisaged for the same period:			
-	Tools & instruments		1	- Direct production: 50			
-	Vehicles		2	- Auxiliary: 10			
-	Office furniture & fixtures		2	c. Purpose: Largely balanced expansion of the existing capacity in a new location.			
d.	Corresponding increase:						
-	In no. of employees		80	160			
-	In annual gross production ( ¥ million )		100	300			
<b>VIII. SUPPLEMENT</b>				<b>Structure of liquid assets and current liabilities ( end of 1964, ¥ million )</b>			
Cash on hand and in bank 76.5; accounts receivable 112.3; prepaid expense and suspense payment 2.7. Taxes payable 25.7; accounts payable 51.7; reserve for price fluctuation 1.6; borrowing from commercial banks 32.0.							
Work performed by subcontractors (gilding): A subcontractor with 30 employees, working solely for this establishment, gilded 41 million pieces of wire springs with total fee ¥ 28 million. Another subcontractor having 50 employees gilded 50.3 million pieces of wire springs and 4.2 million flat springs receiving ¥ 54.3 million for fees, which accounted for more than a half of this subcontractor's total annual proceeds. Other 18 small firms performed gilding with a total fee of ¥ 61.3 million. The products received from subcontractors were processed within this establishment.							

Japan : 350 - ( 12 )

**MAJOR PRODUCTS:** Tin-plate products. (jackets for dry batteries, cans for food and medicines portable gas holders). Annual capacity output is about 1,400 tons on one shift operation. (It could reach 1,400 tons per annum with a ¥ 20 million worth expansion of the body worker equipment).

**REPORTING UNIT:** An independent one-establishment enterprise with total assets ¥ 200 million and 122 employees as of 1966. It was founded in 1958.

I. FIXED CAPITAL ASSETS		End of 1965 After deprec.	End of 1966 After deprec.	II. INVENTORIES (end of 1966)	
<b>TOTAL BOOK VALUE</b>	( ¥ million )	62.05	55.69	<b>TOTAL VALUE</b> ( ¥ million )	24.93 + 4.5
1. Land ( 2,475 m <sup>2</sup> )		14.21	14.21	1. Direct production materials	9.86 - 2
2. Land improvements		-	-	2. Other input materials	.52 - 13
3. Buildings (total floor space 1,799 m <sup>2</sup> )		12.11	11.37	3. Work in process	10.53 + 7
4. Other construction works		-	-	4. Finished products	4.02 -
5. Machinery & equipment		26.94	23.09	- Normal inventories of finished products	1.4% of annual gross production
6. Tools & instruments		4.58	3.57	- Seasonal variations: Range within ± 30% of the normal level. Seasonal high and low of (2) & (4) take place in Mar. & Oct., respectively; of (1), in Apr. & Oct., resp.; and of (3), in Dec. and Aug., respectively.	
7. Vehicles		2.07	1.58		
8. Office furniture & fixtures		2.14	1.86		
	End of 1965				
	Total	Avr. Age	Annual Depr. value	1966 replace value	
<b>DETAIL OF I.5 (No.)</b>	( ¥ 000 )	(Yr.)	Cond.	value	value
a. Line for dry battery jackets No. 1	4,478	2.5	B	897	8,000
b. Line for dry battery jackets No. 2	7,000	.4	A	536	7,000
c. Line for food & medicine cans No. 1	2,315	7.6	C	444	14,500
d. Line for food & medicine cans No. 2	3,534	2.3	A	726	5,850
e. Cartridge line	5,800	.5	C	571	5,800
f. Slitter No. 1	117	7.6	C	26	300
g. Slitter No. 2	117	7.6	C	26	300
h. Slitter No. 3	224	4.5	B	40	500
i. Slitter No. 4	280	3.0	E	49	500
j. Slitter No. 5	340	2.5	A	59	500
k. Press No. 1	392	7.6	C	68	1,500
l. Press No. 2	965	4.5	C	169	2,000
m. Press No. 3	1,382	2.5	B	243	2,000

Capacity of electr. motors: 110 KW

Total load, capacity of trucks: 2.9 t

The machines were made domestically except for (e) which was imported.

Average age is 3 years.

**EXTERNAL CONDITIONS:** Long distance transport and public utilities, excellent. Local transport, health recreation and educational facilities, fair. Residential facilities, poor.

III. LABOUR (1966 average)	1st shift			2nd shift			3rd shift			EDUCATIONAL BACKGROUND (No. of employees)			
	1st shift	2nd shift	3rd shift	Univ. or higher	Br. High sch. or equiv.	Other	Unskilled	Semi-skilled	Skilled	Unskilled	Semi-skilled	Skilled	
<b>TOTAL EMPLOYED</b>	112	—	—	2	23	86	—	—	—	—	—	—	
1. Direct production ( m. 31 f. 62 )	93	—	—	2	23	86	—	—	—	—	—	—	
Annual total manhours (000)	(223.2)	( )	( )										
a. Line for dry battery jackets	28												
b. Line for food and medicine containers	43												
c. Cartridge line (for portable gas holders)	14												
d. Cutting	6												
e. Cover press	2												
2. Auxiliary activities ( e. 14 f. 5 )	19												
a. General affairs & accountants' unit.	5												
b. Engineering	1												
c. Warehouse keepers	2												
d. Sales and purchase	4												
e. Clerical work	2												
f. Personal manager and labor section	3												
g. Management	2												

- Actual hours worked in 1966 per direct production worker : 2,400 hours.

- Proportion of motors occupied : 75% on the 1st shift.

**Technological features:**

- e) Automation body worker.  
b) Body worker; can manufacturing.  
c) Press; can manufacturing.

- Degree of mechanisation and automation is excellent in

(e), poor in (b) and fair in (c).

- **Skilled workers** in direct production are in inspection and machine operation. Those in auxiliary activities are engaged in monthly settlement and business negotiation.

IV. ANNUAL PRODUCTION (1966)				V. INTERMEDIATE INPUTS (1966)					
TOTAL VALUE OF PRODUCTION ( ¥ million )			281.60	TOTAL VALUE OF CONSUMPTION ( ¥ million )			216.87		
Product	Unit	Quantity Produced (000 ¥)	Unit Value (000 ¥)	1. Energy & water: total		Quantity consumed (000 ¥)	Unit value (000 ¥)		
a. Jackets for dry batteries	000 pieces	104,563	1.8	- Electricity	000 KWH	140.34	5.8		
b. Food cans	000 cans	5,517*	5.2	- Gas	000 m <sup>3</sup>	9.49	23		
c. Medicine cans	"	4,050*	6.5	- Water	"	11.32	45		
d. Cartridges for portable gas holders	000 pieces	3,596	10.2	2. Direct production materials: total			122.83		
e. Scrap	ton	130	13.0	a. Tin plate, 0.20 mm	ton	750	117		
				b. Tin plate, 0.22 mm	"	172*	114		
				c. Tin plate, 0.24 mm	"	78	112		
				d. Tin plate, 0.32 mm	"	62	92		
* Of which 536,000 pieces were produced by subcontractors.				* Of which 166 tons was supplied for and processed by subcontractors (see VIII).					
<b>CAPACITY OUTPUT:</b> 20% higher than the 1966 actual production level with additional 2,400 man-hour on the 1st shift. This is constrained by the installed capacity of the body worker equipment; an investment of ¥ 20 million would bring the overall capacity to a level 50% higher than the 1966 production level. The optimum product-mix would be 60% for dry battery jackets, 10% for food cans and medicine cans, respectively, and 20% for cartridges for portable gas holders.				3. Packaging materials: total				5.76	
Unit value of product: Market values f.o.b. before sales tax				78,100 cases of paper products (¥ 50/ case)					
Unit value of material: Market price c.i.f.				18,590 cases of wooden materials (¥ 100/ case)				74.42	
				4. Work performed by sub-contractors (see VIII)					
				5. Repairs & maintenance (materials & services purchased)				1.46	
				6. Material inputs for auxiliary activities				1.18	
				Electricity, gas & water used for administration ¥ 307,000. Repairs & maintenance ¥ 877,000.					
				7. Non-factor service inputs: total				9.68	
				Transportation, insurances and storage services (purchased separately) ¥ 4.73 million.					
<b>VI. VALUE ADDED</b> TOTAL 1966 ( ¥ million )				64.73	<b>SELECTED CONVEYANCES</b>				
1. Wages & salaries (before income tax)					- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 339,000 (¥ 573,000 1/)				
- Employees in direct production				29.40	- Value added per employee: ¥ 578,000				
- Other employees				13.03	- Annual wage per employee in direct production: ¥ 316,000				
2. Other expenditures for employees				5.12	- Variable input costs/gross production ratio: 83.1%				
3. Annual depreciation allowance				6.36	- Gross profit/gross production ratio: 3.4%				
4. Rental paid (buildings)				1.38	(at full capacity : 5.6%)				
5. Sales & other indirect taxes (less subsidies)				-	- Level of production at break-even point is approximately 80 % of the 1966 actual level.				
6. Other gross business income (before income tax)				9.44					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				Gross acquisition	Scrapped or sold	<b>2. Future Plan :</b>			
1. Recent Expansion						a. Investment proposed for the period 1966 to 19 68			
From 19 63 to 1966						Total value ( ¥ million )			
a. Total Investment ( ¥ million )				49.62	17.25	Of which: - Mach. & equipment			
- Land				13.50	13.50	- Land improv. & bldg.			
- Land improvements				-	-	- Land			
- Buildings				11.43	1.14	- Others			
- Other construction work				-	-				
- Machinery & equipment				21.02	2.10	b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments				1.46	.15	- Direct production: 10			
- Vehicles				1.65	.30	- Auxiliary: 3			
- Office furniture & fixtures				.56	.06	c. Purposes: Selective expansion of the body worker equipment.			
b. Corresponding increase:				From 1963	to 19 66				
In no. of employees				75	112				
In annual gross production ( ¥ million )				119.2	281.6				
<b>VIII. SUPPLEMENT</b>				A subcontractor with 150 employees was engaged in printing 735,000 pieces of tin plates for a fee of ¥ 36.9 million. The printed tin plates were further processed in the establishment. Three small subcontractors (with employees 11 to 28 each) were supplied 166 tons of tin plate altogether to manufacture cans for a total fee of ¥ 37.5 million. The order accounts for a major portion of the total annual proceeds of these three subcontractors, two of which work solely for this enterprise.					
1/ Using the 1966 replacement value.									

**MAJOR PRODUCTS:** Machine screws, bolts and nuts.  
Annual capacity output is about 1,300 t of these products on one shift operation.

**REPORTING UNIT:** A one-establishment enterprise, founded in 1931, with total assets ¥ 130 million (net worth ¥ 50 million) and employees 133 as of 1964.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( ¥ million )	114.0	61.4
1. Land (7,422 m <sup>2</sup> )	3.4	3.4
2. Land improvements	-	-
3. Buildings (total floor space 1,960 m <sup>2</sup> )	28.7	22.8
4. Other construction works	-	-
5. Machinery & equipment	72.5	29.1
6. Tools & instruments	-	-
7. Vehicles	5.7	4.1
8. Office furniture & fixtures	3.7	2.6

DETAIL OF 1,5 (No.)	Total Bk. value	Avr. Age	* Depr. Oper. rate	1964 replace. value
a. Headers (47)	34.2	5-24 10-13 10-20	A(40) B(40) C(20)	30 33.4
b. Rollers (46)	5.8	5-16 8-10 20-22	A(35) B(40) C(25)	29 7.9
c. Slottting machines (32)	1.6	5-6 10-13 13-20	A(20) B(40) C(40)	20 2.6

\* The figures in parenthesis are percentage of machines with the said operating condition within the group.

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE</b> ( ¥ million )	12.2	.. %
1. Direct production materials	6.4	
2. Other input materials	-	
3. Work in process	1.6	
4. Finished products	4.6	

- Actual inventories of finished products 1.4% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 225 KW

Total load, capacity of trucks: 4 t

Average age of machinery (57% of total) is estimated around 10 years.

**GENERAL CONDITIONS:**

Transport, public utilities and health and recreational facilities, excellent. Residential and educational facilities, fair.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)			
				Univ. or higher	Sr. High sch. or equiv.	Other	Other
<b>TOTAL EMPLOYED</b>	138	-	-	-	-	-	-
1. Direct production ( F. 65 )	154	-	-	-	-	-	-
Annual total manhours (000)	(433)	( )	( )	-	-	-	-
a. Headers	24	-	-	-	-	-	-
b. Rolling	17	-	-	-	-	-	-
c. Slottting	12	-	-	-	-	-	-
d. Press	11	-	-	-	-	-	-
e. Cutting	50	-	-	-	-	-	-
f. Milling	10	-	-	-	-	-	-
g. Packing	25	-	-	-	-	-	-
h. Maintenance of machines and buildings	5	-	-	-	-	-	-
2. Auxiliary activities ( F. 20 )	34	-	-	-	-	-	-
a. Management	5	-	-	-	-	-	-
b. Sales	7	-	-	-	-	-	-
c. Accounting	3	-	-	-	-	-	-
d. General affairs	10	-	-	-	-	-	-
e. Quality and production control	9	-	-	-	-	-	-

- Actual working hours per direct production in 1964: 2,310 hrs.

- Technological features:

a) Cold heading process with high speed automatic operation.

b) Die-plate; high speed.

c) Cutting and slottting machines with high speed operation.

- Mechanization is excellent in (a); excellent to fair in (b); excellent to poor in (c).

- Skilled workers in direct production are engaged in manufacture of machine screws, galling and packing.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)				
TOTAL VALUE OF PRODUCTION ( ¥ million ) <u>341.4</u>				TOTAL VALUE OF CONSUMPTION ( ¥ Million ) <u>219.6</u>				
<u>Product</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Price Value (000 ¥)</u>	<u>1. Energy &amp; water: total</u>	<u>Quantity</u>	<u>Unit Price Value (000 ¥)</u>		
		<u>Produced</u>			<u>Consumed</u>			
a. Machine screws	Ton	1,030	280	- Electricity	000 KWH	380	6.3	
b. Bolts	"	178	210	<u>2. Direct production materials: total</u>				
c. Nuts	"	70	190	a. Iron wire	Ton	1,308	40	
d. Scrap iron	"	76	30	b. Rolled copper	"	133	380	
<b>CAPACITY OUTPUT:</b>				<u>3. Producing materials: total</u> <u>5.7</u>				
Same as the 1964 actual production level.				Metal products other than cans (¥ 60,000/t) <u>95t</u>				
The proportions of products produced are easily changeable according to the pattern of demand.				<u>4. Work performed by sub-contractors ( )</u>				
Unit value of product: Market value f.o.b. before sales tax.				<u>5. Repairs &amp; maintenance (materials &amp; services purchased)</u> <u>18.5</u>				
Unit value of material: Market price c.i.f.				Parts and materials <u>.8</u>				
- Machine screws are partly exported.				Services purchased <u>17.7</u>				
- Iron wire and rolled copper contain a significant amount of import contents. Delivered by road with freight rates 2.5% and 2.0%, respectively, of the c.i.f. value.				<u>6. Material inputs for auxiliary activities (Gasoline for transportation)</u> <u>1.1</u>				
<b>VI. VALUE ADDED TOTAL 1964 ( ¥ million )</b> <u>121.8</u>				<u>7. Non-factor service inputs: total</u> <u>80.0</u>				
1. Wages & salaries (before income tax)				Of which transport, insurance and storage purchased separately <u>9.0</u>				
- Employees in direct production <u>64.9</u>				<b>SELECTED COEFFICIENTS</b>				
- Other employees <u>20.0</u>				- Mech., equip., instruments & tools per employee in direct production on 1st shift: ¥ 471,000				
2. Other expenditures for employees <u>3.9</u>				- Value added per employee: ¥ 647,000				
3. Annual depreciation allowance <u>15.2</u>				- Annual wage per employee in direct production: ¥ 421,000				
4. Rental paid <u>.4</u>				- Variable input costs/gross production ratio: 51.5%				
5. Sales & other indirect taxes (less subsidies) <u>-</u>				- Gross profit/gross production ratio: 5.1%				
6. Other gross business income (before income tax) <u>17.4</u>				- Gross profit/assets ratio:				
				- Level of production at break-even point is approximately 90% of the 1964 actual level.				
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>								
<u>1. Recent Expansion</u>				<u>2. Future Plan</u>				
From 1963 to 1964				a. Investment proposed for the period 1964 to 1969				
a. Total Investment ( ¥ million )		<u>Gross acquisition</u>	<u>Scrapped or sold</u>	Total value	<u>¥ 25 Million</u>			
- Land		64.3	2.1	Of which: - Mech. & equipment	80	%		
- Land improvements		2.3	-	- Land improv. & bldg.	15			
- Buildings		13.3	.2	- Land	5			
- Other construction work		-	-	- Others	-			
- Machinery & equipment		30.6	-	b. Net increase in no. of employees envisaged for the same period:				
- Tools & instruments		-	-	- Direct production: -				
- Vehicles		6.5	2.2	- Auxiliary: -				
- Office furniture & fixtures		1.6	-	c. Purposes: Largely balanced expansion, existing capacity in the same location concentrating on shops for heading, bolts and machine screws.				
b. Corresponding increase:		<u>From 1963 to 1965</u>						
In no. of employees		137	192					
In annual gross production ( ¥ million )		292	335 1/					
<b>VIII. SUPPLEMENT</b>				Structure of liquid assets and current liabilities ( ¥ million : end of 1964 )				
Cash on hand and in bank				12.2	Taxes payable			1.4
Accounts receivable				46.6	Accounts payable			83.8
Suspense payment - prepaid expense				.6	Short medium term borrowing from commercial banks.			33.7

1/ The production in 1965 slightly declined from the 1964 level despite the increase in the labor force. Prior to 1960 the capacity output was some 60% and the number of workers 70% of the 1964 level.

**MAJOR PRODUCTS:** Bolts and nuts. Annual capacity outputs are about 3,000t of these products. Nuts are manufactured on three shifts and bolts on one shift only.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets ¥ 320 million (net worth ¥ 70 million and employees 248 as of 1964. Founded in 1921.

**I. FIXED CAPITAL ASSETS**

TOTAL BOOK VALUE ( ¥ million )	End of 1963	End of 1964
	After deprec.	After deprec.
	216.0	143.9
1. Land (3,646 m <sup>2</sup> )	3.3	3.3
2. Land improvements	-	-
3. Buildings (total floor space 5,930 m <sup>2</sup> )	42.4	39.3
4. Other construction works	2.7	2.7
5. Machinery & equipment	151.2	86.3
6. Tools & instruments	4.5	2.3
7. Vehicles	4.0	3.8
8. Office furniture & fixtures	6.1	5.1

**DETAIL OF I.5 (No.)**

	Total bk. value	Avg. Age	Oper. Cond.	Depr. rate (%)	1964 replace. value
a. Nut formers (22)	151.2	5	B	30	346.0
b. Draping machines (31)		3	B		3.1
c. Surret lathe (30)		9	B		6.0
d. Thread rolling machines (5)		3	B		6.5
e. Presses (3)		6	B		5.0
f. Lathe center grinders (5)		6	B		3.0
g. Machine tools (77)		5	B		91.6

**II. INVENTORIES**

(End of 1964)	Actual	Normal
<b>TOTAL VALUE ( ¥ million )</b>	28.6	- 2.4
1. Direct production materials	5.9	-56
2. Other input materials	5.1	-20
3. Work in process	9.5	+15
4. Finished products	3.1	+10
- Normal inventories of finished products 17.5% of annual gross production		
- Seasonal variations: ..		

Capacity of electr. motors: 460 KW

Total load, capacity of trucks: 4 t

- Machines are all of domestic make.

- Average age of machines (total) is about 5 years. The plant is currently undergoing major expansion.

**GENERAL CONDITIONS:** Transport, water and gas, excellent. Electricity residential and educational facilities fair. Health and recreational facilities, poor.

**III. LABOUR**

(1964 average)

	(1964 average)			EDUCATIONAL BACKGROUND (No. of employees)			
	1st shift	2nd shift	3rd shift	Univ. or higher	Engi- neri- ng	High sch. or equiv.	Other
<b>TOTAL EMPLOYED</b>	196	30	22				
1. Direct production ( )	128	30	22				
Annual total manhours (000)	(327)	(67)	(47)				
a. Nut department	22	30	22				
b. Bolt department	39	-	-				
c. Engineering works	17	-	-				
2. Auxiliary activities ( )	68	-	-				
				Management			
				1	1	4	-
				<b>Direct Production</b>			
				Skilled	-	5	75
				Semi-skilled	-	5	75
				Unskilled	-	2	18
				<b>Auxiliary Activities</b>			
				Skilled	-	10	20
				Semi-skilled	-	3	12
				Unskilled	-	2	10

- Annual work hours in 1964 per direct production worker 2,450 hours.

- Nut department is highly mechanized and automated, while bolt department, is fair in mechanization and poor in automation.

- Skilled workers are engaged in nut and bolt forming, screw cutting and operation of machine tools.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( ¥ million )				TOTAL VALUE OF CONSUMPTION ( ¥ million )			
614.7				391.0			
Product	Unit	Quantity Produced	Unit Value (100 ¥)			Quantity consumed	Unit value (100 ¥)
1. Bolts	Ton	545	394	1. Energy & water: total		3.3	
2. Nuts	"	2,197	127	- Electricity		COOKHI 792.9	4.2
3. Scrap	"	350	14.5	2. Direct production materials: total		225.9	
4. Sludge	"	90	11.0	a. Mild steel wire rods	} Ton 3,977	} 41	
				b. Carbon steel			
<b>CAPACITY OUTPUT:</b>				3. Purchasing materials: total (paper products)			
Close to the 1964 actual production. Product- mix is not flexible. The 1967 expansion raised the output by 35% and employment 10% over the 1964 level.				4. Work performed by sub-contractors ( )			
Unit value of product: Market value f.o.b. before salestax.				5. Repairs & maintenance (materials & services purchased)			
Unit value of material: Market price c.i.f.				Parts and materials			
				Services purchased			
				6. Material inputs for auxiliary activities			
				7. Non-factor service inputs: total			
- About half of the nuts are for export.				(of which transport, insurance and storage services purchased separately)			
				62.3			
<b>VI. VALUE ADDED TOTAL 196 ( ¥ million )</b>				<b>SELECTED COEFFICIENTS</b>			
23.7				- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 1,100,000 (3,640,000 <sup>1/2</sup> )			
1. Wages & salaries (before income tax)				- Value added per employee: ¥ 900,000			
- Employees in direct production				- Annual wage per employee in direct production: ¥ 11,000			
- Other employees				- Variable input costs/gross production ratio: 47.8			
2. Other expenditures for employees				- Gross profit/gross production ratio: 13.4%			
3. Annual depreciation allowance				- Level of production at break-even point is approximately 73% of the 1964 actual level.			
4. Rental paid							
5. Sales & other indirect taxes (less subsidies)							
6. Other gross business income (before income tax)							
33.6							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. Recent Expansion				2. Future Plan			
From 19 <sup>63</sup> to 19 <sup>65</sup>				a. Investment proposed for the period 19 <sup>63</sup> to 19 <sup>69</sup>			
a. Total Investment ( ¥ million )				Total value ( ¥ million )			
- Land				Of which: - Mach. & equipment			
- Land improvements				- Land improv. & bldg.			
- Buildings				- Land			
- Other construction work				- Others			
- Machinery & equipment				b. Net increase in no. of employees envisaged for the same period: - Direct production: 20			
- Tools & instruments				- Auxiliary: 4			
- Vehicles				c. Purposes: Largely balanced expansion of the existing capacity at the same location.			
- Office furniture & fixtures							
b. Corresponding increase: From 19 <sup>63</sup> to 19 <sup>65</sup>							
In no. of employees							
In annual gross production ( ¥ million )							
410				691			
<b>VIII. SUPPLEMENT</b>				Structure of liquid assets and current liabilities ( ¥ million; end of 1964).			
Cash on hand and in bank				10.3	Accounts payable		170.0
Marketable securities and bonds				1.6			
Accounts receivable				115.9			
1/ Using the 1964 replacement value as numerator.							
2/ Of which ¥ 36 million internally supplied.							



**MAJOR PRODUCTS:** Bolts, nuts, screws, rivets and studs. Annual capacity output is about 7,500-8,000t of these products on one shift. Also capable of producing 23,000t of rolled steel wire rods from steel ingots (on contract work) and producing ¥270 million worth of tools and gauges (of which 90% is for internal use) annually.

**REPORTING UNIT:** An independent one-establishment enterprise with total assets ¥ 2,730 million (net worth ¥ 920 million) and employees 1,100 as in 1964. Founded in 1935.

**I. FIXED CAPITAL ASSETS (end of 1964)**

TOTAL BOOK VALUE ( ¥ million )	Before deprec.	After deprec.
	2,530.8	914.0
1. Land (77,800 m <sup>2</sup> )	83.7	83.7
2. Structure	37.9	18.3
3. Buildings (total floor space 36,400 m <sup>2</sup> )	431.6	224.5
4. Other construction works	.3	.3
5. Machinery & equipment	1,886.0	557.8
6. Tools & instruments	44.7	16.2
7. Vehicles	31.6	4.2
8. Office furniture & fixtures	15.0	9.0

DETAIL OF 1.5 (No.)	Total Bk. value	Avr. Age	Oper. Cond.	1964 replace. value
a. 3-high rolling mills (1)	14.3	26	B	20.0
b. 3-high finishing mill (1)	14.3	26	"	20.0
c. Horizontal shearing machine (1)	3.7	5	A	4.0
d. Cold headers (4)	23.3	2-5	"	24.0
e. Single die-bolt maker (1)	19.3	5	"	13.5
f. Bolt master (1)	28.1	6	"	29.0
g. Air injectors with heat absorbing device (2)	64.0	1-6	"	65.0
h. Continuous non-oxidation heat treating equipment (1)	20.6	6	"	21.0
i. Automatic gilding equipment (1)	16.5	5	"	19.0
j. Universal measuring machine (1)	1.8	4	"	1.8
k. Hydraulic low-temperature tester (1)	2.4	5	"	2.5
l. Fatigue tester (1)	6.8	6	"	7.0
m. Nut formers (2)	38.6	1-5	"	39.0
n. Knuckle joint press (1)	7.3	3	"	7.3
o. Screw thread rolling machine (1)	7.8	4	"	7.8

**II. INVENTORIES (end of 1964)**

TOTAL VALUE ( ¥ million )	Actual	Normal
	639.4	- 2.5
1. Direct production materials	94.8	+ 5
2. Other input materials	65.8	- 6
3. Work in process	118.7	- 9
4. Finished products	360.1	+ 2

- Normal inventories of finished products 15.5% of annual gross production

- Seasonal variations:

Seasonal high and low are  $\pm 10\%$ , respectively, of the normal level and take place in October and June, respectively.

Capacity of electr. motors: 3,800 KW  
Capacity of electr. furnaces: 1,000 KW  
Total load, capacity of trucks: 4 t

- (e), (f), (j), (k), (l), (m) are of foreign origin. The rest were domestically made.

- Almost two thirds of machines and equipment were installed during the recent (1955-62) expansion (see VII.1). The average age of machinery and equipment is thus estimated as no more than 5 years.

**EXTERNAL CONDITIONS:** Transport, public utilities, and educational facilities, excellent. Residential, health and recreational facilities, fair.

**III. LABOUR (1964 average)**

	1st shift			2nd shift			3rd shift		
	1,100	-	-	950	-	-	1,995	-	-
<b>TOTAL EMPLOYED</b>									
1. Direct production ( m. 790 )									
Annual total manhours (000)									
a. Stretching	30								
b. Rolling	100								
c. Surface treating	40								
d. Heat treating	30								
e. Bolts, nuts, etc. for transport equipment	420								
f. Bolts, nuts, etc. for aircraft	200								
g. Bolts, nuts, etc. for precision machine tools	130								
2. Auxiliary activities ( m. 120 )	150								
a. Factory control (incl. testing)	80								
b. Management	70								

**EDUCATIONAL BACKGROUND (No. of employees)**

	Univ. or higher		Sr. High sch. or equiv.		Other	
	Engl-nese	Other	equiv.	Other		
<b>TOTAL</b>	60	40	300	700		
<b>Management</b>	1	3	-	-		
<b>Direct Production</b>						
Skilled	35	5	142	350		
Semi-skilled	14	2	51	310		
Unskilled	-	-	11	30		
<b>Auxiliary Activities</b>						
Skilled	10	30	48	-		
Semi-skilled	-	-	39	5		
Unskilled	-	-	9	5		

- Annual working hours per direct production worker: 2,100 hrs

- Proportion of motors and furnaces occupied: 80%

- **Technological features:**

a) Cold stretching by horizontal stretching machine.

b) 3-high hot rolling.

c) Anodic oxidation treatment.

d) Non-oxidation heat treatment with airflow electric furnace and box-type electric heating equipment.

- Mechanisation is generally excellent except for (b), which is rated as fair; automation, fair.

- Skilled workers in direct production are engaged in surface treating.

Those in auxiliary activities are for testing, quality control and cost accounting.

IV. ANNUAL PRODUCTION (1964)		2376.8 (excl. h')	
TOTAL VALUE OF PRODUCTION ( ¥ million )			
Product	Unit	Quantity Produced ('000 ¥)	Unit Value ('000 ¥)
a. Bolts	Ton	4,475	257.4
b. Machine screws	"	315	841.0
c. Nuts	"	706	459.1
d. Studs	"	10	361.5
e. Cutting screws	"	428	1,022.4
f. Rivets	"	10	1,084.0
g. Rolled steel wire rods (See VIII)"	"	20,780	7.0 (com- mission)
h. Tools and gauges	¥ mil.	22.5	"
h'. " (internal use)	"	220.8	"
i. Scrap	Ton	390	50.0

V. INTERMEDIATE INPUTS (1964)		1337.9	
TOTAL VALUE OF CONSUMPTION ( ¥ million )			
1. Energy & water: total	71.0		
	Quantity Unit	com- sumed	Unit value ('000 ¥)
- Electricity	000 KWH	12,200	5
- Water	000 t	1,000	10
2. Direct production materials: total	400.1		
a. Carbon steel	t	3,640	57
b. Steel alloy	"	1,230	93
c. Brass	"	20	350
d. Aluminum	"	10	730
e. Stainless steel	"	50	440
f. Miscellaneous steel	"	320	132
g. Steel ingots (supplied by contractors; corresponds to IV.g)	"	20,780	..
3. Packaging materials: total	23.7		
4. Work performed by sub-contractors ( See VIII)	529.0		
5. Repairs & maintenance (materials & services purchased)	245.0		
Parts and materials	21.3		
Services purchased	223.7		
6. Material inputs for auxiliary activities	-		
7. Non-factor service inputs: total	69.1		
Of which transport, insurance, and storage purchased separately.	24.0		

**CAPACITY OUTPUT:** some 30% higher than the 1964 actual production level with no addition to manhours.

Full capacity outputs of major products are 130% for screws, 110% for tools and gauges and rolled steel wire rods, respectively, of the 1964 actual production.

Unit value of product: market value f.o.b. before sales tax  
Unit value of material: market price c.i.f.

- Part of products (a) to (f) are directly exported and also used for the production of exports. Product (h) is partly used for the production of exports.
- Direct production materials (a) to (f) contain significant import contents. All delivered by road with freight rate 10 to 15% of the c.i.f. value.

VI. VALUE ADDED		TOTAL 196 ( ¥ million )		1,036.9	
1. Wages & salaries (before income tax)					
- Employees in direct production		641.1			
- Other employees		87.2			
2. Other expenditures for employees		35.2			
3. Annual depreciation allowance		8.8			
4. Rental paid (land 5.7; building 3.1)		8.8			
5. Other indirect taxes (less subsidies)		15.7			
6. Other gross business income (before income tax)		242.1			

VII. EXPANSION: HISTORY & PLAN		Gross acquisition	
1. Recent Expansion			
From 1958 to 1962			
a. Total Investment ( ¥ million )		1,200	
- Land		-	
- Land improvements		60	
- Buildings		-	
- Other construction work		-	
- Machinery & equipment		1,010	
- Tools & instruments		120	
- Vehicles		10	
- Office furniture & fixtures		-	
b. Corresponding increase:		From 1958	to 1962
In no. of employees		1,100	1,200
In annual gross production ( ¥ million )		1,600	2,200

VIII. SUPPLEMENT		Contract work performed by this establishment (detail of IV.g): This establishment manufactured 20,780t of wire rods from steel ingot supplied by 7 contractors (one with 26,000 employees, the second with 3,000 employees).	
Contract work performed by subcontractors (detail of V.g): A small subcontractor with employees 40, which is more than 50% dependent on this establishment, performed machine treatment of 80t of screws. Screws were then finished within this establishment before being sold outside.			
Structure of liquid assets and current liabilities ( ¥ million; end of 1964):			
- Cash on hand and in bank	- 526	Marketable securities and bonds	- 9
- Accounts receivable	- 455	Prepaid expenses	- 65
- Taxes payable	- 19	Short and medium-term borrowing, from commercial banks	- 429
- Accounts payable	- 731	from industrial banks	- 81
		from Housing Financing Corp., life insurance, etc.	- 18

An enterprise manufacturing steel chains (annual capacity output is 1,300 t on three shifts); also produces agricultural machines, spare parts, ball and roller bearings (amounting altogether to 500-600 t) on a contract basis (co-operation with other enterprises). Cold rolled tracks, which account 6% of total materials, are imported. Proportion of exports is 11%. The enterprise was founded in 1954. Located with good railroad & road communication.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-63			
TOTAL (Drs. million)		1,746	1,873	Gross expenditures	81	44	797	898		
Buildings & land improvements		401	461	Retirements	2	27	134	274		
Machinery & equipment		1,324	1,391	Calculated average age of fixed assets: 4.2 years						
Other capital assets		21	21	<b>Electric motors:</b>						
				Total installed capacity: 843 KW						
				Of which actually operated in 1963:						
				1st shift 73 %; 2nd shift 46 %; 3rd shift 3 %						
<b>Major machinery crucial for determining the overall production capacity:</b>				<b>Technological features:</b> The machines for the production of small chains though specialized and automated, are rather outdated by the contemporary standard. Universal and semi-automatic machines for large chains are also very obsolete and assembly is manual. Other products are made on universal machines. Product - mix is too large technologically but appropriate from the standpoint of sales efficiency.						
<b>Chains:</b> Automatic specialized machines of small capacity ( 2 shifts ).										
<b>Agricultural machines:</b> Universal machine tools of small capacity for processing metal sheets (obsolete mechanization system) ( 2 shifts ).										
( 40% of machines were imported).										
II. LABOUR (1963)		TOTAL no. of employees: 956			<b>Educational background of workers:</b>					
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Law	Others	Total	
1. Factory workers:					Univ. or higher	6	8	3	2	19
Total	756 persons	396	290	70	Tech. Higher sch.	10	1	2	3	16
	( 1,759 thous. manhrs. )	( 981 )	( 622 )	( 156 )	Secondary sch.	31	52	-	9	92
- Small chains		130	84	38	Primary school	-	-	-	829	829
- Large chains		137	77	32	IV. INTERMEDIATE INPUTS					
- Contract work (co-operation)		79	58	-	Quantity		Value (Drs. Million)			
- Others		50	71	-	TOTAL actual consumption 1963 1,248					
2. Non-factory workers: 200 persons		( 500 thous. manhours )			1. Energy inputs: total 70					
					- Electricity 1,882 MWH 38					
					- Brown coal 1,057 t 4					
					- Liquid fuel 86 t 28					
					2. Major production materials: total 1,096					
					- Metal sheets 272 t 86					
					- Round steel 1,778 t 559					
					- Flake steel 87 t 27					
					- Flat and sectional steel 28 t 9					
					- Cold rolled tracks 889 t 279					
					- Steel wire 171 t 54					
					- Various castings 112 t 35					
					- Other steel products 150 t 47					
					3. Repairs & maintenance: total 34					
					4. Other material & non-factor service inputs 48					
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1963) (Drs. Million)					
TOTAL actual revenue output 1963 **				2,770	TOTAL (except turnover tax) 1,484					
- Quality drawn steel *		1,232 t	315		- Wages of factory workers 449					
- Galles chain		869 t	1,980		- Salaries of non-factory workers 167					
- Ball and roller bearings		13 t/81,607 pos	47		- Depreciation 103					
- Agricultural machines, tools and equipment		320 t/ 500 pos	385		- Interests paid 122					
- Spare parts for agricultural machines		69 t	201		- Other accumulation 643 1/2					
* About 50% internally used and not counted in value of production.					(Turnover tax) 38					
** Including turnover tax on sold products.										
<b>Capacity output:</b>					VI. SUPPLEMENT					
- Small chains 600 t	} Overall rate of utilization is 72 %.				<b>Future plans:</b> Introduction of a full mechanization and automation scheme (particularly in the assembly line system) with reducers and conveyors is being planned.					
- Large chains 700 t					1/ Of which Drs. 219 million is retained in the enterprise as its own fund.					
- Underutilization due to unbalance in capacities of various processes and too wide assortment of products. 500 workers would be required on the 1st. shift for the full capacity operation of the present facilities.					2/ "Gross accumulation" includes interest paid.					
					<b>SELECTED COEFFICIENTS</b>					
					- Mach. & equip. per factory worker on 1st shift: Drs. 3,510,000					
					- Value added per employee: Drs. 1,550,000					
					- Annual wage per factory worker: Drs. 590,000					
					- Variable input cost/gross production ratio: 59.1 %					
					- Gross accumulation/gross production ratio: 2/ 28.0 %					
					(at full capacity: 31.6 %)					
					- Level of production at break-even point: 32 % of the 1963 actual level.					

A small enterprise manufacturing agricultural hand tools by casting and forging; annual capacity output is about 680 t of cast and forged products on partial three shifts. Located with favourable access to raw materials and markets. No imported materials are used. About 7% of products are exported. The enterprise was founded in 1948.

## I. FIXED CAPITAL (end of 1965)

	Original purchase value	1965 re- placement value
TOTAL (Drs. million)	124	142
Buildings & land improvements	46	60
Machinery & equipment	78	82
Other capital assets	-	-

Major machinery crucial for determining the overall production capacity:

Agricultural hand tools: Universal machine tools of small capacity for forging and scraping (2 or 3 shifts).

- All equipment domestically produced.

Capital expenditures in the past years: (Drs. million)

	1953-54	1955-57	1958-60	1961-65
Gross expenditures	1	7	8	25
Retirements	-	3	5	24

Calculated average age of fixed assets: 8.9 years

Electric motors:

Total installed capacity: 221 KW

Of which actually operated in 1965:

1st shift 100 %; 2nd shift 33 %; 3rd shift 13 %

Technological features:

a) Blacksmith: sawing, cutting, heating (up to 1,100° C), forging, processing, tempering, grinding, coating and packing.

b) Foundry: moulding in sand, pouring, sanding and cleaning.

- Management feels the present degree of mechanisation very insufficient and wants to improve it to be able to compete at domestic market.

## II. LABOUR (1965)

	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. Factory workers:			125
Total 115 persons	61	41	13
( 246 thous. manhrs. )	( 135 )	( 86 )	( 25 )
- Blacksmith shop	27	25	13
- Foundry	14	8	-
- Pig iron processing	8	8	-
- Maintenance, warehousing and transport	12	-	-
2. Non-factory workers:	10 persons		
( 26 thous. manhours )			

Educational background of workers:

	Techn.	Elem.	Low	Others	Total
Univ. or higher	-	-	-	-	-
Tech. Higher sch.	-	-	-	-	-
Secondary sch.	2	2	-	-	4
Primary school	-	-	-	121	121

## IV. INTERMEDIATE INPUTS

	Quantity	Value (Drs. Million)
TOTAL actual consumption 1965		110
1. Energy inputs: total		18
- Electricity		4
- Coke	204 MME	5
- Brown coal	724 t	7
- Lignite	64 t	0.4
- Liquid fuel (of which half is gasoil)	42 t	2
2. Major production materials: total		87
- Gray pig iron	138 t	10
- Scrap iron	94 t	7
- Rolled ferrous products	439 t	44
- Other materials	Drs. million	26
3. Repairs & maintenance: total		3
4. Service inputs non-factor		2

## III. ANNUAL PRODUCTION &amp; CAPACITY

	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1965		231
- Cast gray pig iron	219 t	70
- Forged agricultural hand tools	405 t	161

\* Includes turnover tax on sold products.

Capacity output:

Cast gray pig iron	230 t	} Overall rate of utilisation is 91 %.
Forged agricultural hand tools	450 t	

- Underutilisation due to unbalance in the capacities of various production processes and insufficient supply of materials. 82 workers would be needed on the 1st. shift for the full utilisation of the existing facilities.

## VI. SUPPLEMENT

Future plans:

Production of tools by pressing is now planned.

1/ Of which Drs. 4 million is the fund belonging to this enterprise.

2/ "Gross accumulation" includes interests paid.

SELECTED COEFFICIENTS

- Mech. & equip. per factory worker on 1st shift:	Drs. 1,340,000
- Value added per employee:	Drs. 890,000
- Annual wage per factory worker:	Drs. 570,000
- Variable input cost/gross production ratio:	77.4 %
- Gross accumulation/gross production ratio:	2/ 13.6 %
(at full capacity):	14.4 %
- Level of production at break-even point:	40 % of the 1965 actual level.

An enterprise, founded in 1946, producing cooking ranges and metal containers. Annual capacity output is 60,000 units of cooking ranges on 3 shifts and 9,000 tons metal containers on 2 shifts. 3% of the products are exported; 25% of input materials, such as rolled ferrous products (pickled and black sheet), liquid rubber, lacquer, tin and tin plate, are imported. Located in the area of large consumption. Communication lines are suitable.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		902	1,233	Gross expenditures	-	26	362	176	
Buildings & land improvements		296	385	Retirements	-	39	103	130	
Machinery & equipment		606	848	Calculated average age of fixed assets: <u>7.3</u> years					
Other capital assets		-	-	<b>Electric motors:</b>					
				Total installed capacity: <u>532</u> KW					
				Of which actually operated in 1963:					
				1st shift <u>94</u> %; 2nd shift <u>38</u> %; 3rd shift <u>19</u> %					
<b>Major machinery crucial for determining the overall production capacity:</b>		<b>Technological features:</b> Large scale production of							
Cooking ranges: Universal machines for bending and enamelling shop. ( 3 shifts ).		cooking ranges by individual machines; assembly-line							
Tin plate containers: Automatic line production of medium capacity. ( 2 shifts ).		production of tin-plate containers by the automatic line (Italian "Gevolani") and semi-automatic machines (Italian "Lovatti"). No facilities for lithographic packaging and varnishing (for which there is a strong demand).							
- 20% of machinery and equipment is imported.									
II. LABOUR (1965)		TOTAL no. of employees: 873			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Tech.	Spec.	Low	Others	Total
1. Factory workers:					8	4	4	2	18
Total	722 persons	514	161	47	1	1	1	-	3
(1,431 thous. manhrs.) (1,030) (324) (96)					16	15	-	11	42
- Tin plate containers and barrels		230	70	-	Secondary sch. 16 15 - 11 42				
- Cooking ranges		284	91	47	Primary school - - - 810 810				
2. Non-factory workers: 151 persons (289 thous. manhours)					IV. INTERMEDIATE INPUTS				
					Quantity		Value (Drs. Million)		
					TOTAL actual consumption 1965		2,128		
					1. Energy inputs: total		92		
					- Electricity		58		
					- Brown coal		3,858 MWH		
					- Lignite		543 t		
					- Liquid fuel (Masut 4%)		176 t		
							188 t		
					2. Major production materials: total		1,356		
					- Drawn ferrous products		35 t		
					- Rolled ferrous products		2,167 t		
					- Non-ferrous metal products		33 t		
					- Cast grey pig iron		208 t		
					- Cast non-ferrous metal		1 t		
					- Tin plates		3,867 t		
					- Coatings		192 t		
					- Sawm timber		364 m <sup>3</sup>		
					- Copper products		2 t		
					- Aluminium products		9 t		
					- Nichrome wire		1 t		
					3. Repairs & maintenance: total		60		
					4. Other material & non-factor service inputs		620		
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1965)		(Drs. Million)		
TOTAL actual revenue output 1965			2,971 *		TOTAL (except turnover tax)		748		
- Cooking ranges for fuel wood and coal		11,644 pos.	197		- Wages of factory workers		320		
- Electric cooking ranges		24,005 pos.	1,308		- Salaries of non-factory workers		94		
- Tin plate containers		3,469 t	1,322		- Depreciation		46		
- Other metal containers		573 t	128		- Interests paid		90		
- Services		2,000 h	16		- Other accumulation		158		
* Including turnover tax on sold products					- (Turnover tax)		95 1/2		
<b>Capacity output:</b>									
- Cooking ranges for fuel wood and coal:		20,000 pos							
- Electric cooking ranges:		40,000 "							
- Tin plate containers:		7,000 t							
- Other metal containers:		1,750 t							
Overall rate of utilisation : 53 %.									
Underutilisation due to insufficient supply of raw, especially of imported, materials.									
Number of workers required on the 1st. shift to reach full utilisation of the existing capacity is 800.									
VI. SUPPLEMENT		Future plans :			SELECTED COEFFICIENTS				
a) Widening of product assortment.		b) Establishment of an automatic line for tin plate containers of a capacity of 400 pos. per minute.			- Mech. & equip. per factory worker on 1st shift: Drs. 1,650,000				
c) Reconstruction of existing automatic lines with the latest techniques.		d) Expansion of the capacity for lids of tin plate containers to a level compatible with the capacities of other processes.			- Value added per employee: Drs. 857,000				
					- Annual wage per factory worker: Drs. 443,000				
					- Variable input cost/gross production ratio: 63.7 %				
					- Gross accumulation/gross production ratio: 10 2/3 % (at full capacity)				
					- Level of production at break-even point: 23.3 % of the 1965 actual level.				
1/ Of which Drs. 80 million retained by the enterprise as its own fund.					2/ Gross accumulation includes interest paid.				

An enterprise, founded in 1932, producing radiators and boilers (mainly for household use). Annual capacity output is about 13,000 t of radiators and boilers. About 10% of materials (gray pig iron, foundry coke, ferrosilicon, spare parts for machines and equipments, etc.) is imported. 17% of production are sold on foreign markets. Automation and mechanization is fairly satisfactory by Yugoslav standards. Good communication lines (railroad and road) with the market for finished goods, but considerably far from the source of basic raw materials.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)					
TOTAL (Drs. million)		1,007	1,170	1953-54	1955-57	1958-60	1961-63		
Buildings & land improvements		268	350	Gross expenditures	-	65	561		
Machinery & equipment		737	820	Retirements	-	43	71		
Other capital assets		2	-	Calculated average age of fixed assets: 6.8 years					
<u>Major machinery crucial for determining the overall production capacity:</u>				<u>Electric motors:</u>					
Radiators and boilers: Casting machines for the production of thin and high quality dry castings (of medium capacity); operated 2 shifts.				Total installed capacity: 835 kW					
- 65 % of equipment were imported.				Of which actually operated in 1963:					
				1st shift 100 %; 2nd shift 99 %; 3rd shift 10 %					
				<u>Technological features:</u>					
				Manufacturing of cores by manual forming and drying (petrol ovens); moulding of radiators on semi-automatic machines of "Rabuffetti" type and of boiler components on "Peckometti" preparation of sand in "Mix-Miller" machines; smelting in 3 cupola furnaces; cleaning in 3 semi-automatic machines of "Vilebrator" type; assembly and test.					
II. LABOUR (1963)		TOTAL no. of employees: 1,045			<u>Educational background of workers:</u>				
		1st shift	2nd shift	3rd shift					
1. Factory workers:									
Total	851 persons	543	246	62					
	(1,848 thous. manhrs.)	(1,176)	(540)	(132)					
- Corps		48	48	13					
- Foundry I		203	103	25					
- Foundry II		65	11	9					
- Assembly		61	60	10					
- Repair		71	14	5					
- Technical division		49	-	-					
- Transportation		46	10	-					
2. Non-factory workers:		194 persons							
		(429 thous. manhours)							
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	IV. INTERMEDIATE INPUTS					
TOTAL actual revenue output 1963		2,635 *		Quantity		Value (Drs. Million)			
- Radiators		213,000m <sup>2</sup> /6,159 t	1,355	TOTAL actual consumption 1963					
- Boilers		39,000m <sup>2</sup> /5,081 t	1,280	1. Energy inputs: total					
				- Electricity					
				- Coke					
				- Liquid fuel					
				2. Major production materials: total					
				- Grey pig iron					
				- Castings					
				- Anthracite					
				- Other					
				3. Repairs & maintenance: total					
				4. Other material & non-factor service inputs					
				V. VALUE ADDED (1963) (Drs. Million)					
				TOTAL (except turnover tax)					
				- Wages of factory workers					
				- Salaries of non-factory workers					
				- Depreciation					
				- Interests paid					
				- Other accumulation					
				(Turnover tax)					
VI. SUPPLY		Future plans:		SELECTED COMPARISONS					
		a) Introduction of new products; boilers for central heating, of which heated surface ranges from 1.9 to 74 m <sup>2</sup> .		- Mach. & equip. per factory worker on 1st shift: Drs. 1,510,000					
		b) Expansion of the shop for preparation of sand by "Shell moulding" process.		- Value added per employee: Drs. 722,500					
		c) Raising of the degree of mechanisation and automation.		- Annual wage per factory worker: Drs. 499,400					
				- Variable input cost/gross production ratio: 77.3 %					
				- Gross accumulation/gross production ratio: 6.7 %					
				(at full capacity)					
				- Level of production at break-even point: 70 % of the 1963 actual level.					
1/ Out of this and previous accumulation, the enterprise contributed Drs. 123 million to the community in 1963.									
2/ Gross accumulation includes interest paid.									

A small enterprise, founded in 1954, producing steel and non-ferrous metal screw propellers. Annual capacity output is 5,500 to 6,000 t of screw-propellers on 3 shifts. About 10% of the production materials (mainly wire) are imported, while 6% of the products are exported. Located far from steel works as well as final markets, but good railway communication lines available.

I. FIXED CAPITAL		(end of 1965)	Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)					
					1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)					1,572	1,740	-	332	23	273
Buildings & land improvements					357	465	-	17	165	190
Machinery & equipment					1,165	1,275				
Other capital assets					50	-				
<u>Major machinery crucial for determining the overall production capacity:</u>										
Screw propellers : Machines for pressing ( 2 - 3 shifts); winding machines and equipment for thermal treatment ( 3 shifts ).										
- 90% of machinery and equipment was imported.										
					Calculated average age of fixed assets: <u>8.8</u> years					
					<u>Electric motors:</u>					
					Total installed capacity: <u>994</u> KW					
					Of which actually operated in 1965:					
					1st shift <u>74</u> %; 2nd shift <u>34</u> %; 3rd shift <u>14</u> %					
					<u>Technological features:</u> Treatment of wire with alkali, drawing, thermal and cold treatment; tbe within - yard transportation is only partly mechanised.					
					The utilisation of capacity is considerably low.					
II. LABOUR		(1965)	TOTAL no. of employees:			<u>Educational background of workers:</u>				
			1st shift	2nd shift	3rd shift					
1. Factory workers:						Techn. High.	Sec.	Low	Others	Total
Total	334 persons	(792 thous. manhrs.)	196	83	55	3	4	-	-	7
			(468)	(192)	(132)	3	-	-	-	3
						16	3	-	-	19
						-	-	-	383	383
						IV. INTERMEDIATE INPUTS				
						Quantity		Value (Drs. Million)		
						TOTAL actual consumption 1965				
						695				
						1. Energy inputs: total				
										42
										28
										13
										1
						2. Major production materials: total				
										565
										433
										24
										39
										19
										21
										[ 160 ]
						(internally produced and not included in total).				
						3. Repairs & maintenance: total				
						4. Other material & non-factor service inputs				
						47				
						41				
III. ANNUAL PRODUCTION & CAPACITY			Quantity	Value (Drs. Million)	V. VALUE ADDED (1965) (Drs. Million)					
TOTAL actual revenue output 1965					652					
					- Wages of factory workers					
					219					
					- Salaries of non-factory workers					
					68					
					- Depreciation					
					93					
					- Interest paid					
					116					
					- Other accumulation					
					156 1/					
					(Turnover tax)					
					192					
					* Including turnover tax on sold products.					
<u>Capacity output:</u>					<u>SELECTED COEFFICIENTS</u>					
Screw propellers : 5,500 - 6,000 t Rate of utilisation is 40 %.					- Mach. & equip. per factory worker on 1st shift: Drs. 6,505,000					
Underutilization is due to insufficient demand, unbalance in capacities of various processes, engineering deficiencies, and insufficient supply of raw materials.					- Value added per employee: Drs. 1,580,000					
Number of workers required on the 1st. shift for full utilisation of existing capacity is 210.					- Annual wage per factory worker: Drs. 655,700					
					- Variable input cost/gross production ratio: 61.3 %					
					- Gross accumulation/gross production ratio: 18.8 2/3 %					
					(at full capacity 31.2 %)					
					- Level of production at break-even point: 48 % of the 1963 actual level.					
VI. SUPPLEMENT		Future plans:								
a)		Introduction of assembly line system.								
b)		Raising of mechanization and automation by 30% of the existing level.								
c)		Expansion of the existing capacities by 80%.								
1/		Of which Drs. 43 million belongs to the enterprise.								
2/		Gross accumulation includes interest paid.								

An old enterprise, founded in 1921, producing cooking, heating, and other household equipment. Annual capacity output is 9,400 t of radiators, sewage pipes etc., and 105,000 ovens and cooking ranges. 5% of production is exported; about 18% of materials, such as coke, ferro-silicon, ferrophosphate, grey pig iron, pickled ferrous sheet, granulated materials for enamelling, are imported.

I. FIXED CAPITAL (end of 1965)		Original purchase value	1965 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		694	806	124	160	83	250		
Buildings & land improvements		277	360	21	52	53	89		
Machinery & equipment		406	426						
Other capital assets		-	-						
<p><b>Major machinery crucial for determining the overall production capacity:</b></p> <p><b>Cast radiators:</b> casting machines for production of thin and high-quality pig iron. Of small capacity (3 shifts).</p> <p><b>Ovens and cooking ranges:</b> universal machine tools and semi-automatic machines for cutting and bending of sheets with enamelling equipment. (3 shifts).</p> <p>(2% of machinery and equipment are imported.)</p>				<p>Retirements</p> <p>Calculated average age of fixed assets: <u>6.7</u> years</p> <p><b>Electric motors:</b></p> <p>Total installed capacity: <u>1,386</u> KW</p> <p>Of which actually operated in 1965:</p> <p>1st shift <u>100</u> %; 2nd shift <u>92</u> %; 3rd shift <u>67</u> %</p> <p><b>Technological features:</b> Foundry: pneumatic presses in two semi-mechanised lines and four air-cooled cupola furnaces with semi-automatic charging. Mechanical shops: using old machines. Treatment of components for radiators are semi-automatic. Assembly of cooking apparatus: carried on conveyor belts. Mechanisation and automation are even below the Yugoslav standard (fall short by about 40% and 60%, respectively).</p>					
II. LABOUR (1965)		TOTAL no. of employees: 1,893			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Low	Others	Total
1. Factory workers:		977	418	278	9	4	2	-	15
Total 1,673 persons		(2,098)	(900)	(600)	3	-	-	3	6
(3,592 thous. manhrs.)					16	18	-	25	59
- Foundry		340	246	211	Secondary sch. 16 18 - 25 59				
- Radiators		80	20	15	Primary school - - - 1,818 1,818				
- Apparatus for households		221	71	28	IV. INTERMEDIATE INPUTS				
- Repairs and maintenance		183	41	4	Quantity		Value (Drs. Million)		
- Warehousing and others		153	40	20	TOTAL actual consumption 1965 <u>2,008</u>				
2. Non-factory workers: 225 persons		(606 thous. manhours)			1. Energy inputs: total <u>187</u>				
					- Electricity 2,520 MWh 34				
					- Coks 4,146 t 116				
					- Hard coal 220 t 3				
					- Lignite 1,703 t 6				
					- Liquid fuel 891 t 28				
					2. Major production materials: total <u>1,573</u>				
					- Grey pig iron 6,341 t 412				
					- Scrap iron 5,814 t 349				
					- Ferrous sheets 2,499 t 350				
					- Fire-clay brick 582 t 71				
					- Sawn timber 2,998 m <sup>3</sup> 102				
					- Chemicals .. 90				
					- Ferrophosphate 119 t 10				
					- Ferro-silicon 70 t 25				
					- Metal products .. 90				
					- Others .. 74				
					3. Repairs & maintenance: total <u>97</u>				
					4. Other material & non-factor service inputs <u>151</u>				
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		V. VALUE ADDED (1965) (Drs. Million)				
TOTAL actual revenue output 1965 *				3,343	TOTAL (except turnover tax) <u>1,205</u>				
- Cast grey pig iron **		11,231 t	(2,133)		- Wages of factory workers 718				
- Drain pipes & sectional parts		2,564 t	448		- Salaries of non-factory workers 145				
- Water supply & sanitary fittings		225 t	79		- Depreciation 38				
- Radiators		3,918 t	807		- Interests paid 104				
- Hand operated pumps		694t/ 53,928 poe	198		- Other accumulation (Turnover tax) 200 1/				
- Machines for food preparation		184t/ 5,550 "	46		130				
- Ovens		4,371t/ 54,640 "	686						
- Cooking ranges		3,717t/ 46,466 "	855						
- Parts for ovens and cooking ranges		223 t	33						
- Other products for general household use		470 t	124						
- Services		20,000 h	25						
- Repairs and maintenance		250,000 h	1						
- Others		..	41						
* Includes turnover tax on sold products.									
** Internal use; not included in total.									
Capacity utilization:									
- Sewage pipes & sectional parts		3,200 t							
- Radiators		4,200 t							
- Ovens		55,000 pos.	Overall rate of utilis -						
- Cooking ranges		50,000 pos.	ation is 92%.						
- Others		2,000 t							
Number of workers required on 1st. shift for full utilization of the existing capacity is 1,056.									
VI. SUPPLEMENT		Future plans:		SELECTED COEFFICIENTS					
a) Mechanization and automation of sand preparation (increase by 20% and 25% respectively).		b) Renewal of moulding department		- Mach. & equip. per factory worker on 1st shift: Drs: 655,000 2/					
c) Installation of furnaces with preheated air and isotopes.		d) Regulation of charging and cleaning department with tunnel cleaners.		- Value added per employee: Drs: 635,000					
1/ Of which Drs. 10 million are funds belonging to the enterprise.				- Annual wage per factory worker: Drs. 429,000					
2/ The denominator is 650; i.e. excluding workers in "repairs and maintenance" and "warehousing and others".				- Variable input cost/gross production ratio: 77 %					
				- Gross accumulation/gross production ratio: 9.5 1/2 % (at full capacity: 10.6 %)					
				- Level of production at break-even point: 58 % of the 1965 actual level.					
				3/ Gross accumulation includes "interests paid".					



An enterprise, founded in 1946, producing metal furniture and baby carriages. Annual capacity output is 3,820 t of metal furniture and 8,000 baby carriages on 3 shifts operation. 6% of products are sold on foreign markets, while 3% of raw materials, such as tubes, polyvinylchloride powder and plates, are imported. Located in a large consumer centre, with good communication lines with the domestic and foreign markets.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 re- placement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		361	415	6	16	15	136		
Buildings & land improvements		136	175						
Machinery & equipment		225	240	7	16	21	34		
Other capital assets		-	-						
<b>Major machinery crucial for determining the overall production capacity:</b>				Calculated average age of fixed assets: <u>7.5</u> years					
Metal furniture and baby carriage: special machinery for cutting and bending. Semi-automatic galvanic protection and painting shop. (1-2 shifts).				<b>Electric motors:</b> Total installed capacity: <u>1,051</u> KW Of which actually operated in 1963: 1st shift <u>86</u> %; 2nd shift <u>12</u> %; 3rd shift <u>1</u> %					
				<b>Technological features:</b> Galvanization and painting, including "decorative" protection for metal furniture. Drying varnishes in infrared furnaces. The treatment of aluminum (shop reconstructed in 1964) involves anode oxidation and multi-color decoration processes. Mechanization is rated at 70% but is lower than the European standard.					
II. LABOUR (1963)		TOTAL no. of employees: 605			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Law	Others	Total
1. Factory workers:									
Total	495 persons	439	54	2	1	3	1	1	6
	(860 thous. manhrs.)	(764)	(96)	(-)	-	1	-	-	1
-	Cutting, tinsmith, welding and sharpening	62	29	2	14	13	-	9	36
-	Locksmith	21	12	-	-	-	-	562	562
-	Carpenter's shop	33	-	-	-	-	-	-	-
-	Assembly and upholstery	65	-	-	-	-	-	-	-
-	Galvanization and painting	26	13	-	-	-	-	-	-
-	Tool shop and other auxiliary shops	232	-	-	-	-	-	-	-
2. Non-factory workers:		110 persons			IV. INTERMEDIATE INPUTS				
		(390 thous. manhours)			Quantity		Value (Drs. Million)		
TOTAL actual revenue output 1963*		Quantity		Value (Drs. Million)	TOTAL actual consumption 1963				
-	Metal furniture	3,685 t	2,722		1. Energy inputs: total				
-	Baby carriage	8,000 pcs.	132		- Electricity				
* Includes turnover tax on sold products.					- Coal (lignite)				
Capacity output:					- Liquid fuel				
-	Metal furniture	3,820 t	Overall rate of utilization is 97%.	2. Major production materials: total					
-	Baby carriage	8,000 pcs.		- Ferrous metal products					
Underutilization due to unbalanced and inappropriate technological arrangement in the old plant which limits the capacity level of production. Number of workers required on the first shift for full utilization of the existing capacity is 520.					- Non-ferrous metal products				
					- Wood				
					- Decorative plates				
					- Fabrics				
					- Contract work				
					- Other materials				
					3. Repairs & maintenance: total				
					4. Other material & non-factor service inputs				
V. VALUE ADDED (1963)					TOTAL (except turnover tax)				
					897				
					- Wages of factory workers				
					- Salaries of non-factory workers				
					- Depreciation				
					- Interests paid				
					- Other accumulation (Turnover tax)				
VI. SUPPLEMENT		Future plans: a) Plasticization of metal furniture.			SELECTED COEFFICIENTS				
		b) Introduction of assembly line production will be expected to expand the existing capacities by 30-40%.			Mach. & equip. per factory worker on 1st shift: Drs. 1,159,000				
		c) Modernization of surface treatment.			- Value added per employee: Drs. 1,483,000				
					- Annual wage per factory worker: Drs. 836,000				
					- Variable input cost/gross production ratio: 77 %				
					- Gross accumulation/gross production ratio: 12.4 %				
					(at full capacity: 12.9 %)				
					- Level of production at break-even point: 47 % of the 1963 actual level.				
		1) Of which Drs. 62 million are funds belonging to the enterprise.							
		2) The denominator is .07; i.e. excluding workers in "tool shop and other auxiliary shops".							
		3) From accumulation includes interest paid.							

An enterprise, founded in 1953, manufacturing toys, school equipment and other miscellaneous metal and plastic products. Annual capacity output is 1,200 t of spiral and other metal products on partial 3 shifts operation; processing of plastic mass up to 130 t with two shifts. 8% of goods are exported and 22% of the materials, such as polystyrene, polystyrene and pickled metal sheets, are imported. Good connections with the market through road and sea.

I. FIXED CAPITAL (end of 1963)	Original purchase value	1963 replacement value
	TOTAL (Drs. million)	1,139
Buildings & land improvements	387	520
Machinery & equipment	752	800
Other capital assets	-	40

**Major machinery crucial for determining the overall production capacity:**

**Spiral products:** full and semi-automatic machines of small capacity (3 shifts).  
**Toys and plastic products:** semi-automatic presses and smaller machines of medium capacity for processing metal tracks. Also the capacity of special paint sprayers (3 shifts).

(% of machinery and equipment were imported.)

**Capital expenditures in the past years: (Drs. million)**

	1953-54	1955-57	1958-60	1961-63
Gross expenditures	108	222	555	405
Retirements	12	69	113	137

Calculated average age of fixed assets: 4.9 years

**Electric motors:**

Total installed capacity: 566 KW  
 Of which actually operated in 1963:

1st shift 100 %; 2nd shift 35 %; 3rd shift 15 %

**Technological features:** Production lines consist of cutting, perforation, pressing, drawing, injecting of plastic masses, surface polishing and assembly. The degree of mechanization and automation fall short by 30% and 40% of the world level, respectively.

II. LABOUR (1963)		TOTAL no. of employees: 963		
		1st shift	2nd shift	3rd shift
1. Factory workers:				
Total	804 persons	676	96	32
	(1,678 thous. manhrs.)	(1,402)	(204)	(72)
- Spiral products		50	42	32
- Plastics		58	29	-
- Perforation		103	25	-
- Assembly		379	-	-
- Tool shop		37	-	-
- Overhauling, other ancillary services		49	-	-
2. Non-factory workers: 159 persons				
	(400 thous. manhours)			

**Educational background of workers:**

	Techn.	Econ.	Law	Others	Total
Univ. or higher	5	-	-	-	5
Tech. Higher sch.	1	-	2	-	3
Secondary sch.	18	18	-	-	36
Primary school	-	-	-	919	919

III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)
TOTAL actual revenue output 1963 *			3,006
- Spiral products		638 t	775
- Toys		4,380,000 pos	843
- School equipment		7,500,000 pos	923
- Other metal products		160 t	278
- Other plastic products		46 t	187

\* Includes turnover tax on sold products.

**Capacity output:**

- Spiral products	710 t	Overall rate of utilization is 72%.
- School equipment and other metal products	470 t	
- Plastic processing	130 t	

Underutilization due to insufficient supply of materials and shortage of machines and tools for processing plastic masses and other imported materials. 650 workers would be enough even for the full utilization of the capacity on 1st. shift.

IV. INTERMEDIATE INPUTS		Quantity	Value (Drs. Million)
TOTAL actual consumption 1963			1,362
1. Energy inputs: total			32
- Electricity		1,256 MWH	16
- Liquid fuel		78	16
2. Major production materials: total			1,152
- Ferrous products		1,146 t	242
- Non-ferrous metal products		145 t	168
- Plastic mass		84 t	142
- Other production materials		..	600
3. Repairs & maintenance: total			43
4. Other material & non-factor service inputs			135

V. VALUE ADDED (1963)		(Drs. Million)
TOTAL (except turnover tax)		1,347
- Wages of factory workers		480
- Salaries of non-factory workers		140
- Depreciation		56
- Interests paid		127 1/2
- Other accumulation (Turnover tax)		544 (297)

VI. SUPPLEMENT Future plans: Improvement of the existing production processes, especially those of spiral goods and writing equipment:

- Of which Drs. 181 million are funds belonging to the enterprise.
- The denominator is 630, i.e. excluding workers in "overhauling and other auxiliary services".
- Wages and salaries are considered, on account of over-employment, as fixed cost.
- Gross accumulation includes interest paid.

**SELECTED COEFFICIENTS**

- Mech. & equip. per factory worker on 1st shift: Drs.	1,270,000	2/
- Value added per employee: Drs.	1,399,000	
- Annual wage per factory worker: Drs.	597,000	
- Variable input cost/gross production ratio:	3/ 43.7 %	
- Gross accumulation/gross production ratio:	24.8 4/ %	
(at full capacity)	33.6 %	
- Level of production at break-even point:	56 % of the 1963 actual level.	

An enterprise, founded in 1947, producing water-conduit castings and fittings and parts of textile machinery. Annual capacity output is about 7,000 t of castings and fittings for water conduit and 120 t of textile machines and parts on a 3-shifts basis. Only 2% of sales go to foreign markets, while 6% of materials, such as foundry graphite, grey pig iron, coke, graphite vessel, piano wire, are imported. Good communication by railroad and road with the steel works and markets.

I. FIXED CAPITAL (end of 1965)	Original purchase	1965 re-
	value	placement value
TOTAL (Drs. million)	721	828
Buildings & land improvements	283	366
Machinery & equipment	438	462
Other capital assets	-	-

**Major machinery crucial for determining the overall production capacity:**

**Castings:** semi-automatic cupola furnaces (2 shifts).  
**Springs:** semi-automatic and automatic machines of small capacity (1 shift).  
**Fittings for water conduit:** universal casting and metal-working machines of small capacity (1 shift).  
**Textile machines & parts:** universal machine tools of small capacity (1 shift).  
 (34% of equipment was imported).

Capital expenditures in the past years: (Drs. million)	1953-54	1955-57	1958-60	1961-63
	Gross expenditures	91	81	175
Retirements	18	51	70	81

Calculated average age of fixed assets: 6.1 years

**Electric motors:**

Total installed capacity: 830 KW  
 Of which actually operated in 1965:

1st shift 100 %; 2nd shift 27 %; 3rd shift 6 %

**Technological features:**

Product assortment is considered as too large both from the technological and the marketing standpoint. Foundry and fitting production is poorly mechanized (about 50%). The production of utensils involves mechanical treatment of wood, which is also poorly mechanized.

II. LABOUR (1965)	TOTAL no. of employees:		
	1st shift	2nd shift	3rd shift
1. <b>Factory workers:</b>			
Total 1,031 persons	688	278	65
(2,148 thous. manhrs.)	(1,440)	(576)	(132)
- Castings and fittings	422	129	35
- Knitting machines & tools	115	98	16
- Utensils	151	51	14
2. <b>Non-factory workers:</b>	114 persons		
	(421 thous. manhours)		

**Educational background of workers:**

	Techn.	Non.	Law	Others	Total
	Univ. or higher	5	1	-	2
Tech. Higher sch.	-	-	4	-	4
Secondary sch.	28	16	-	7	51
Primary school	-	-	-	1,082	1,082

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
	TOTAL actual revenue output 1965 *	
- Cast grey pig iron **	5,106 t	(1,052)
- Cast non-ferrous metals	191 t	235
- Levers and springs	21 t	25
- Sectional parts	3,148 t	541
- Water conduit fittings	1,529 t	726
- Looms	45 t	49
- Machines and tools for knitting	20 t	39
- Spareparts for textile machinery	33 t	64
- Utensils for textile industry	1,132,000 pce.	197
- Paper utensils	292 t	91

\* Including turnover tax on sold products.  
 \*\* Of which only Drs. 186 million (756 t) was sold and counted in the total value.

**Capacity output:**

- Castings and fittings for water conduit	7,000 t	Rate of utilization is 79 %.
- Textile machines & parts	120 t	

Underutilization due to capacity unbalance between processes and other engineering deficiencies; to insufficient supply of materials. 700 workers on 1st. shift are estimated to be required for full utilization.

VI. SUPPLEMENT	Future plans:
a)	Introduction of new products: machine tools, slide valves, and hydrants.
b)	New equipment for foundry and pressing of wood.
c)	For the production of machine tools, introduction of electro-erosion and electro-chemistry is planned (66% of the facilities for utensils production was renovated in 1965).

1/ Drs. 34 million are funds belonging to the enterprise.  
 2/ Gross accumulation includes "interests paid".

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. Million)
	TOTAL actual consumption 1965	
1. <b>Energy inputs: total</b>		120
- Electricity	1,423 MWH	18
- Coke	2,489 t	75
- Coal (lignite)	2,808 t	14
- Liquid fuel	159 t	13
2. <b>Major production materials: total</b>		979
- Grey pig iron	4,026 t	262
- Scrap iron	806 t	24
- Rolled ferrous products	175 t	44
- Saw logs	944 m <sup>3</sup>	17
- Other saw timber	552 m <sup>3</sup>	25
- Paper	285 t	51
- Non-ferrous metal products	108 t	97
- Others	..	459
3. <b>Repairs &amp; maintenance: total</b>		15
4. <b>Other material &amp; non-factor service inputs</b>		90

V. VALUE ADDED (1965)	(Drs. Million)
TOTAL (except turnover tax)	783
- Wages of factory workers	510
- Salaries of non-factory workers	65
- Depreciation	30
- Interests paid	91
- Other accumulation (Turnover tax)	187 1/2

**SELECTED COEFFICIENTS**

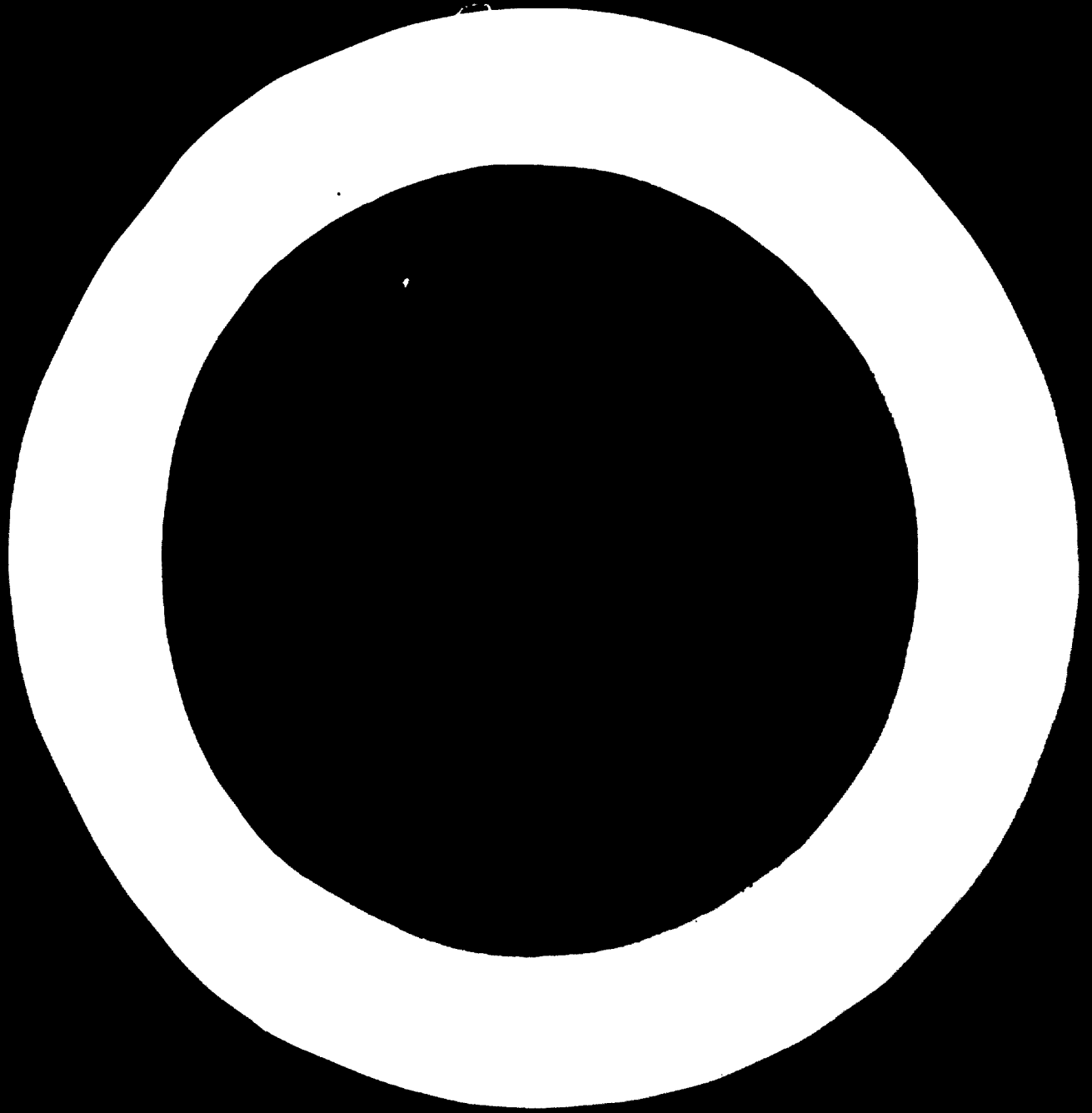
- Mach. & equip. per factory worker on 1st shift:	Drs: 672,000
- Value added per employee:	Drs. 684,000
- Annual wage per factory worker:	Drs. 495,000
- Variable input cost/gross production ratio:	77 %
- Gross accumulation/gross production ratio:	2/ 13.3 %
(at full capacity):	15.5 %
- Level of production at break-even point:	34 % of the 1965 actual level.

An enterprise, founded in 1947, producing screw propellers and wire products. Annual capacity output is about 27,000 t of screw propellers, hubs, rivets, wire nails, wire cloth, barbed wire, etc. on a 3-shift basis. About half of the products are exported, while one-third of materials (such as rolled, drawn, galvanised, fine and MS wires) are imported.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)						
				1953-54	1955-57	1958-60	1961-63			
<b>TOTAL (Drs. million)</b>		1,845	2,105	Gross expenditures	32	429	7	765		
Buildings & land improvements		423	550	Retirements	146	206	186	269		
Machinery & equipment		1,421	1,555	Calculated average age of fixed assets: 8.9 years						
Other capital assets		1	-	<b>Electric motors</b>						
				Total installed capacity: 2,200 KW						
				Of which actually operated in 1963:						
				1st shift 50 %; 2nd shift 32 %; 3rd shift 17 %						
<b>Major machinery crucial for determining the overall production capacity:</b>		<b>Technological features:</b> Rolled wire is rendered in alkali, drawn into desired size and heated. Six-angled and four-angled hubs are made by a special machine. Some screw-propellers undergo further thermal treatment and galvanization. Operations are connected mostly manually. Knitting of wire cloth on looms of conventional design. Mechanization and automation rated at 70% and 60%, respectively, of the world level.								
Screw propellers and hubs: Semi-automatic and fully automatic machines of medium capacity (2 shifts).										
Wires: Automatic machines of medium capacity (3 shifts).										
Wire cloth: Semi-automatic looms of medium capacity (2 shifts).										
About 30% of machinery was imported.										
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:					
		1st shift	2nd shift	3rd shift	Techn.	Non.	Law	Others	Total	
1. Factory workers:		479	244	98	Univ. or higher	4	1	2	-	7
Total 321 persons		(1,386)	(540)	(223)	Tech. Higher sch.	7	1	-	2	10
(1,350 thous. manhrs.)					Secondary sch.	10	20	1	12	43
- screw propellers, hubs and rivets		292	119	42	Primary school	-	-	-	923	923
- Nails		54	35	18	IV. INTERMEDIATE INPUTS					
- Wire-cloth knitting		74	50	14	Quantity		Value (Drs. Million)			
- Barbed wire		59	40	24	TOTAL actual consumption 1963					
2. Non-factory workers:		162 persons				1. Energy inputs: total				
(361 thous. manhours)					- Electricity					
					- Coke					
					- Lignite					
					- Hard coal					
					- Liquid fuel					
					2. Major production materials: total					
					- Steel bar					
					- Steel strips					
					- Rolled wire					
					- Drawn wire (ordinary)					
					- Drawn wire (galvanised)					
					- Drawn wire (sectional)					
					- Drawn wire (patent)					
					3. Repairs & maintenance: total					
					4. Other material & non-factor service inputs					
					V. VALUE ADDED (1963) (Drs. Million)					
					TOTAL (except turnover tax)					
					- Wages of factory workers					
					- Salaries of non-factory workers					
					- Depreciation					
					- Interests paid					
					- Other accumulation					
					(Turnover tax)					
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)	SELECTED COEFFICIENTS						
TOTAL actual revenue output 1963		4,425 *		- Mach. & equip. per factory worker on 1st shift: Drs. 3,250,000						
- screw propellers		3,084 t	1,036	- Value added per employee: Drs. 1,250,000						
- hubs		472 t	217	- Annual wage per factory worker: Drs. 497,000						
- rivets		390 t	97	- Variable input cost/gross production ratio: 72.5 %						
- wire nails		9,899 t	1,594	- Gross accumulation/gross production ratio: 2/ 15.6 %						
- wire nettings		1,762 t	590	(at full capacity)						
- wire cloth		263 t	221	- Level of production at break-even point: 43 % of the 1963 actual level.						
- barbed wire		1,366 t	264							
- others		..	406							
Includes turnover tax on sold products.										
Capacity output:										
- screw propellers, hubs and rivets		8,600 t	} (overall rate of utilisation is 64%.							
- wire nails		12,200 t								
- wire netting, cloth and barbed wire		6,000 t								
Underutilization is due to imbalance of capacities. Certain machinery breakdowns (due to high wear and tear) caused a stoppage of major processes. Also demand was rather unstable.										
VI. SUPPLEMENT		Future Plans								
a) Specialisation in the production of small wire products.										
b) Fine arrangement of machines.										
c) Installation of two-shock process, equipment for galvanization and machines for the preparation of raw materials.										
d) Raising of the level of mechanization and automation by 10%.										
* Of which Drs. 21 million retained as own fund.										
* Gross accumulation includes interests paid.										

An enterprise, founded in 1946, producing fittings, flanges and other hardware. Annual capacity output is about 7,000 t of products on 3-shift operation. About 16% of products are sold on foreign markets while 4% of the materials are imported, (such as coke and parts). The enterprise is located near the source of basic raw materials. Well situated in relation to both domestic and foreign markets.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 replacement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		2,135	2,401	-	37	43	40		
Buildings & land improvements		847	1,001	96	157	194	257		
Machinery & equipment		1,332	1,400	Calculated average age of fixed assets: 1.6 years					
Other capital assets		6	-	Electric motors: 1,211 KW					
<b>Major machinery crucial for determining the overall production capacity</b>		Total installed capacity: _____ KW							
Fittings and parts made of tempered iron: Small size machines for smelting, processing and surface protection of fittings. (2 shifts).		Of which actually operated in 1963: _____ KW							
Household apparatuses: Universal machines of small capacity. (2 shifts) (three-quarters of machinery and equipment were imported).		1st shift 10%; 2nd shift 45%; 3rd shift 7%							
		<b>Technological features:</b> involves the conventional type of smelting, processing and surface protection processes. The capacity of the tempering furnaces is too small. Mechanization and automation are rated at 3% and 4%, respectively, but the factory ranges among the best in the country.							
II. LABOUR (1963)		TOTAL no. of employees:			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn.	Econ.	Low	Others	Total
1. Factory workers:		69	139	23	6	4	2	1	13
Total 852 persons		(1,824 thous. manhrs.)	(1,476)	(300)	(48)				
- Foundry and production of fittings		349	102	23					
- ther		341	37	-					
2. Non-factory workers:		149 persons							
		(322 thous. manhours)							
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		IV. INTERMEDIATE INPUTS				
TOTAL actual revenue output 1963*			2,827		Quantity		Value (Drs. Million)		
- Castings **		2,455 t	1,228		TOTAL actual consumption 1963		1,143		
- Fittings and edgings		1,076 t	874		1. Energy inputs: total		29		
- Hand tools		209 t	161		- Electricity		3,337 mwh 44		
- Weighing machines		92 t	127		- Coke		275 t 8		
- Household apparatuses		449 t	332		- Coal		2,263 t 22		
- Flanges and accessories		783 t	825		- Liquid fuel		333 t 25		
- Services		..	10		2. Major production materials: total		769		
- others		..	253		- Pig iron		1,601 t 96		
					- Scrap iron		775 t 13		
					- Rolled and drawn ferrous products		1,301 t 60		
* Includes turnover tax on sold products.						3. Repairs & maintenance: total		72	
**About 80% or Drs. 983 million are internally used and not included in total.						4. Other material & non-factor service inputs (of which services 45)		2.3	
Capacity Output:						V. VALUE ADDED (1963)		(Drs. Million)	
Castings		2,455 t	} overall rate of utilization: 68.		TOTAL (except turnover tax)		1,455		
Fittings and edgings		1,475 t			- Wages of factory workers		557		
Hand tools and other household apparatuses		1,670 t			- Salaries of non-factory workers		138		
Flanges and accessories		1,350 t			- Depreciation		100		
Underutilization is due to insufficient capacity of furnaces for tempering.						- Interests paid		121	
Number of workers required on 1st shift for full utilization of the existing capacity is 690.						- Other accumulation		489	
						- (Turnover tax)		(279)	
VI. SUPPLEMENT		Future Plans		SELECTED COEFFICIENTS					
a) Specialization in tempered castings.				- Mech. & equip. per factory worker on 1st shift: Drs. 2,029,000					
b) Introduction of tin tempered sheets.				- Value added per employee: Drs. 1,404,000					
c) Expansion of foundry of tempered castings by 50%.				- Annual wage per factory worker: Drs. 654,000					
d) Mechanization of the foundry.				- Variable input cost/gross production ratio: 56%					
e) Mechanization and partial automation of the within-yard transportation system.				- Gross accumulation/gross production ratio: 23.9%					
				- (at full capacity) 30.3%					
				- Level of production at break-even point: 46% of the 1963 actual level.					
1) of which Drs. 130 million retained within the enterprise.									
2) Gross accumulation includes interests paid.									



**MAJOR PRODUCTS:** Milling machines; also make other small metal cutting machines. Annual capacity output is about 600 milling machines of various types and some 800 units of other machines, amounting to about Fr. 22 million, on partial two-shift operation.

**REPORTING UNIT:** A one - establishment enterprise with capital stock of Fr. 6 million and 513 employees as of 1964. This company was founded in 1910.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE ( Fr. 000 )</b>	<b>13,664</b>	<b>5,317</b>
1. Land (mostly rented)	1	1
2. Land improvements	-	-
3. Buildings	2,225	1,891
4. Other construction works	-	-
5. Machinery & equipment	6,018	2,262
6. Tools & instruments	4,702	815
7. Vehicles	248	113
8. Office furniture & fixtures	469	235

**DETAIL OF I.5 (No.)**

	Total Bk. value bef. deprec.	Avr. Age (Yr.)	Depr. rate (%)
a. Planing section	1,065	7	8.4
b. Milling section	434	4.5	8.0
c. Milling section (rented)		0.8	30.3
d. Parallel lathes section	269	10	6.3
e. Parallel lathes section (rented)		0.5	7.0
f. Automatic lathes section (rented)		0.75	5.4
g. Tempering section	130	4	10.0
h. Rectifier section	573	5.3	10.7
i. Radial section	266	7.7	10.0
j. Boring section	72	4	13.0

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE (Fr. 000)</b>	<b>4,682</b>	<b>+ 10 %</b>
1. Direct production materials	1,496	
2. Other input materials		
3. Work in process	2,956	..
4. Finished products	230	

- Normal inventories of finished products 1.3% of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 288 KW

Total load, capacity of trucks: 5 t

- Rectifiers were imported; (a),(d),(e),(f) (g) and (i) are of domestic origins. (h),(o) and (j) were produced within the plant.

- Average age of machinery itemized: 4.4 yrs

- Prior to the recent expansion listed in VII. 1, a substantial expansion took place in 1957, before which the level of employment and that of output were 70% and 35% of the 1964 level, respectively.

**GENERAL CONDITIONS:** Transportation, water, health and educational facilities, excellent. Electricity, gas and residential situation are fair.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 513	316	136	61
1. Direct production ( all male )	172	130	46
Annual total manhours (000)	( 327 )	( 296 )	( 67 )
a. Preparation and painting	27	-	-
b. Planing	-	7	3
c. Rectifying and tempering	-	19	3
d. Drilling	-	9	31
e. Milling	-	28	-
f. Notching, drawing and mortising	1	9	-
g. Lathes	1	34	-
h. Bu removing and finishing	15	-	-
i. Assembly	88	-	-
j. Electricity	7	-	-
k. Shapening and tooling	4	6	-
l. Repair and maintenance	21	-	-
m. Foremen of shops	8	18	9
2. Auxiliary activities ( m. 137 f. 28 )	144	6	15
a. Warehouse	16	-	-
b. Quality control : retouching	13	-	-
c. Receiving, loading : transport	14	-	-
d. Research, pilot works, design.	42	-	-
e. Administration	33	-	-
f. Sales and purchase	22	-	-
g. Miscellaneous aids (operatives)	4	6	15

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Others
Engi-neers	Other	
26	30	457
<b>Management</b>		
26	30	-
<b>Direct Production</b>		
<b>Skilled</b>		
-	-	233
<b>Semi-skilled</b>		
-	-	9
<b>Unskilled</b>		
-	-	24
<b>Auxiliary Activities</b>		
<b>Skilled</b>		
-	-	37
<b>Semi-skilled</b>		
-	-	11
<b>Unskilled</b>		
-	-	72

- Actual hours worked per annum per direct production worker: 1,979 hours.

- Proportion of motors occupied: 99% in 1st shift, 89% in 2nd and 93% in 3rd shift.

- Technological features :  
a): Slipping, coating and painting.

b): Uses big planing machines.

c): Uses plane rectifiers with two columns and cylindrical precision rectifiers.

d): Uses radial drilling machines.

e): Uses universal milling machines.

f): Uses various notching machines.

g): Uses parallel and automatic lathes.

h): Uses manual operations

i): Assembly and adjusting.

- Mechanisation: excellent in (b) and (c); fair in (d), (e),(f) and (g); poor in (a),(h) and (i).

- Automation: poor in (c),(f) and (g); outdated in other shops.

- Skilled workers in direct production engaging in manufacturing mechanical parts of machines from iron casting steel bars and in assembly.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( Fr. 000 )				TOTAL VALUE OF CONSUMPTION ( Fr. 000 )			
20,044				6,913			
Product	Unit	Quantity Produced	Unit Value ( Fr. )		Quantity consumed	Unit value ( Fr. )	
a. Milling machines 1m	No.	350	28,100	1. <u>Energy &amp; water: total</u>			93
b. Milling machines 2m	"	161 *	37,100	- Electricity	000 KW	1,168	80
c. Milling machines 27e	"	42	59,350	- Water	000 s <sup>3</sup>	18	..
d. Milling machines F.A.R.	"	2	80,125	2. <u>Direct production materials: total</u>			4,475
e. Pivoting vices	"	465	965	a. Cast iron	ton	1,430	1,600
f. Circular dieke	"	96	2,205	b. Steel	"	464	1,250
g. Universal dividers	"	102	6,845	c. Couplings	No.	1,110	209
h. Mortising machines	"	18	2,125	d. Bearings	"	77,245	5
i. Rack notching machines	"	21	2,005	e. Motors	"	1,100	220
j. Sensitive drilling machines	"	38	2,125	f. Remote control armour	"	555	563
k. AFA - BFA				g. Electric pumps	"	555	101
l. Waste metals	ton	450	143	h. "Lecteurs" (electro-magnetic apparatus)	"	555	415
				i. Rules	"	555	136
				j. Others	Fr. 000	72	..
				3. <u>Packaging materials: total</u>			31
				4. <u>Work performed by sub-contractors (</u>			1,616
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>			110
				Parts and materials	65		
				Services purchased	45		
				6. <u>Material inputs for auxiliary activities</u>			75
				7. <u>Non-factor service inputs: total</u>			513
				Of which transport, insurance and storage purchased separately	256		
* Of which 2 are being used internally, but valued at market price and counted in the total.							
<u>CAPACITY OUTPUT:</u>							
10% higher than the 1964 actual level of production.							
Underutilization due to seasonally insufficient demand and the shortage of man-hours by some 56,000 hours.							
Product - mix is <u>not</u> flexible.							
Unit value of product: Market value f.o.b. before sales tax.							
Unit value of material: Market price o.i.f.							
- About half of products (c) and (d) are exported; (a), (b), (e) to (j) are partly exported.							
- Production materials (a), (b), (d) and (e) are transported by road with freight costs amounting to 2.8% of c.i.f. value.							
VI. VALUE ADDED TOTAL 1964 ( Fr. 000 )				13,131			
1. <u>Wages &amp; salaries (before income tax)</u>							
- Employees in direct production				5,419			
- Other employees				4,104			
2. <u>Other expenditures for employees</u>				366			
3. <u>Annual depreciation allowance</u>				1,280			
4. <u>Rental paid (incl. royalties)</u>				20			
5. <u>Sales &amp; other indirect taxes (less subsidies) (not included in total)</u>				4,023			
6. <u>Other gross business income (before income tax)</u>				1,942			
VII. EXPANSION: HISTORY & PLAN				SELECTED CORRELATIVES			
1. <u>Recent Expansion</u>				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Fr. 62,300			
From 1960 to 1964				- Value added per employee: Fr. 25,700			
a. <u>Total Investment ( Fr. 000 )</u>				- Annual wage per employee in direct production: Fr. 15,550			
- Land				- Variable input costs/gross production ratio: 58%			
- Land improvements				- Gross profit/gross production ratio: 9.7%			
- Buildings				- (at full capacity : 12.6%)			
- Other construction work				- Level of production at break-even point is approximately 77 % of the 1964 actual level.			
- Machinery & equipment							
- Tools & instruments							
- Vehicles							
- Offices furniture & fixtures							
b. <u>Corresponding increase:</u>							
In no. of employees				From 1960 to 1964			
In annual gross production				308 513 + 120%			
				2. <u>Future Plan</u>			
				a. <u>Investment proposed for the period 1964 to 1968</u>			
				Total value ( Fr. 000 )			
				11,636			
				Of which: - Mach. & equipment			
				77 %			
				- Land improv. & bldg.			
				9			
				- Land			
				-			
				- Others			
				14			
				b. <u>Net increase in no. of employees envisaged for the same period:</u>			
				- Direct production:			
				113			
				- Auxiliary:			
				15			
				c. <u>Purposes:</u>			
				Introduction of new products and processes; expansion of the assembly shop; and largely balanced expansion of existing capacity in the same location. The newly acquired highly advanced production equipment is to be utilized to the fullest possible extent			
VIII. SUPPLEMENT							



IV. ANNUAL PRODUCTION (1964)		110,930 (excl. tax)		V. INTERMEDIATE INPUTS (1964)		85,747	
TOTAL VALUE OF PRODUCTION ( Frs. 000 )				TOTAL VALUE OF CONSUMPTION ( Frs. 000 )			
Product	Unit	Quantity Produced	Unit Value ( Frs. )		Quantity consumed	Unit value ( Frs. )	
a. Diesel engine 4 cylinders 35-42 HP	pc	10,197	3,136	1. Energy & water: total (including 5 and 6)			2,644
b. Diesel engines 3 cylinders 38-42 HP	pc	14,570	3,832	- Water	000 cu.m	145	288
c. Diesel engine 4 cylinders 54-57 HP	pc	7,518	4,424	- Gas	000 cu.m	45	688
d. Diesel engine 6 cylinders 66-71 HP	pc	2,406	6,392	- Electricity	000 kWh	600	100
e. Diesel engine 4 cylinders 70 HP	pc	*	5,280	- Domestic liquid fuel	000 l	270	..
				- Combustion oil	000 l	40	..
				- Motor Oil	000 l	43	..
* Production has been just started; hence the quantity is negligible.				2. Direct production materials: total			80,431
<b>CAPACITY OUTPUT:</b> 25% above the 1964 actual production level. No additional labour input is required. Product-mix is completely flexible.				a. Injecting pumps	Fr. 000	16,000	..
Unit value of product/Market value f.o.b. after sales tax. Unit value of material: ..				b. Breech blocks	"	16,000	..
- About one fourth of the products are used for the production of exported goods.				c. Casted parts	"	3,600	..
- Direct production materials (a) to (e) are supplied by specialized parts makers, under various types of contracts (some semi-permanent and some short-term).				d. Pumps and other mechanical parts	"	2,100	..
				e. Braces and bits	"	3,200	..
				f. Others (including packaging materials)	"	29,531	..
				3. Packaging materials: total (included in 2.f)			
				4. Work performed by sub-contractors ( )			-
				5. Repairs & maintenance (materials & services purchased) (included in 1.)			
				6. Material inputs for auxiliary activities (included in )			
				7. Non-factor service inputs: total			2,672
				Of which transport, insurance and storage purchased separately.			443
<b>VI. VALUE ADDED</b>		TOTAL 1964 ( Frs. 000 )		25,183		<b>SELECTED COEFFICIENTS</b>	
1. Wages & salaries (before income tax)						- Mach., equip., instruments & tools per employee in direct production on let shift: Frs. 32,400	
- Employees in direct production )						- Value added per employee: Frs. 38,565	
- Other employees )		16,048				- Annual wage per employee: Frs. 24,576 1/	
2. Other expenditures for employees						- Variable input costs/gross production ratio: .. 2/	
3. Annual depreciation allowance		3,208				- Gross profit/gross production ratio: 4.6.	
4. Rental paid (land)		771				- Level of production at break-even point is approximately .. % of the 196 actual level. 2/	
5. Sales & other indirect taxes (less subsidies not included in total)		[ 28,642 ]					
6. Other gross business income (before income tax)		5,155					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				Gross acquisition		Scrapped or sold	
1. Recent Expansion							
From 1962 to 1964							
a. Total Investment ( Frs. 000 )				5,301			
- Land				-			
- Land improvements				-			
- Buildings				967			
- Other construction work				-			
- Machinery & equipment				4,064			
- Tools & instruments				-			
- Vehicles				120			
- Office furniture & fixtures				150			
b. Corresponding increase:				From 19 62 to 19 64			
In no. of employees				253		261	
In annual gross production ( Frs. 000 )				80,932		110,930	
2. Future Plan							
a. Investment proposed for the period 19 64 to 19 67							
Total value ( Frs. 000 )				4,500			
Of which: - Mach. & equipment				95		%	
- Land improv. & bldg.				-			
- Land				-			
- Others				5			
b. Net increase in no. of employees envisaged for the same period:				- Direct production:		40	
				- Auxiliary:		10	
c. Purposes:				Selective expansion of engines assembly line.			
<b>VIII. SUPPLEMENT</b>							
1. Including also "Other expenditure for employees".							
2. No reliable estimate of the fixed costs is available.							

**MAJOR PRODUCTS:** Industrial and marine diesel engines. Annual capacity output is about 43,000 units of various types of diesel engines on one-shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with capital stock Frs. 14 million and employees 653 as of 1964. The enterprise was newly organized in 1961 on the basis of an old factory.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE ( Frs. 000 )</b>	<u>11,775</u>	<u>6,955</u>
1. Land (18,500 m <sup>2</sup> )	(rented)	-
2. Land improvements	-	-
3. Buildings (17,950 m <sup>2</sup> )	1,386	1,163
4. Other construction works	-	-
5. Machinery & equipment	6,329	4,454
6. Tools & instruments	2,174	439
7. Vehicles	784	246
8. Office furniture & fixtures	1,102	652

**DETAIL OF I.5 (No.)**

	Age (Yr.)	Oper. Cond.
a. Parallel lathes	15-24	B
b. Milling machines	10-14	B
c. Surface Grinders	10-14	B
d. Radial drilling machines	10-14	B
e. Boring machines	5-9	B

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE ( Frs. 000 )</b>	<u>23,900</u>	<u>+3</u>
1. Direct production materials	12,700	+5
2. Other input materials	-	-
3. Work in process	1,900	+10
4. Finished products	9,300	-

- Normal inventories of finished products 6.7% of annual gross production

- Seasonal variations:

(1) } May: +7%; Oct: -4%  
 (3) }  
 (4) }

Capacity of two transformers for electric furnaces: 1,000 KW each  
 Total load, capacity of trucks: - t

All the machines are of local manufacture.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities are excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	<u>653</u>	-	-
1. Direct production ( all male )	<u>262</u>	-	-
Annual total manhours (000)	(..)	( )	( )
a. Assembly and finishing	104	-	-
b. Testing benches	60	-	-
c. Conversion of marine and industrial engines	6	-	-
d. Maintenance	23	-	-
e. General Mechanical shop	8	-	-
f. Mechano-welding shop	8	-	-
g. Control service	53	-	-
2. Auxiliary activities ( m. 273 f. 118 )	<u>391</u>	-	-
a. Management and administration	312	-	-
b. Provisions	23	-	-
c. Purchases	17	-	-
d. Purchase and maintenance of equipment	8	-	-
e. Methods	13	-	-
f. Garage and adaptation	10	-	-
g. Transport	8	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	Others
<b>TOTAL</b>	15	15	495
<b>Management</b>	15	15	48
<b>Direct Production</b>	-	-	-
Skilled	-	-	116
Semi-skilled	-	-	138
Unskilled	-	-	8
<b>Auxiliary Activities</b>	-	-	-
Skilled	-	-	-
Semi-skilled	-	80	214
Unskilled	-	-	19

- Motors and furnaces are 100% occupied.

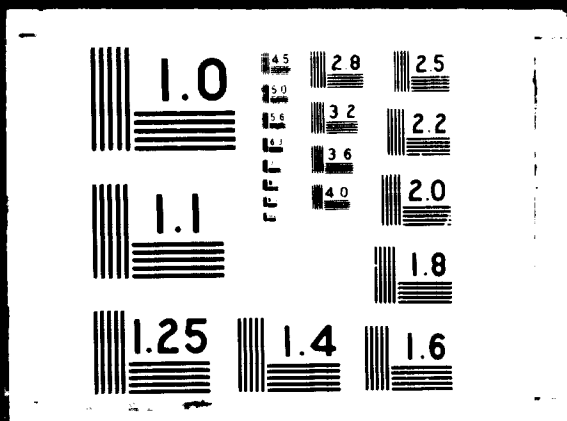
- Moderate degree of mechanization in (a) and (b).

- Direct production workers classified as skilled are engaged in engine assembly and engine control at the testing benches.



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# 9 OF 10 D O 6 1 8



**MAJOR PRODUCTS:** Pumps and related equipment and fixtures; also construction of tanks and other plumbing work. Annual capacity output is some 12,000 units of pumps (electric and manual) plus Frs. 5 million worth of electrical fixtures and plumbing work (with serial two shifts).

**REPORTING UNIT:** An old but well renovated one-establishment enterprise with capital stock Frs. 1 million and employees 125 as of 1965. Founded in 1886.

**I. FIXED CAPITAL ASSETS (end of 1965)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( 000 Frs. )	1,903	507
1. Land	-	-
2. Land improvements	-	-
3. Buildings	80	48
4. Other construction works	153	35
5. Machinery & equipment	1,402	302
6. Tools & instruments	44	2
7. Vehicles	22	6
8. Office furniture & fixtures	203	114

DETAIL OF I.5 (No.)	Total bk. value	Avg. Age	Oper. Cond.	Depr. rate (%)	1964 replace. value
a. Parallel lathes	720	4	A	10	880
b. Boring machines	210	6	A	10	260
c. Milling machines	325	5	A	10	390
d. Surface polishers	85	8	B	10	160
(Subtotal)	1,340				1,690

**II. INVENTORIES (end of 1965)**

	Actual	Normal
<b>TOTAL VALUE</b> ( 000 Frs. )	1,410	.. \$
1. Direct production materials	339	
2. Other input materials	72	
3. Work in process	576	
4. Finished products	525	

- Actual inventories of finished products 5 % of annual gross production

- Seasonal variations: High Low

1. Direct production materials	+ 20% (Dec.)	- 20% (June)
4. Finished goods	+ 20% (July)	- 20% (Oct.)

Capacity of electr. motors: 200 KW

Total load, capacity of trucks: 1.5 t

(1.5.a), (-b) and (-c) were locally manufactured; (-d) was imported.

Average age of machinery (96% of total) about 5 years.

**GENERAL CONDITIONS:** Long distance transportation and gas supply are excellent. Other public utilities and community facilities are fair.

**III. LABOUR (1965 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 125	93	32	-
1. Direct production (all male)	49	32	-
Annual total manhours (000)	(83)	(53)	(-)
a. Warehouse	-	11	-
b. Machining	49	-	-
c. Assembly	-	21	-
2. Auxiliary activities ( m. 32 f. 12 )	44	-	-
a. Tooling and maintenance	6	-	-
b. Supervision of production	9	-	-
c. Sales and purchase and other office work	23	-	-
d. Research	7	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	Others
4	21	9	91
<b>Management</b>			
4	2	-	-
<b>Direct Production</b>			
-	4	-	-
<b>Semi-skilled</b>			
-	-	-	65
<b>Unskilled</b>			
-	-	-	12
<b>Auxiliary Activities</b>			
-	7	2	-
<b>Semi-skilled</b>			
-	-	15	6
<b>Unskilled</b>			
-	-	-	8

- Average working hours per annum per direct production worker: 1,678 hrs.

- Proportion of motors occupied: 74% on the 1st shift and 84% on the 2nd shift.

- Conventional processes are applied. Mechanization and automation generally fair except (c), which is rated poor.

- Skilled workers are engaged in lathing, fraising, boring, polishing and assembly.

- Those in auxiliary activities are responsible for adjustment and setting of machines.

IV. ANNUAL PRODUCTION (1965)			V. INTERMEDIATE INPUTS (1965)		
TOTAL VALUE OF PRODUCTION ( 000 Frs. ) 10,085			TOTAL VALUE OF CONSUMPTION ( 000 Frs. ) 6,488		
<b>Product</b>	<b>Unit</b>	<b>Quantity Produced ( Fr. )</b>	<b>Quantity consumed ( Fr. )</b>	<b>Unit value</b>	<b>Unit value</b>
a. Pumps, electro and manual	unit	9,700	600		
b. Revenue from construction of tanks, brass founding, plumbing, and miscellaneous electrical equipment for control and protection of electro-pumps	000 Frs	4,200	..		
c. Scrap from casting	000 Frs	65	..		
<b>CAPACITY OUTPUT:</b> 20% higher than the 1965 actual production with sufficient demand and additional manhours 20,000 for machine shop and 10,000 for assembly. Reception of materials and disposal of products as well as internal transport forms a bottleneck. The share of electro-pumps can be increased.			<b>1. Energy &amp; water: total</b> 16		
Unit value of product: Market value f.o.b. before sales tax Unit value of material: Market price c.i.f. except for 2.c. (partial c.i.f.)			- Electricity 000 kwh 220 70		
- 5% of pumps are exported.			- Water 000 m <sup>3</sup> 9 50		
			<b>2. Direct production materials: total</b> 3,984		
			a. Casting Ton 500 2,050		
			b. Bronze ,, 45 11,500		
			c. Steel ,, 60 3,900		
			d. Miscellaneous ,, 2,209 ..		
			<b>3. Producing materials: total</b> 12		
			Paper & paper products (Fr. 3,500/t) 2 tons		
			Wooden materials (Fr. 650/t) 8 tons		
			<b>4. Work performed by sub-contractors (See VIII.)</b> 46		
			<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> 20		
			<b>6. Material inputs for IV b.</b> 2,145		
			<b>7. Non-factor service inputs: total</b> 265		
			Of which transportation, insurance and storage purchased separately Frs. 161,000		
<b>VI. VALUE ADDED TOTAL 1965 ( 000 Frs. ) 3,597</b>			<b>STANDARD COEFFICIENTS</b> (in 1965 replacement value)		
1. Wages & salaries (before income tax)			- Mach., equip., instruments & tools/per employee in direct production on 1st shift: Frs. 37,250		
- Employees in direct production 945			- Value added per employee: Frs. 28,700		
- Other employees 1,150			- Annual wage per employee in direct production: Frs. 11,670		
2. Other expenditures for employees 897			- Variable input costs/gross production ratio: 50%		
3. Annual depreciation allowance 79			- Gross profit/gross production ratio: 3.2%		
4. Rental paid (incl. royalties: 16) 91			(at full capacity: 10.9%)		
5. Sales & other indirect taxes (less subsidies) (not included in total) [1,811]			- Level of production at break-even point is approximately 95 % of the 1965 actual level.		
6. Other gross business income (before income tax) 315					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>			<b>2. Future Plan</b>		
1. <b>Recent Expansion</b>			a. Investment proposed for the period 1964 to 1975		
From 1960 to 1965			Total value Frs. 5 million		
a. Total Investment ( 000 Frs. ) 1,335 90			Of which: - Mach. & equipment 10 \$		
- Land - -			- Land improv. & bldg. 80		
- Land improvements - -			- Land 7		
- Buildings - -			- Others 3		
- Other construction work 80 -			b. Net increase in no. of employees envisaged for the same period:		
- Machinery & equipment 780 70			- Direct production: 30		
- Tools & instruments 195 -			- Auxiliary: 20		
- Vehicles 60 20			c. Purpose: Selective expansion of the production of electro-pumps and balanced expansion on new factory premises.		
- Office furniture & fixtures 220 -					
b. Corresponding increase: From 1960 to 1965					
In no. of employees 78 82					
In annual gross production + 64%					
<b>VIII. SUPPLEMENT</b>			<b>Work performed by sub-contractor</b>		
A sub-contractor (with 20 employees) made rings and bolts from the screw-cut products supplied by this enterprise under a temporary contract. The product received from the sub-contractor re-enters the pump-producing line of this enterprise.					

**MAJOR PRODUCTS:** Centrifugal pumps and compressors. Annual capacity output is about 700 pumps and 400 compressors amounting to about Frs. 40 million (including other products) on one-shift operation.

**REPORTING UNIT:** Branch of a 2-establishment <sup>1/</sup> enterprise with capital stock Frs. 10 million and 800 employees as of 1964. The establishment was founded in 1912.

**I. FIXED CAPITAL ASSETS (end of 1964)**

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( Frs. 000 )	<u>9,123</u>	<u>2,746</u>
1. Land	512	512
2. Land improvements	-	-
3. Buildings	2,022	1,247
4. Other construction works	-	-
5. Machinery & equipment	5,435	753
6. Tools & instruments	408	33
7. Vehicles	126	36
8. Office furniture & fixtures	620	165

**DETAIL OF I.5 (No.)**

	Avr. Age (Yr.)	Oper. Cond.
a. Lathee	} 10	A
b. Parallel lathes		
c. Vertical lathes		
d. Drilling machines		
e. Multi-broach drilling machines	} 5 (partly 20)	A
f. Planing machine		
g. Polishing machines		
h. Boring machines		

**II. INVENTORIES (end of 1964)**

	Actual	Normal
<b>TOTAL VALUE</b> ( Frs. 000 )	10,820	.. 9
1. Direct production materials	4,600	
2. Other input materials	-	
3. Work in process	5,600	
4. Finished products	620	

- Actual inventories of finished products 2.0% of annual gross production

- Seasonal variations: None.

Inventories at the end of 1964 remain practically at the same level as in 1963.

**Capacity of electr. motors:** - KW

**Total load, capacity of trucks:** 9.3 t

- Installed capacity of electricity generation: 800 kw (not used in 1964).

- The machinery was partly imported.

- The establishment was greatly expanded in 1960; the level of employment and output more than tripled as the result of the expansion.

**EXTERNAL CONDITIONS:** All external conditions are excellent, except for health facilities, which are fair, and educational facilities, which are poor.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	445	-	-
1. Direct production ( m. 189 f. 11 )	200	-	-
Annual total manhours (000) *	(847*)	( )	( )
a. Machine shop	60	-	-
b. Assembly	70	-	-
c. Testing section	10	-	-
d. Controlling section	10	-	-
e. Others	50	-	-
* Annual total manhours (847,000) include those worked by the employee classified under 2.b.			
2. Auxiliary activities ( m. 156 f. 89 )	245	-	-
a. Management	77	-	-
b. Administration and technical control	168	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

	Univ. or higher		Sr. High sch. or equiv.		Others
	Engi-neers	Other			
<b>TOTAL</b>	20	-	67	358	
<b>Management</b>					
20	-	57	-		
<b>Direct Production</b>					
Skilled	-	-	-	140	
Semi-skilled	-	-	-	60	
Unskilled	-	-	-	-	
<b>Auxiliary Activities</b>					
Skilled	-	-	10	-	
Semi-skilled	-	-	-	100	
Unskilled	-	-	-	58	

- Actual hours worked per annum per direct production worker: 2,300 hrs.

- **Technological features:** All shops are normally equipped.

- Mechanization is fair in all shops. No automation is involved.

- Skilled workers in direct production are engaged in machining, assembling and testing.

<sup>1/</sup> The other establishment produces controlling and regulating equipment for turbines (see France 360-(7))

IV. ANNUAL PRODUCTION (1964)			
TOTAL VALUE OF PRODUCTION (Fr. million) 30.75			
Product	Unit	Quantity Produced	Unit Value (Fr.)
a. Centrifugal pumps (piston or rotating), up to 2 hp.	No.	8	25,720 (avg.)
b. " " " from 2 to 50 hp.	"	320	
c. " " " from 50 to 500 hp.	"	115	
d. " " " more than 500 hp.	"	38	
e. Air and gas compressors (alternative), up to 3/ kw	"	122	41,700 (avg.)
f. " " " more than 37 kw	"	29	
g. Refrigerating compressors (open and half-hermetic)	"	161	17,860
h. Steam turbines	"	84	17,130
i. Others	Fr. mill.	4.96	..

**CAPACITY OUTPUT:** 30% higher than the actual 1964 production level with sufficient demand for products and about 240,000 additional annual manhours.  
Product-mix is not flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: ..  
- All products are partly exported.  
- All production materials are delivered by road.

V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF CONSUMPTION (Fr. million) 17.65			
<b>1. Energy &amp; water: total</b>		0.17	
		Quantity consumed	Unit value (Fr.)
- Water		cu.m.	50,000
- Electricity		kwh	1,150
- Coal		ton	3 ..
- Liquid fuel		cu.m.	403
- Gas		cu.m.	74,400
<b>2. Direct production materials: total</b>		15.00 *	
a. Cast iron	ton	100	..
b. Cast steel	Fr. 000	2,128	..
c. Non-ferrous metal castings	"	678	..
d. Rolled steel rounds	"	113	..
* Including 3, 5 and 6.			
<b>3. Packaging materials: total</b>		(included in 2.)	
<b>4. Work performed by sub-contractors</b>		( )	
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>		(included in 2.)	
<b>6. Material inputs for auxiliary activities</b>		(included in 2.)	
<b>7. Non-factor service inputs: total</b>		2.48	

VI. VALUE ADDED		TOTAL 1964 (Fr. mill.)	13.10
1. Wages & salaries (before income tax)	}	7.14	
- Employees in direct production			
- Other employees			
2. Other expenditures for employees		0.58	
3. Annual depreciation allowance		0.49	
4. Rental paid			
5. Sales & other indirect taxes (less subsidies) (not included in total)		[4.53]	
6. Other gross business income (before income tax)		4.89	

**SELECTED COEFFICIENTS**  
 - Mach., equip., instruments & tools per employee in direct production on 1st shift: Frs. 29,210  
 - Value added per employee: Frs. 29,438  
 - Annual wage per employee in direct production: Frs. 16,040 <sup>1/</sup>  
 - Variable input costs/gross production ratio: 57.1% <sup>2/</sup>  
 - Gross profit/gross production ratio: 15.9% (at full capacity: 22.2%)  
 - Level of production at break-even point is approximately 63 % of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN			
1. Recent Expansion		Gross acquisition	Scrapped or sold
From 1964 to 1965			
a. Total Investment (Fr. 000)		700	-
- Land		-	-
- Land improvements		-	-
- Buildings		-	-
- Other construction work		-	-
- Machinery & equipment		700	-
- Tools & instruments		-	-
- Vehicles		-	-
- Office furniture & fixtures		-	-
b. Corresponding increase:		From 19	to 19
In no. of employees		445	500
In annual gross production		+ 30%	

**2. Future Plan : Nons**  
 a. Investment proposed for the period 19 to 19  
 Total value ( )  
 Of which: - Mach. & equipment \$  
 - Land improv & bldg.  
 - Land  
 - Others  
 b. Net increase in no. of employees envisaged for the same period:  
 - Direct production:  
 - Auxiliary:  
 c. Purposes:

**VIII. SUPPLEMENT**  
<sup>1/</sup> Numerator is the sum of wages, salaries and other expenditures for employees; denominator is total number of employees.  
<sup>2/</sup> V. 2, 3, 5 and 6 are included in variable cost, but only one third of VI. 1 and 2 is regarded as variable cost.



**MAJOR PRODUCTS:** Controlling and regulating equipment for turbines. Annual capacity output is about Frs. 32 million worth of goods on a one-shift operation.

**REPORTING UNIT:** Sister branch of France 360 - (6). This branch was founded in 1920.

**I. FIXED CAPITAL ASSETS (end of 1964)**

TOTAL BOOK VALUE ( Fr. 000 )	Before deprec.	After deprec.
	7,165	2,157
1. Land	403	403
2. Land improvements	-	-
3. Buildings	1,588	978
4. Other construction works	-	-
5. Machinery & equipment	4,268	591
6. Tools & instruments	320	26
7. Vehicles	99	29
8. Office furniture & fixtures	487	130

**DETAIL OF I.5 (No.)**

- a. Lathes
- b. Drilling machines
- c. Milling machines
- d. Polishing machines
- e. Planing machines

Avg. Age (Yr.)

5-20 A

**II. INVENTORIES (end of 1964)**

TOTAL VALUE ( Fr. 000 )	Actual	Normal
	8,538	.. \$
1. Direct production materials	3,651	
2. Other input materials	-	
3. Work in process	4,400	
4. Finished products	487	

- Actual inventories of finished products 2 % of annual gross production

- Seasonal variations: None.

Since the level of production did not change substantially from 1963 to 1964 the inventories also remained at the same level.

Capacity of electr. motors: 600 KW

Total load, capacity of trucks: 7.3 t

- Some of the machinery was imported.

- A large renovation/expansion took place in 1960, which raised the capacity by more than 300 %.

**GENERAL CONDITIONS:** Transportation, public utilities and residential facilities are excellent. Health and educational conditions are poor.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED	355	-	-
1. Direct production ( male 151 / fem. 9 )	160	-	-
Annual total manhours (000)*	( 679 )	( )	( )
a. Processing	50	-	-
b. Assembly	45	-	-
c. Control	26	-	-
d. Others	39	-	-

\* Total manhours include those worked by the employees under 2.b.

2. Auxiliary activities ( 124 m. / 71 fem. ) 195

- a. Management 63
- b. Administrative, commercial and other services 132

EDUCATIONAL BACKGROUND (No. of employees)			
Univ. or higher	Sr. High sch. or equiv.	Other	Other
Engi-			
MANAGEMENT			
TOTAL	18	71	266
Direct Production			
Skilled	-	-	95
Semi-skilled	-	-	65
Unskilled	-	-	-
Auxiliary Activities			
Skilled	-	26	-
Semi-skilled	-	-	60
Unskilled	-	-	46

- Actual hours worked per annum per direct production worker: 2,320 hours.

- Degree of mechanization is fair in all shops.

- Skilled workers in direct production deal with processing and assembly. In auxiliary production they do controlling.

IV. ANNUAL PRODUCTION (1964)			
TOTAL VALUE OF PRODUCTION ( Frs. 000 )		24,126	
Product	Unit	Quantity Produced	Unit Value ( .. )
a. Gates (of turbines)	} 000 Frs.	24,125	..
b. Level-gauging instruments			
c. Temperature regulators			
d. Pressure regulators			
e. Turbines			

**CAPACITY OUTPUT:** 30 % higher than the actual 1964 production level with sufficient demand for the products and 30 % more annual manhours (about 200,000). There is no flexibility of the product-mix.

Unit value of product: Market value f.o.b. before sales tax  
 Unit value of material: Not available

- All products are partly exported.
- All input materials are delivered by road.

V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF CONSUMPTION ( Frs. 000 )		11,840	
<b>1. Energy &amp; water: total</b> 136			
		Quantity	Unit value
		Unit consumed	( .. )
- Water		cu.m.	39,300
- Electricity		kWh	902
- Coal		ton	2.3 ..
- Liquid fuel		cu.m.	316
- Gas		cu.m.	58,400
<b>2. Direct production materials: total</b> 11,760			
a. Cast iron	Fr. 000	994	
b. Cast steel	Fr. 000	1,670	
c. Other cast metals	Fr. 000	532 ..	
d. Ring iron	Fr. 000	89	
e. Others (including 3.5 and 6)*	Fr. 000	8,475	

\* Of which pumps are supplied by the other factory of the company.

**3. Packaging materials: total** (included in 2.e.) \_\_\_\_\_

**4. Work performed by sub-contractors** ( ) \_\_\_\_\_

**5. Repairs & maintenance (materials & services purchased)** (included in 2.e.) \_\_\_\_\_

**6. Material inputs for auxiliary activities** (included in 2.e.) \_\_\_\_\_

**7. Non-factor service inputs: total** 1,944

VI. VALUE ADDED		TOTAL 1964 ( Fr. 000 )	10,286
1. Wages & salaries (before income tax)	} 5,609		
- Employees in direct production			
- Other employees			
2. Other expenditures for employees			
3. Annual depreciation allowance		453	
4. Rental paid		385	
5. Sales & other indirect taxes (less subsidies) (not included in total)		[ 3,547 ]	
6. Other gross business income (before income tax)		3,839	

**SELECTED COMMENTARY**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Fr. 28,700
- Value added per employee: Fr. 28,970
- Annual wage per employee in direct production: Fr. 15,800 1/
- Variable input costs/gross production ratio: 57.0 % 2/
- Gross profit/gross production ratio: 15.9 %
- (at full capacity: 21.6 %)
- Level of production at break-even point is approximately 63 % of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN		
	Gross acquisition	Scrapped or sold
<b>1. Recent Expansion</b>		
From 19 to 19		
a. Total Investment ( )		
- Land		
- Land improvements		
- Buildings		
- Other construction work	No investment since 1960.	
- Machinery & equipment		
- Tools & instruments		
- Vehicles		
- Office furniture & fixtures		
c. Corresponding increase:	From 19	to 19
In no. of employees		
In annual gross production		

**2. Future Plan:** No future plans.

a. Investment proposed for the period 19 to 19

Total value ( ) \_\_\_\_\_ \$

Of which: - Mach. & equipment \_\_\_\_\_ \$

- Land improv. & bldg. \_\_\_\_\_

- Land \_\_\_\_\_

- Others \_\_\_\_\_

b. Net increase in no. of employees envisaged for the same period:

- Direct production: \_\_\_\_\_

- Auxiliary: \_\_\_\_\_

c. Purposes: \_\_\_\_\_

**VIII. SUPPLEMENT**

1/ The sum of wages, salaries and other expenditures for employees divided by the total number of employees.

2/ V. 2., 3., 5. and 6. are all included in variable cost; two thirds of VI.1. and 2. are regarded as fixed cost.

**MAJOR PRODUCTS:** Presees: Annual capacity is about 2,500 tone on one-shift operation.

**REPORTING UNIT:** An independent one-establishment enterprise with capital stock Frs. 9.5 million and employees 400 as of the end of October 1966. Founded in 1905.

**I. FIXED CAPITAL ASSETS** (end of 1966)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( Frs. 000 )	<u>15,316</u>	<u>5,143</u>
1. Land	614	614
2. Land improvements	-	-
3. Buildings	2,968	1,013
4. Other construction works	-	-
5. Machinery & equipment )	10,232	2,532
6. Tools & instruments )		
7. Vehicles	195	68
8. Office furniture & fixtures	734	343
9. Investment in progress	573	573

**DETAIL OF I.5** (No.)

	Total Bk value	Avr. Age	Oper. Cond.
a. Milling and boring machine (1) pin ø 180	682	4	A
b. Milling and boring machine (1) pin ø 130	269	11	A
c. Milling machine (1)	378	1	A
d. Drilling machine with numerical control (1)	129	1	A
e. Planing-machine (G.S.P.) (1)	476	5	A
f. Automatic lathe (1)	338	1	A
g. Vertical lathe (3)	450	6	A
h. Surface polisher (1)	357	2	A
i. Parallel lathe (27)	1,620	6	A
(Subtotal)	(4,699)		

**II. INVENTORIES**

(end of 1966)	Actual	Normal
<b>TOTAL VALUE</b> ( Frs. 000 )	<u>12,513</u>	<u>..</u>
1. Direct production materials	1,008	
2. Other input materials	-	
3. Work in process	8,796	
4. Finished products	2,709	

- Actual inventories of finished products 11.1 % of annual gross production (estimated from the figure in IV)  
- Seasonal variations: ..

Capacity of electr. motors: 600 KW

Total load, capacity of trucks: 10 t

- Installed capacity of electricity generation: 600 KW (no production in 1966). (a) and (f) imported; the rest domestically made.

**GENERAL CONDITIONS:** Transportation, public utilities and community facilities are fair.

**III. LABOUR** (1966 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	<u>400</u>	<u>-</u>	<u>-</u>
1. Direct production ( .. )	<u>270</u>	<u>-</u>	<u>-</u>
Annual total manhours (000)	(485)	(-)	(-)
<b>Operatives</b>			
a. Lathes	22	-	-
b. Milling and boring machines	40	-	-
c. Assembly and finishing	65	-	-
d. Tooling	27	-	-
e. Maintenance	6	-	-
<b>Other operatives</b>	110	-	-
2. Auxiliary activities ( .. )	130	-	-

**EDUCATIONAL BACKGROUND**  
(No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	
		Engi- ners	Other
TOTAL	18	4	378
<b>Management</b>	18	4	-
<b>Direct Production</b>			
Skilled	-	-	198
Semi-skilled	-	-	72
Unskilled	-	-	-
<b>Auxiliary Activities</b>			
Skilled	-	-	80
Semi-skilled	-	-	-
Unskilled	-	-	28

- Average working hours per annum per direct production workers: 1,796 hours.

- Proportion of motors occupied: 95 % on the first shift.

- Conventional process is employed. Degree of mechanization is high.

- Skilled workers in direct production work on: supervision of machines, milling, lathing, boring, assembly, finishing and electrical control.

IV. ANNUAL PRODUCTION (1966)				V. INTERMEDIATE INPUTS (1966)			
TOTAL VALUE OF PRODUCTION ( Frs. 000 ) 20,350				TOTAL VALUE OF CONSUMPTION ( Frs. 000 ) 9,821			
Product	Unit	Quantity Produced	Unit Value ( Frs. )	1. <u>Energy &amp; water: total</u>		1,198	
a. Presses of various types	} ton	2,045	9,731*	Quantity consumed		Unit value ( Frs. )	
b. Spare parts				Unit	Quantity	Unit value	
				- Electricity	000 kWh	113,200	100
				- Liquid fuel	000 litre	510	130
				2. <u>Direct production materials: total*</u> 7,555			
				a. Cast iron	ton	680	..
				b. Steel	ton	531	..
				c. Non-ferrous metals	ton	12	..
				d. Others	..	..	..
* An average for 75 different types.				* Including pecking materials.			
<b>CAPACITY OUTPUT:</b> 20 % higher than the 1966 actual production level. Additional manhours required: 48,000 on the first shift. Product mix is flexible (especially small presses "swan-neck" may be increased).				b. Work performed by sub-contractors ( ) -			
Unit value of product: Market value f.o.b. before sales tax. Unit value of material: Market prices c.i.f.				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> 194			
- Products, complete machines and parts, are partly exported.				6. <u>Material inputs for auxiliary activities</u> 425			
				7. <u>Non-factor service inputs: total</u> 449			
<b>VI. VALUE ADDED TOTAL 1966 ( Frs. 000 ) 10,529</b>				<b>RELATIVE COSTS</b>			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Frs. 37,896			
- Employees in direct production				- Value added per employee: Frs. 26,300			
- Other employees				- Annual wage per employee: " 17,265 1/2			
2. Other expenditures for employees				- Variable input costs/gross production ratio: 60.3 % 1/2			
3. Annual depreciation allowance				- Gross profit/gross production ratio: 9.9 %			
4. Rental paid (incl. royalties 538)				(at full capacity: 15.6 %)			
5. Sales & other indirect taxes (less subsidies) (not included in total) [3,550]				- Level of production at break-even point is approximately 75 % of the 1966 actual level.			
6. Other gross business income (before income tax) 2,096							
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>2. Future Plan</b>			
1. <u>Recent Expansion</u>				a. Investment proposed for the period 1966 to 1968			
From 1962 to 1966				Total value ( Frs. 000 ) 6,000			
a. Total Investment ( Frs. 000 )		Gross acquisition	Scrapped or sold	Of which: - Mach. & equipment 20 \$			
- Land		-	-	- Land improv. & bldg. 80			
- Land improvements		-	-	- Land -			
- Buildings	600	-	-	- Others -			
- Other construction work	-	-	-	b. Net increase in no. of employees envisaged for the same period:			
- Machinery & equipment	4,500	-	-	- Direct production:			
- Tools & instruments	-	-	-	- Auxiliary:			
- Vehicles	-	-	-	c. Purposes: Adaptation/expansion of the assembly shop for the production of larger presses; reduction of production costs and increase in productivity by improving the working conditions.			
- Office furniture & fixtures	-	-	-				
b. Corresponding increase:	From 1962 to 1966						
In no. of employees (disposal)	440	400					
In annual gross production (incl. tax) ( Frs. million )	15.6	24.2					
<b>VIII. SUPPLEMENT</b>							
1/ Wages and salaries plus "other expenditures for employees" divided by the total number of employees.							
2/ Variable costs include one half of wages and salaries plus "other expenditures for employees".							

**MAJOR PRODUCTS:** Diesel engines, power looms, agricultural implements, pumps and specialized machine tool castings. Annual capacity production is about Rs. 40 million worth of products on three shift basis.

**REPORTING UNIT:** A one-establishment enterprise, founded in 1940, with total assets Rs. 0.25 million (net worth Rs. 17 million) and 2,331 employees as of 1965.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. million)	15.06	7.75
1. Land (210,000 m <sup>2</sup> )	0.18	0.18
2. Land improvements	-	-
3. Buildings	2.66	1.30
4. Other construction works	0.71	0.71
5. Machinery & equipment }	10.26	4.97
6. Tools & instruments }	-	-
7. Vehicles	0.50	0.18
8. Office furniture & fixtures	0.73	0.44

DETAIL OF I.5 (No.)	Total Bk. value bef. depr.	Avr. Age (Yr.)	Depr. rate (\$)	196 replac. value
---------------------	----------------------------------	----------------------	-----------------------	-------------------------

Approximately 400 machines (mostly metal-working) are installed besides foundry equipment and power house equipment. The total investment made in plant and machinery is about Rs. 12 million in original (historical) prices.

In 1940's the production capacity of this enterprise was less than 20 % of the current level, with total number of employees 770.

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Rs. million)	10.39	+ 10 %
1. Direct production materials	7.16	+ 10
2. Other input materials		
3. Work in process	2.06	- 3
4. Finished products	1.17	+ 30

- Normal inventories of finished products 4.9 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 1,698 KW  
" " " furnaces: 615 KW  
Total load, capacity of trucks: 7 t

310 KW of thermo - electrical

capacity are installed.

The actual production is 8,338 KWH in 1965.

**EXTERNAL CONDITIONS:**

All external conditions are excellent.

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 2,331	1,677	431	223
1. Direct production ( all male)	1,377	361	183
Annual total manhours (000)	(3,780)	(570)	(490)
a. Machine shop	378	80	33
b. Assembly testing	386	85	36
c. Foundry and allied departments	433	114	69
d. Jigs and tools department	30	12	-
e. Repair and maintenance	150	70	45
2. <b>Auxiliary activities</b> ( all male )	300	70	40
Technical, managerial and other activities	300	70	40

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Other
8	50	270	2,003
<b>Management</b>			
8	10	70	12
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	-	395
<b>Semi-skilled</b>			
-	-	-	998
<b>Unskilled</b>			
-	-	-	528
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	40	200	20
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	-	50

- Annual hours worked per direct production workers: 2,518 hours.

- Degree of mechanisation is fair in all shops.

- Degree of automation poor in all shops.

- Skilled workers in direct production are engaged in pattern making, moulding,

grinding, drilling, tool making, tool grinding, boring, milling, etc.

In auxiliary activities they are administrative assistants, sales and purchase assistants, accountants, etc.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)				
TOTAL VALUE OF PRODUCTION (Re. million)			31.06	TOTAL VALUE OF CONSUMPTION (Re. million)			20.15	
Product	Unit	Quantity	Unit Value (Re.)	1. Energy & water: total	Quantity	Unit value	(Re.)	
a. Diesel engines	No.	12,048	2,000	- Water	Mill. lit.	125	600	
b. Power looms	No.	321	1,921	- Electricity	000 KWH	4,110*	100	
c. Agricultural implements	No.	4,716	70	- Coal	ton	2,501	50	
d. C.I. castings (meehanite)	ton	2,500	1,230	- Liquid fuel	000 litre	125	100	
e. Pumps	No.	3,000	385	*Of which 8.300 KWH is internally supplied.				
f. Machine tools castings	ton	1,323	984	2. Direct production materials: total			18.22	
g. Runners and risers (scraps)	"	120	300	a. Pig iron	ton	2,804	284	
h. Jobbing	Rs. mil.	0.45	..	b. Scrap	"	1,573	188	
				c. Steel bars	"	498	795	
				d. Others	Re. mil.	16.91	..	
<b>CAPACITY OUTPUT:</b> 30% higher than the actual 1965 production level with additional 390, 110 and 60 thousand man - hours on 1st, 2nd, and 3rd shift, respectively. The underutilization was due to unreliable supply of ancillary items (both in quantity and quality), as well as insufficient supply of labor and materials. The proportions of diesel engines and power looms can be changed between them.				3. <u>Finishing materials: total</u>				0.42
Unit value of product: Market value f.o.b before sales tax				Wooden materials				No. 12,369 34
Unit value of material: Market price c.i.f.				4. <u>Work performed by sub-contractors ( )</u>				-
- Product (a) and (b) are partly exported.				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>				0.12
- Production materials are all produced domestically and transported by railroad and road, with a freight rate of 5% each approximately.				6. <u>Material inputs for auxiliary activities</u>				0.10
				Stationery and printing				
				7. <u>Non-factor service inputs: total</u>				0.24
<b>VI. VALUE ADDED TOTAL 1965 (Re. million)</b>				<b>SELECTED COEFFICIENTS</b>				
1. Wages & salaries (before income tax)			10.91	- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 3,264				
- Employees in direct production			4.02	- Value added per employee: Rs. 4,680				
- Other employees			1.79	- Annual wage per employee in direct production: Rs. 2,110				
2. Other expenditures for employees			0.63	- Variable input costs/gross production ratio: 7%				
3. Annual depreciation allowance			1.36	- Gross profit/gross production ratio: 10% (at full capacity : 13.4%)				
4. Rental paid			-	- Level of production at break-even point is approximately 60 % of the 1965 actual level.				
5. Sales & other indirect taxes (less subsidies) (not included in total)			[ 1.63 ]					
6. Other gross business income (before income tax)			3.06					
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>2. Future Plan</b>				
1. <u>Recent Expansion</u>				a. Investment proposed for the period 1967 to 1971				
From 1963 to 1965				Total value (Re. million)				
a. Total Investment (Re. million)			5.59	Of which: - Mach. & equipment 60 \$				
- Land			0.10	- Land improv. & bldg. 20				
- Land improvements			1.41	- Land 1				
- Buildings			1.15	- Others (utility + services) 19				
- Other construction work			2.64	b. Net increase in no. of employees envisaged for the same period:				
- Machinery & equipment			0.11	- Direct production: 500				
- Tools & instruments			0.18	- Auxiliary: 150				
- Vehicles				c. Purpose: Introduction of new products (castings of machine tools such as vertical turret lathes), selective expansion of existing capacity (iron castings) and balanced expansion of capacity on the same location.				
- Office furniture & fixtures								
b. Corresponding increase:			From 1963 to 1965					
In no. of employees			1,950	2,331				
In annual gross production (Re. million)			20.12	31.06				
<b>VIII. SUPPLEMENT</b>				<b>Structure of liquid assets and current liabilities as of 1965: (Re. million).</b>				
Cash on hand and in bank		0.80	Taxes payable		0.02			
Accounts receivable		4.26	Accounts payable		6.30			
Loans and advances		1.47	Borrowing from commercial banks		1.40			

**MAJOR PRODUCTS:** Agricultural implements (trailers, harrows, ploughs, etc.) with an annual capacity of some Rs. 1.2 million worth products on a one-shift basis.

**REPORTING UNIT:** A small one-establishment enterprise with capital stock Rs. 0.5 million and 110 employees as of 1964. Founded in 1947.

**I. FIXED CAPITAL ASSETS**

	End of 1963 After Deprec.	End of 1964 After Deprec.
<b>TOTAL BOOK VALUE</b> (Rs. 000)	423	390
1. Land	37	37
2. Land improvements	-	-
3. Buildings	26	23
4. Other construction works	-	-
5. Machinery & equipment	268	250
6. Tools & instruments	-	-
7. Vehicles	92	80
8. Office furniture & fixtures	-	-

**DETAIL OF I.5 (No.)**

	Total Bk. value Rs. 000	Avg. Age (Yr.)	Deprec. rate (%)	1964 replaced value Rs. 000
a. Pressure drill (1)			A	
b. Circular shearing machines (2)			B	
c. Welding transformers (2)			B	
d. Bench grinder (1)			C	
e. Beading machine (1)			A	
f. Roller machine (1)			B	
g. Guillotine shears (2)	161,000	7	B	6
h. Wheel turning lathes (6)			B	175,000
i. Air compressor (1)			C	
j. Power presses (2)			B	
k. Spot welder (1)			B	
l. Oven for paints section (3)			A	
m. Honing machine (1)			B	

**II. INVENTORY**

	Actual	Normal
<b>TOTAL VALUE</b> (Rs. 000)	662	- 38 4
1. Direct production materials	176	- 25
2. Other input materials		
3. Work in process	29	- 69
4. Finished products	457	- 21

- Normal inventories of finished products 33 % of annual gross production

- Seasonal variations:

No seasonal variations.

Capacity of electr. motors: 31.5 KW

Total load, capacity of trucks: 4 t

(a),(b),(c),(d),(e) and (m) were

imported; all the others were

produced domestically.

**GENERAL CONDITIONS:**

All external conditions are

excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 110	110	-	-
1. Direct production (all male)	89	-	-
Annual total manhours (000)	(208)	( )	( )
a. Implements shop	56	-	-
b. Painting shop	10	-	-
c. Maintenance shop	23	-	-
2. Auxiliary activities (all male)	21	-	-
Managerial and technical control	21	-	-

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or	Other	Unskilled
1	15	93	-
-	5	-	-
-	3	22	-
-	-	24	-
-	-	40	-
2	7	-	-
-	-	-	-
-	-	-	7

- Actual hours worked per annum per direct production worker : 2,337 hours.

- Proportion of motors occupied: 89% for the 1st. shift.

**Technological features:**

a): Fabricates and assembles trailers, harrows and ploughs by casting and machining of components.

b): Here the implements are spray painted.

- Mechanisation: fair in all shops.

- Automation: fair in all shops.

- Skilled workers in direct production are machine operators, turners, formen, etc.

In auxiliary activities: stores and purchase assistants, administrative assistants, stenotypists, etc.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( Rs. 000 )		1,096		TOTAL VALUE OF CONSUMPTION ( Rs. 000 )		635.0	
Product	Unit	Quantity Produced	Unit Value ( Rs. )				
a. Trailers (all types)	No.	93	3,404	1. Energy & water: total			
b. Harrows (all types)	No.	167	1,358	19.6			
c. Ploughs (all types)	No.	16	2,000	Quantity consumed ( Rs. )			
d. Other miscellaneous agricultural tools	Rs.000	524	..	Unit summed ( Rs. )			
CAPACITY OUTPUT:				- Water 000 lit. 4,523 0.34			
10% higher than the 1964 actual production level, with sufficient supply of raw materials and 10,000 additional man-hours on 1st. shift.				- Electricity 000 kWh 39 208			
Product - mix is flexible.				- Coal ton 12 68			
Unit value of product: Market value f.o.b. before sales tax				- Firewood ton 51 101			
Unit value of material: Market price o.i.f.				- Petroleum 000 lit. 3.5 800			
- Production materials (b) and (c) are directly imported; (a), (d) and (e) contain a significant amount of imports; the others are produced domestically.				- Other fuel oils 000 lit. 3.81 1,670			
(a), (e) and (i) are transported by railroad only (freight rate 1%, 2% and 1%, respectively); (b) and (o) are transported by railroad, road and sea with 7% and 10% freight rate; (d), (f), (g), (i) and (k) are trans. by rail-road and road; freight rates are 1%, 4 1/2%, 3%, 3%, 1%, resp.				2. Direct production materials: total			
VI. VALUE ADDED TOTAL 1964 ( Rs. 000 ) 461				559.4			
1. Wages & salaries (before income tax)				a. Steel sheets ton 72 944			
- Employees in direct production 184				b. Copper sheets and wires ton 4 8,830			
- Other employees 84				c. Copper tubings m 320 14.2			
2. Other expenditures for employees 25				d. Brass sheets and pipes ton 0.5 9,280			
3. Annual depreciation allowance 33				e. Aluminium sheets and castings ton 0.5 4,260			
4. Rental paid (other capital than land + bldgs.) 1				f. Angle iron and flat iron ton 48 786			
5. Sales & other indirect taxes (less subsidies) (not included in total) [20]				g. Finished components Rs. 000 220 ..			
6. Other gross business income (before income tax) 134				h. Iron castings ton 23 377			
VII. EXPANSION: HISTORY & PLAN				i. Gum metal castings ton 3 8,354			
1. Recent Expansion				j. M.S. rods and bars ton 15 746			
From 19 62 to 19 64				k. Paints and varnishes ton 2.3 7,600			
a. Total Investment ( Rs. 000 ) 244				l. Gases m <sup>3</sup> 35 4.5			
- Land - -				m. Consumable stores Rs. 000 35 ..			
- Land improvements - -				n. Others " 78.4 ..			
- Buildings 12 1				3. Finishing materials: total			
- Other construction work - -				4.2			
- Machinery & equipment 197 5				Tape rolls, wood wool, packing paper, etc.			
- Tools & instruments 35 4				4. Work performed by sub-contractors ( ) -			
- Vehicles - -				5. Repairs & maintenance (materials & services purchased) 29.0			
- Office furniture & fixtures - -				Materials Rs. 16,000			
b. Corresponding increase: From 1962 to 19 64				Services Rs. 13,000			
In no. of employees 58 110				6. Material inputs for auxiliary activities 4.0			
In annual gross production ( Rs. million ) 0.52 1.10				Stationery and printing, administration charges, etc.			
VIII. SUPPLEMENT				7. Non-factor service inputs: total 18.0			
				Transportation, insurance and storage 16.0			
				Other services purchased 2.8			
				SELECTED COEFFICIENTS ( in 1964 replacement value )			
				- Mach., equip., / per employee in direct production on 1st shift: Rs. 3,270			
				- Value added per employee: Rs. 4,191			
				- Annual wage per employee in direct production: Rs. 2,067			
				- Variable input costs/gross production ratio: 70%			
				- Gross profit/gross production ratio: 12.2% (at full capacity : 12.0%)			
				- Level of production at break-even point is approximately 59 % of the 1964 actual level.			
				2. Future Plan : Details are not yet finalized.			
				a. Investment proposed for the period 19 to 19			
				Total value ( ) \$			
				Of which: - Mach. & equipment \$			
				- Land improv. & bldg.			
				- Land			
				- Others			
				b. Net increase in no. of employees envisaged for the same period:			
				- Direct production:			
				- Auxiliary:			
				c. Purposes:			



**MAJOR PRODUCTS:** Metal transforming machine tools. (Lathes, planers, band saws and rolled products etc.) Annual capacity of about Rs. 7 million worth of products on a two-shift operation.

**REPORTING UNIT:** A one-establishment enterprise with total assets Re. 12 million (net worth Rs. 4 million) and 535 employees as of 1964. Founded in 1933.

**I. FIXED CAPITAL ASSETS (end of 1964)**

TOTAL BOOK VALUE ( Re. 000 )	Before deprec.	After deprec.
	9,863	7,760
1. Land	1,017	1,017
2. Land improvements	-	-
3. Buildings	3,143	2,855
4. Other construction works	-	-
5. Machinery & equipment	5,346	3,660
6. Tools & instruments	61	45
7. Vehicles	68	42
8. Office furniture & fixtures	228	141

**DETAIL OF I.5 (No.)**

	Total Bk value After deprec.	Avr. Age (Yr.)	Oper. Cond. (%)	Depr. rate (%)	1964 replace value
a. Planers (7)	Rs. 3.66 million	15	A		Rs. 4.50 million
b. Shapers (3)		22	A		
c. Tool grinders (2)		15	A		
d. Hack saw 14" cap (1)		15	A		
e. Capstan lathes (2)		15	A		
f. Screwing machines (2)		15	A		
g. Turret lathe (1)		15	A	8%	
h. Lathe Herbert (1)		15	A		
i. All geared lathes (2)		2,13	A		
j. Pillar drill (1)		15	A		
k. Radial drill (1)		15	A		
l. Horizontal boring machines (2)		4	A		
m. Surface grinding machines (1)		4	A		
n. Sunderland gear planer (1)		15	A		

**II. INVENTORIES (end of 1964)**

TOTAL VALUE ( Re. 000 )	Actual	Normal
	3,312	-18
1. Direct production materials	1,749	-10
2. Other input materials		
3. Work in process	339	+7
4. Finished products	1,224	-34

- Normal inventories of finished products 13 % of annual gross production

- Seasonal variations:

No seasonal variations.

Capacity of electr. motors: 1,726 KW

Total load, capacity of trucks: - t

All machinery was imported except for planers and tool grinders (partly internally made) and shapers (partly domestically made).

Average age of machinery is about 14 years.

A major expansion took place in 1957 - 58, where Re. 0.8 million were invested for the production of planers, lathes and band saws.

**GENERAL CONDITIONS:** Transport and utilities are excellent; residential conditions are fair; health and educational facilities are poor.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 535	345	190	--
1. Direct production ( all male )	195	190	--
Annual total manhours (000)	(474)	(474)	( )
a. Machine shop	60	58	
b. Lathe assembly	52	52	
c. Planer assembly	33	30	
d. Rolling mill	25	25	
e. Paint shops	15	15	
f. Packing department	10	10	
2. Auxiliary activities (all male )	150	--	--
a. Administration and technical control	118		
i. Commercial department	32		

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	Other
Engi-ners			
Other			
<b>TOTAL</b>	5	29	501
<b>Management</b>			
-	3	2	-
<b>Direct Production</b>			
Skilled		5	110
Semi-skilled		12	251
Unskilled	2	5	-
<b>Auxiliary Activities</b>			
Skilled		5	2
Semi-skilled		-	-
Unskilled		-	-
-	-	-	138

- Actual hours worked per annum per direct production worker : 2,480 hours.

- Proportion of motors occupied : 8% in 1st shift and 80% in 2nd.

- **Technological features:**  
**Machine shop:** different castings constituting the various parts of the machines are turned and finished.

**Lathe assembly:** various lathe parts fabricated in the machine shop are assembled.

**Planer assembly:** different planer parts fabricated and finished in machine shop are put together.

- Mechanisation: fair in all shops.

- Automation: poor, except for the machine shop which is fair.

- **Skilled workers:** in direct production are turners, fitters, machine operators, etc.

In auxiliary production they are typists, stenographers, administrative assistants, accountants, sales and purchase assistants, etc.

**IV. ANNUAL PRODUCTION (1964)**TOTAL VALUE OF PRODUCTION ( Rs. 000 ) 5,927

Product	Unit	Quantity	Unit Price	Value (Rs.)
a. Lathes	No.	127		6,908
b. Planers	No.	141		16,672
c. Rolled products	ton	27		90,887
d. Band saws	Rs. 000	19		..
e. Others	Rs. 000	20		..
f. Scrap	Rs. 000	181		..
g. Defective cuttings	ton	82		311

**CAPACITY OUTPUT:**

20% higher than the actual 1964 production level with sufficient supply of raw and intermediate materials and additional 12,000 man-hours on 2nd and 3rd. shifts. Product - mix is flexible with regards to lathes, planer and rolled products.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Production materials (c), (d) and (e) are imported directly; freight cost is 10% of c.i.f. value.
- Material (f) contains a significant amount of imports; freight cost 7%. All the rest are produced domestically and delivered with freight cost 5% of c.i.f. value.

**V. INTERMEDIATE INPUTS (1964)**TOTAL VALUE OF CONSUMPTION ( Rs. 000 ) 3,431

Category	Unit	Quantity	Unit Price	Value (Rs.)
<b>1. Energy &amp; water: total</b> (Includes also 64 t. of coal at Rs. 71/t., 8 t. of charcoal at Rs. 253/t. and 38 t. of firewood Rs. 50/t.) <u>290</u>				
- Coke	ton	558		141
- Electricity	000 KWH	875		95
- Petroleum	Kl	1.35		332
- Furnace oil	Kl	446		213
- Lubricating oil	Kl	13		1,760
<b>2. Direct production materials: total</b> <u>2,812</u>				
a. Limestone	ton	91		42
b. Billets	ton	3,000		573
c. Ferro-silicon	"	5		1,052
d. Nickel	"	0.3		1,162
e. Ferro-manganese	"	9		15,850
f. Lead	"	4		2,731
g. Pig iron	"	498		296
h. Oxygen and acetylene	Cu. m.	910		6
i. Steel	ton	50		3,597
j. Consumable stores and others	Rs. 000	594		..
<b>3. Packaging materials: total</b> <u>193</u>				
- Wooden materials	Cu. m.	1,500		66
- Others	Rs. 000	94		..
<b>4. Work performed by sub-contractors</b> ( ) <u>..</u>				
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> <u>67</u>				
- Materials for repairs and maintenance		39		
- Services purchased		28		
<b>6. Material inputs for auxiliary activities</b> <u>26</u>				
- Stationery and printing				
<b>7. Non-factor service inputs: total</b> <u>43</u>				
- Transportation, insurance and storage		11		
- Other services purchased		32		
(incl. Rs. 18,000 of audit fees)				

**VI. VALUE ADDED TOTAL 1964 ( Rs. 000 ) 2,496**

1. Wages & salaries (before income tax)	
- Employees in direct production	600
- Other employees	606
2. Other expenditures for employees	338
3. Annual depreciation allowance	448
4. Rental paid (for land)	4
5. Sales & other indirect taxes (less subsidies) (not included in total)	[ 114 ]
6. Other gross business income (before income tax)	500

**SELECTED COEFFICIENTS (in 1964 replacement value)**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 34,000
- Value added per employee: Rs. 4,665
- Annual wage per employee in direct production: Rs. 1,558
- Variable input costs/gross production ratio: 65.7%
- Gross profit/gross production ratio: 8.5% (at full capacity : 12.7%)
- Level of production at break-even point is approximately 75% of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

Category	From 1962 to 1964	Gross % of acquisition + repair + maintenance
<b>1. Recent Expansion</b>		
From 1962 to 1964		
a. Total Investment ( Rs. 000 )	5,423	
- Land	144	-
- Land improvements	-	-
- Buildings	2,502	3
- Other construction work	-	-
- Machinery & equipment	2,620	5
- Tools & instruments	24	-
- Vehicles	54	2
- Office furniture & fixtures	79	-
c. Corresponding increase: <u>From 1962 to 1964</u>		
In no. of employees	472	535
In annual gross production ( Rs. million)	5.43	5.93

**2. Future Plan**

- a. Investment proposed for the period 1968 to 1971  
Total value (Rs. million) 2  
Of which: - Mach. & equipment 75 %  
- Land improv. & bldg. 25  
- Land -  
- Others -
- b. Net increase in no. of employees envisaged for the same period:  
- Direct production: 150  
- Auxiliary: 25
- c. Purposes: Largely balanced expansion of the existing capacity in the same location.

**VIII. SUPPLEMENT**

Structure of liquid assets and current liabilities as of 1964 (Rs. 000).

Cash on hand and in bank	54	Taxes payable	13
Accounts receivable	661	Accounts payable	1,116
Loans and advances	539		

India : 360 - ( 10 )

**MAJOR PRODUCTS:**—Sewing machines, complete and parts. Annual production capacity (one-shift operation) is about 13,500 complete machines (both hand-operated and foot-operated) 50,000 machine bodies and 35,000 machine stands, amounting altogether to some Rs. 3.5 million.

**REPORTING UNIT:**—A one-establishment enterprise founded in 1953, the original installed capacity being about one-half of the current level.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. 000 )	<u>453</u>	<u>383</u>
1. Land	5	5
2. Land improvements	-	-
3. Buildings	209	172
4. Other construction works	-	-
5. Machinery & equipment	187	165
6. Tools & instruments	-	-
7. Vehicles	52	41
8. Office furniture & fixtures	-	-

**DETAIL OF I.5 (No.)**

	Total Bk value bef. deprec.	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1965 replace value
a. Cupolas (2)		9	B		
b. Lathes (6)		8	B		
c. Planers (2)		10	B		
d. Jhapers (3)	Rs. 140 thousand	8	B	10%	Rs. 200 thousand
e. Drilling machines (4)		9	B		
f. Tool and cutter grinders (2)		3	A		
g. Moulding machines (3)		5	A		
h. Sand mixer (1)		8	B		

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Rs. 000 )	161	+ 9 %
1. Direct production materials	70	+ 23
2. Other input materials		
3. Work in process	35	+ 15
4. Finished products	56	- 10

- Normal inventories of finished products 2 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 87 KW

Total load, capacity of trucks: - t

Tool and cutter grinders are imported; all other items are domestically produced.

Average age of machinery is 8 years.

**GENERAL CONDITIONS:** Transport, electricity, water and residential conditions are excellent; recreational and educational conditions are fair.

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	150	-	-
1. Direct production ( all male )	130	-	-
Annual total manhours (000)	(327)	( )	( )
a. Foundry	51	-	-
b. Machine shop	21	-	-
c. Assembly shop	40	-	-
d. Repair and maintenance	18	-	-
2. Auxiliary activities ( all male )	20	-	-
Technical, managerial and other activities.	20	-	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Engl- RSSES	Other	Sr. High sch. or equiv.	Other	
				Univ. or higher
TOTAL	1	3	18	128
Management	1	1	2	2
Direct Production	-	-	10	40
Skilled	-	-	-	-
Semi-skilled	-	-	-	-
Unskilled	-	-	-	35
Auxiliary Activities	-	-	-	-
Skilled	2	6	-	-
Semi-skilled	-	-	-	-
Unskilled	-	-	-	6

- Actual hours worked per annum per direct production worker : 2,515 hours.

- Proportion of motors occupied: 90%.

- **Technological features:**  
b): Involves turning, drilling, grinding, shaping, planing, etc.

- Mechanization and automation poor in all shops.

- **Skilled workers** in direct production are turners, moulders, fitters, grinders etc.

In auxiliary activities they are administrative and sales and purchase assistants.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION ( Rs. 000 ) 2,578				TOTAL VALUE OF CONSUMPTION ( Rs. 000 ) 1,893			
Quantity Unit Pro- Value Unit used ( Rs. )				Quantity Unit con- Unit sumed ( Rs. )			
Product	Unit	used	( Rs. )		Unit	used	( Rs. )
a. Sewing machines (hand operated)	No.	8,238	88	1. <u>Energy &amp; water: total</u>			78
b. Sewing machines (foot operated)	No.	1,704	235	- Water	000 litre	430	..
c. Sewing machine bodies	No.	37,558	11.9	- Electricity	000 KWH	103	150
d. Sewing machine stands	No.	25,805	39	- Coal	ton	81	54
				- Fuel oil	litre	24,536	9.40
				- Lubricating oil		400	1.75
				2. <u>Direct production materials: total</u>			1,646
				a. Pig iron	ton	524	350
				b. Castings	"	628	456
				c. Finished components and accessoriss	Rs. 000	523	..
				d. Paints and varnishes	000 litre	21.5	8,000
				e. Consumable stores, sto.	Rs. 000	367	..
				3. <u>Packaging materials: total</u>			128
				- Paper and paper products	ton	7	2,240
				- Wooden materials	cu. m.	1,186	89.3
				4. <u>Work performed by sub-contractors (</u>			..
				5. <u>Repairs &amp; maintenance (materials</u> <u>&amp; services purchased)</u>			5
				6. <u>Material inputs for auxiliary activities</u>			7
				Stationery and printing			
				7. <u>Non-factor service inputs: total</u>			29
				Transportation, insurance and storage	23		
				Other services purchased	6		
<b>CAPACITY OUTPUT:</b> 35% higher than the 1965 actual production level with additional 12,000 annual man-hours on 1st. shift and sufficient supply of raw materials. The proportion of production of almost all products is flexible.				<b>REWORKED COMPONENTS</b> (in 1965 replacement value) - Mach., equip., instruments & tools/ per employee in direct production on 1st shift: Rs. 2,060 - Value added per employee: Rs. 4,570 - Annual wage per employee in direct production: Rs. 1,500 1/ - Variable input costs/gross production ratio: 70.7% 2/ - Gross profit/gross production ratio: 14% (at full capacity : 16.6%) - Level of production at break-even point is approximately 33 % of the 1965 actual level.			
Unit value of product: Market value f.o.b. before sales tax Unit value of material: Market price o.i.f. - All production materials are produced domestically; (a), (d) and (e) are transported by road, (b) by railroad and road and (c) by railroad only. Freight cost involved in the o.i.f. value of (a) and (b) is 8%; that of (d) 5%.				<b>VI. VALUE ADDED</b> TOTAL 1965 ( Rs. 000 ) 685 1. Wages & salaries (before income tax) 225 - Employees in direct production (..) - Other employees (..) 2. Other expenditures for employees 25 3. Annual depreciation allowance 74 4. Rental paid - 5. Sales & other indirect taxes (less subsidies) (not included in total) [ 53 ] 6. Other gross business income (before income tax) 361			
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>VIII. SUPPLEMENT</b>			
1. <u>Recent Expansion</u> From 19 62to 1965 a. Total Investment ( Rs. 000 ) 287 - Land - - Land improvements - - Buildings 116 8 - Other construction work - - Machinery & equipment 67 10 - Tools & instruments } - Vehicles } 104 8 - Office furniture & fixtures } b. Corresponding increase : In no. of employees From 1962 to 1965 In annual gross production ( Rs. 000 ) 1,650 2,578				2. <u>Future Plan</u> : No future plans. a. Investment proposed for the period 19 to 19 Total value ( ) \$ Of which: - Mach. & equipment \$ - Land improv. & bldg. - Land - Others b. Net increase in no. of employees envisaged for the same period: - Direct production: - Auxiliary: c. Purposes:			
1/ Total wages and salaries divided by total number of employees.				2/ 50 % of the wages and salaries are considered as variable costs.			

**MAJOR PRODUCTS:** Shearing machines and power presses. Annual capacity output is some 250 shearing machines and power presses on one shift operation.

**REPORTING UNIT:** A small one-establishment enterprise with total assets Rs. 6 million (net worth Rs. 3.5 million) and employess 92 as of 1964. Founded in 1957.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. million)	.77	.60
1. Land	.06	.06
2. Land improvements	-	-
3. Buildings	.28	.21
4. Other construction works	-	-
5. Machinery & equipment	.40	.32
6. Tools & instruments	.03	.01
7. Vehicles	-	-
8. Office furniture & fixtures	-	-

**DETAIL OF I.5 (No.)**

	Total Bk. value bef. depr.	Avr. Age (Yr.)	Depr. Oper. rate Cond. (%)
a. Lathes H.M.T. (15)	}	8	A 6
b. Radial drilling machines (2)		6	B "
c. Vertical boring machines (1)		..	8 " "
d. Hobbing machines (1)		7	" "
e. Planers (2)		6	" "

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Rs. million) (end of 1964)	.43	..
1. Direct production materials	}.32	..
2. Other input materials		
3. Work in process	-	..
4. Finished products	.11	..
- Normal inventories of finished products 7.3% of annual gross production		
- Seasonal variations: Nons.		

Capacity of electr. motors: 120 KW  
Total load, capacity of trucks: - t  
Machines (a) and (e) were domestically made. The rest imported.  
Average age of machinery is about 7 years.

**ENVIRONMENTAL CONDITIONS:**

Transport, utilities and community facilities, excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	92	-	-
1. Direct production ( all male )	79	-	-
Annual total manhours (000)	(186)	( )	( )
Manufacturing shop (machining and fabrication)			
2. Auxiliary activities ( all male )	13	-	-
Managerial and technical control			

**EDUCATIONAL BACKGROUND**

(No. of employees)			
Univ. or higher	Sr. High sch. or equiv.	Other	Other
Engi- neers			
<b>TOTAL</b>	2	9	81
<b>Management</b>			
-	2	-	-
<b>Direct Production</b>			
Skilled		4	16
Semi-skilled		1	19
Unskilled		-	-
-	-	-	39
<b>Auxiliary Activities</b>			
Skilled		4	-
Semi-skilled		-	-
Unskilled		-	-
-	-	-	7

- Actual hours worked per annum per direct production worker: 2,354 hours.  
- 95% of motors occupied during the 1st. shift.  
- Mechanisation and automation of manufacturing shop are rated as fair and poor, respectively.  
- Skilled workers in direct production are turners, machins operators and electricians.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)				
TOTAL VALUE OF PRODUCTION (Rs. million ) 1.51				TOTAL VALUE OF CONSUMPTION (Rs. million ) 1.25				
Product	Unit	Quantity Produced	Unit Value (Rs.)			Quantity consumed	Unit value (Rs.)	
a. Shearing machines	No.	97	9,165	1. Energy & water: total			.02	
b. Power presses	No.	94	6,585	- Electricity	000 KWH	112	133	
				- Gas	000 litres	3,882	.17	
				- Lubricating oil	litre	4,840	1.05	
				2. Direct production materials: total			.86	
				a. Castings	ton	486	78c	
				b. Special steels (H-S)	"	4	5,250	
				c. Steel shafts	"	134	948	
				d. Nuts, bolts, rivets, etc.	"	15	2,800	
				Electric motors	No.	170	800	
				f. Shearing blades	pair	97	928	
				g. Paints and varnishes	ton	4	6,500	
				h. Gum metal and other materials	000Rs.	40	..	
				3. Packaging materials: total			.04	
				Wooden materials (Rs. 286/ou.m.)	154 ou.m.			
				4. Work performed by sub-contractors ( .. )			.08	
				5. Repairs & maintenance (materials & services purchased)			.01	
				6. Material inputs for auxiliary activities			.01	
				Stationery and printing				
				7. Non-factor service inputs: total			.03	
				Of which transportation, insurance and storage (purchased separately)	Rs. 20,000			
CAPACITY OUTPUT:				SELECTED COEFFICIENTS				
30% higher than the 1964 actual production level with no additional man-hours, and with sufficient supply of production materials. Product-mix is <u>not</u> changeable.				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 5,443				
Unit value of product: Market prices f.o.b. before sales tax				- Value added per employee: Rs. 5,000				
Unit value of material: Market value o.i.f.				- Annual wage per employee in direct production: Rs. 1,646				
- Special steels (H - S) are imported and delivered by railroad, road and sea with freight rates 2%.				- Variable input costs/gross production ratio: 66.2 % 1/				
The rest are domestically made and delivered by railroad and road. Freight rates are 1% for (g), and 2% for the rest.				- Gross profit/gross production ratio: 8.6% (at full capacity : 14.3%)				
VI. VALUE ADDED TOTAL 1964 (Rs. million ) .46				- Level of production at break-even point is approximately 74 % of the 1964 actual level.				
1. Wages & salaries (before income tax)				VII. EXPANSION: HISTORY & PLAN				
- Employees in direct production			.13	Gross acquisition % of repair				
- Other employees			.05	1. Recent Expansion				
2. Other expenditures for employees			.08	From 1961 to 1964				
3. Annual depreciation allowance			.07	a. Total Investment (Rs. million)		.58		
4. Rental paid			-	- Land		.06		
5. Sales & other indirect taxes (less subsidies) (not included in total)			[ .09 ]	- Land improvements		-		
6. Other gross business income (before income tax)			.13	- Buildings		.25	5	
				- Other construction work		-		
				- Machinery & equipment		.25	15	
				- Tools & instruments		-		
				- Vehicles		.01	-	
				- Office furniture & fixtures		.01	-	
				c. Corresponding increase:		From 1961	to 1964	
				In no. of employees (direct prod. only)		57	79	
				In annual gross production (Rs. million)		.72	1.51	
				2. Future Plan : None.				
				a. Investment proposed for the period 19 to 19				
				Total value ( )				
				Of which: - Mach. & equipment \$				
				- Land improv. & bldg.				
				- Land				
				- Others				
				b. Net increase in no. of employees envisaged for the same period:				
				- Direct production:				
				- Auxiliary:				
				c. Purposes:				
VIII. SUPPLEMENT				Structure of liquid assets and current liabilities, (end of 1964; Rs. million)				
Cash on hand and in bank				.01	Taxes payables			.01
Marketable securities and bonds				.04	Accounts payables			.32
Accounts receivable				1.90	Short term borrowings (from National Small Industry Corp.)			2.00
Loans and advances				.93				
1/ Variable costs do not include wages and salaries.								

India : 360 - ( 12 )

**MAJOR PRODUCTS:** Agricultural implements (threshers, winnowers, cultivators and Persian wheels). Annual capacity outputs (one-shift operation) are about 1,600 units of threshers, winnowers and Persian wheels and 4,300 units of cultivators on one-shift.

**REPORTING UNIT:** A small one-establishment enterprise with total assets Rs. 0.4 million (net worth Rs. 0.2 million) and employees 70 as of 1965. Founded in 1954.

I. FIXED CAPITAL ASSETS		End of 1964 After deprec.	End of 1965 After deprec.	II. INVENTORY	
(Rs. 000)		69	63	(end of 1965)	
TOTAL BOOK VALUE	(Rs. 000)			TOTAL VALUE (Rs. 000)	Actual Normal
1. Land					155 .. \$
2. Land improvements		31	30	1. Direct production materials	} 86
3. Buildings				2. Other input materials	
4. Other construction works		31	28	3. Work in process	..
5. Machinery & equipment				4. Finished products	77
6. Tools & instruments		3	-	- Actual inventories of finished products 10.6% of annual gross production	
7. Vehicles		4	2	- Seasonal variations: ..	
8. Office furniture & fixtures			3		
		Total	Avr. Depr. 1964		
		Bk. value	Age Oper. rate		
		Act. Surv. (Yr.)	Cond. (\$)		
			replac. value		
<b>DETAIL OF I.5 (No.)</b>					
a. Lathee (4)				Capacity of electr. motors: 42 KW	
b. Power drille (1)				Total load, capacity of trucks: - t	
c. Grinder (1)				Machines were all domestically produced.	
d. Welding plant		28	10		
e. Power press (1)			10		
f. Cupola (1)			10		
g. Planer (1)			45		
				<b>GENERAL CONDITIONS:</b>	
				Transport, utilitise and community facilities, excellent.	

III. LABOUR (1965 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				- Actual hours worked per annum per direct production: 2,625 hours.
		70	-	-	Univ. or higher	Sr. High sch. or equiv.	Other	Others	
TOTAL EMPLOYED		70	-	-	Engi-ners				- Proportion of motors occupied: 90% on 1st. shift.
1. Direct production (all male)	Annual total manhours (000)	64	( )	( )	TOTAL	1	3	66	
a. Foundry		15			<b>Management</b>				- Technological features: a): Melting and moulding. d): Primary assembly.
b. Welding		7			-	1	1	-	
c. Machine shop		16			<b>Direct Production</b>				- Mechanisation and automation are generally fair except in (a) which has a poor rating.
d. Fitting		12			Skilled	-	-	20	
e. Assembly		14			Semi-skilled	-	-	30	
					Unskilled	-	-	14	
					<b>Auxiliary Activities</b>				- Skilled workers in direct production are those engaged in moulding, drilling, fitting, turning, etc. Those in auxiliary activities are in administration, sales and purchase, accounting, etc.
					Skilled	-	2	-	
					Semi-skilled	-	-	-	
					Unskilled	-	-	2	
2. Auxiliary activities (all male)		6							
	Technical and managerial								

IX ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION ( Rs. 000 )				TOTAL VALUE OF CONSUMPTION ( Rs. 000 )			
728				478			
Product	Unit	Quantity Produced	Unit Value (Rs.)		Quantity consumed	Unit value (Rs.)	
a. Threshers	No.	522	347	1. <u>Energy &amp; water: total</u>			21
b. Winnowers	"	838	218	- Electricity	000 KWH	26	110
c. Cultivators	"	4,274	42.5	- Coal	ton	205	70
d. Persian wheels	"	240	760	- Gas	000 Rs.	4	..
				2. <u>Direct production materials: total</u>	414		
				a. Pig iron	ton	140	375
				b. Iron and steel sheets	"	155	900
				c. Ball bearings	No.	3,667	6
				d. Nuts, bolts, rivets, and washers	ton	33	2,500
				e. Consumable goods	000 Rs.	118	..
				3. <u>Finishing materials: total</u>	—		
				4. <u>Work performed by sub-contractors (</u>	—		
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>	24		
				6. <u>Material inputs for auxiliary activities</u>	2		
				Stationery and printing			
				7. <u>Non-factor service inputs: total</u>	17		
				Of which transportation, insurance and storage (purchased separately) Rs. 12,000.			
<b>CAPACITY OUTPUT:</b>							
Just about the same as the 1964 actual production level.							
Unit value of product: Market value f.o.b. before sales tax							
Unit value of material: Market price o.i.f.							
- Pig iron and iron and steel sheets are domestically produced but has considerable amounts of import contents. They are delivered by railroad and road with freight cost 10% and 7% of o.i.f. value, respectively. Ball bearings and nuts, bolts, rivets, and washers are all of domestic origin and delivered by railroad and road with freight rates 4% & 3%, respectively.							
<b>VI. VALUE ADDED</b>				<b>SELECTED COEFFICIENTS</b>			
TOTAL 1965 ( Rs. 000 )				250			
1. Wages & salaries (before income tax)			110	- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 778 <sup>1/</sup>			
- Employees in direct production			{ .. }	- Value added per employee: Rs. 3,571			
- Other employees			{ .. }	- Annual wage per employee in direct production: Rs. 1,571 <sup>2/</sup>			
2. Other expenditures for employees			15	- Variable input costs/gross production ratio: 71.8%			
3. Annual depreciation allowance			3	- Gross profit/gross production ratio: 16.8%			
4. Rental paid			-	- Level of production at break-even point is approximately 40 % of the 1965 actual level.			
5. Sales & other indirect taxes (less subsidies) (not included in total)			[ 15 ]				
6. Other gross business income (before income tax)			122				
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>							
1. <u>Recent Expansion</u>				2. <u>Future Plan</u> : None.			
From 1963 to 1965				a. Investment proposed for the period 19 to 19			
a. Total Investment ( Rs. 000 )		9		Total value ( )			
- Land		-	-	Of which: - Mach. & equipment		\$	
- Land improvements		-	-	- Land improv. & bldg.			
- Buildings		-	-	- Land			
- Other construction work		-	-	- Others			
- Machinery & equipment		8	10	b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments		-	-	- Direct production:			
- Vehicles		-	-	- Auxiliary:			
- Office furniture & fixtures		1	3	c. Purposes:			
b. Corresponding increase:							
In no. of employees		58	70				
In annual gross production ( Rs. 000 )		575	728				
<b>VIII. SUPPLEMENT</b>				Structure of liquid assets and short term liabilities (end of 1965; Rs. 000).			
Cash on hand and in bank		50	Taxes payable		30		
Accounts receivable		141	Accounts payable		74		
			Short term borrowings from commercial banks		69		
<sup>1/</sup> Numerator is the replacement value in 1965.							
<sup>2/</sup> Wages and salaries divided by total number of employees.							
<sup>3/</sup> 80% of wages and salaries considered as variable costs.							



**MAJOR PRODUCTS:** Dies, jigs, fixtures, surface grinders and other special machines. Annual capacity output is about Rs. 1.5 million worth of the above products on two-shift operation.

**EMPLOYING UNIT:** A small one-establishment enterprise with total assets Rs. 1.1 million (net worth Rs. 0.9 million) and employees 67 as of 1965. Founded in 1961.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. 000)	<u>741</u>	<u>480</u>
1. Land (rented)	-	-
2. Land improvements	-	-
3. Buildings (rented)	-	-
4. Other construction works	53	38
5. Machinery & equipment	612	379
6. Tools & instruments	-	-
7. Vehicles	17	10
8. Office furniture & fixtures	59	53

DETAIL OF 5.5 (No.)	Total Bk value Rs. 000.	Avg. Age (Yr.)	Oper. Cond.	1964 replac. value
a. Lathes (4)	612	7	B	6.6
b. Capstan lathes (2)		"	A	"
c. Vertical milling machines (4)		"	"	"
d. Horizontal milling machines (2)		"	A	"
e. Surface grinders (7)		"	"	"
f. Cylindrical grinder (1)		"	"	"
g. Internal grinder (1)		"	"	"
h. Jig borer (1)		"	"	"
i. Shapers (2)		"	B	"
j. Radial drilling machines (2)		"	C	"
k. Drilling machines (4)		"	B	"
l. Electric heat treatment furnaces (2)		"	A	"

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Rs. 000)	<u>230</u>	<u>+ 33 %</u>
1. Direct production materials	71	+123
2. Other input materials	59	- 15
3. Work in process	73	- 30
4. Finished products	27	+ 77

- Normal inventories of finished products 4.3% of annual gross production

- Seasonal variations: None.

Capacity of electr. motors: 84 KW

Total load, capacity of trucks: 2 t

(a), (i), (j) and 4 of (e) were

domestically made.

The rest imported.

**GENERAL CONDITIONS:**

Transportation and utilities, excellent. Residential and educational facilities, fair. Health and recreational facilities, poor.

**III. LABOUR** (1965 average)

	1965 average		
	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	<u>40</u>	<u>27</u>	<u>-</u>
1. Direct production (all male)	<u>30</u>	<u>27</u>	<u>-</u>
Annual total manhours (000)	<u>(70)</u>	<u>(70)</u>	<u>( )</u>
a. Machine shop	10	10	
b. Tool room	11	10	
c. Paint shop	2	2	
d. Carpentry shop	2	2	
e. Assembly shop	5	3	
2. Auxiliary activities (all male)	<u>10</u>	<u>-</u>	<u>-</u>
Management and technical control			

**EDUCATIONAL BACKGROUND** (No. of employees)

	Univ. or higher		Sr. High sch. or eqv.	
	Engl.	Other	Engl.	Other
<b>TOTAL</b>	2	2	18	45
Management	2	2	2	-
Direct Production	-	-	12	8
Skilled	-	-	2	19
Semi-skilled	-	-	-	16
Unskilled	-	-	-	-
Auxiliary Activities	-	-	2	-
Skilled	-	-	-	-
Semi-skilled	-	-	-	-
Unskilled	-	-	-	2

- Actual hours worked per annum per direct production worker : 2,456 hours.

- Proportion of motors occupied : 95% on both shifts.

**Technological features:**

- Machining of components.
- Maintenance of tools.
- Painting of components.
- Wood working.
- Final assembly of various components.

- Mechanisation is excellent in (b), fair in (a) and poor in all others. Automation is generally poor; shop (c) is outmoded.

- **Skilled workers** in direct production are die-makers, carpenters, inspectors, painters, etc.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION (Rs. 000 )				TOTAL VALUE OF CONSUMPTION (Rs. 000 )			
1,127				421			
Product	Unit	Quantity	Unit Value (Rs.)		Quantity	Unit Value (Rs.)	
a. Disc	No.	90	4,182	1. Energy & water: total			27
b. Jigs and fixtures	"	150	2,939	- Electricity	000 KWH	113	140
c. Surface grinders	"	40	4,437	- Other fuel oils	Kilo lit.	9	128
d. Other special machines	000 Rs.	132	..	- Lubricating oil	"	4	1,050
				- Water	000 K.L.	2.28	220
				2. Direct production materials: total			427
				a. Steel	ton	23.6	9,423
				b. Other materials	000 Rs.	75	..
				c. Consumable stores	000 Rs.	130	..
<b>CAPACITY OUTPUT:</b>				3. Purchasing materials: total			
30% higher than the 1964 actual production level with additional man-hours 2,100 on 1st. shift, if sufficient demand for the products and supply of materials are assumed. Inadequacy in skilled labor is a cause of the underutilisation. Proportion of production of disc and jigs is changeable.				11			
Unit value of product: Market price f.o.b. before sales tax				4. Work performed by sub-contractors ( )			
Unit value of material: Market price o.i.f.				5. Repairs & maintenance (materials & services purchased)			
- Steel is imported and delivered by railroad, road and river with freight rate 10% of o.i.f. value.				21			
				6. Material inputs for auxiliary activities			
				Stationery and printing			
				7. Non-factor service inputs: total			
				2			
<b>VI. VALUE ADDED</b>				<b>SELECTED COEFFICIENTS</b>			
TOTAL 1965 (Rs. 000 )				636			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 20,400 (Rs. 33,300 1/2)			
- Employees in direct production				191			
- Other employees				116			
2. Other expenditures for employees				53			
3. Annual depreciation allowance (incl. royalties)				61			
4. Rental paid (land and buildings) Rs. 3,000				12			
5. Sales & other indirect taxes (less subsidies) (not included in total)				[ 20 ]			
6. Other gross business income (before income tax)				203			
				- Value added per employee: Rs. 9,493			
				- Annual wage per employee in direct production: Rs. 3,351			
				- Variable input costs/gross production ratio: 58.0%			
				- Gross profit/gross production ratio: 18.0%			
				(at full capacity : 23.5%)			
				- Level of production at break-even point is approximately 57 % of the 1965 actual level.			
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>				<b>2. Future Plan</b>			
1. Recent Expansion				a. Investment proposed for the period 1965 to 1968			
From 1963 to 1965				Total value (Rs. million )			
a. Total Investment (Rs. 000 )				1.2			
- Land				Of which: - Mach. & equipment			
- Land improvements				75 %			
- Buildings				- Land improv. & bldg.			
- Other construction work				25			
- Machinery & equipment				- Land			
- Tools & instruments				-			
- Vehicles				- Others			
- Office furniture & fixtures				-			
b. Corresponding increase:				b. Net increase in no. of employees envisaged for the same period:			
In no. of employees				- Direct production: 25			
In annual gross production				- Auxiliary: 10			
				Introduction of new products (automatic surface grinders, die cast piece parts, die sets, door bells and bushings) and a new process (electrical discharge machining); overhauling the machine shop; and largely balanced expansion of existing capacity at a new site.			
<b>VIII. SUPPLEMENT</b>				<b>Structure of liquid assets and current liabilities (end of 1965; Rs. 000).</b>			
Cash on hand and in bank				40			
Accounts receivable				333			
Loans and advances				25			
				Taxes payable			
				3			
				Accounts payable			
				177			
1/ Using the 1964 replacement value.							

**MAJOR PRODUCTS:** Lathes : Annual capacity output is 140 lathes on one shift.

**REPORTING UNIT:** A small one-establishment enterprise with total assets some Rs. 0.1 million. (net worth Rs. 0.2 million) and employees 44 as of 1964. Founded in 1957.

**I. FIXED CAPITAL ASSETS** (end of 1964)

TOTAL BOOK VALUE (Rs. 000 )	Before deprec.	After deprec.
	784	341
1. Land	-	Negligible
2. Land improvements	-	-
3. Buildings	165	134
4. Other construction works	-	-
5. Machinery & equipment	600	192
6. Tools & instruments	-	-
7. Vehicles	14	11
8. Office furniture & fixtures	5	4

**DETAIL OF I.5 (No.)**

	Total Bk. value	Avg. Age	Oper. Cond.	Depr. rate (%)	1964 replace value
a. Lathe HT (1)		2	A	10	20
b. Lathes (11)		5,6	A,B	"	125 "
c. Hobbing machines (1)		4	A	"	45
d. Cylindrical grinder (1)	600	1	A	"	35
e. Drilling machines (1)		6	A	"	10
f. Planers (3)		6,10	B	"	90
g. Shapers (4)		1,6	A,B	"	72

■ The imported laths (one) costs about Re. 25,000.

**II. INVENTORY**

(end of 1964)	Actual	Normal
TOTAL VALUE ( Re. 000 )	42.5	- 1.5
1. Direct production materials	40.0	-
2. Other input materials	-	..
3. Work in process	-	..
4. Finished products	2.5	-20

- Normal inventories of finished products 0.4 % of annual gross production

- Seasonal variations: None

Capacity of electr. motors: 86 KW

Total load, capacity of trucks: - t

10 of (b) are internally made, (a), (f) and (g) were domestic make. The rest were imported.

Average age of machinery is 5 years.

**GENERAL CONDITIONS:**

Transport, utilities and community facilities, excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED	44	-	-
1. Direct production ( all male )	37	-	-
Annual total manhours (000)	( 98 )	( )	( )
a. Machine shop	25	-	-
b. Fitting shop	12	-	-
2. Auxiliary activities ( all male )	7	-	-
Technical and managerial control			

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Others
1	2	32	9
<b>Management</b>			
1	2	1	-
<b>Direct Production</b>			
<b>Skilled</b>			
-	-	30	-
<b>Semi-skilled</b>			
-	-	-	2
<b>Unskilled</b>			
-	-	-	5
<b>Auxiliary Activities</b>			
<b>Skilled</b>			
-	1	-	-
<b>Semi-skilled</b>			
-	-	-	-
<b>Unskilled</b>			
-	-	-	2

- Actual hours worked per annum per direct production worker : 2,649 hours.

- 92 % of motors occupied during the 1st. shift.

- Mechanisation and automation are generally fair.

- Skilled workers in direct production: turners, fitters, and machine operators.

IV. ANNUAL PRODUCTION (1964)				V. INTERMEDIATE INPUTS (1964)			
TOTAL VALUE OF PRODUCTION ( Re. 000 ) <u>531</u>				TOTAL VALUE OF CONSUMPTION ( Re. 000 ) <u>237</u>			
Product	Unit	Quantity Produced	Unit Value ( Re. )	1. <u>Energy &amp; water: total</u>		<u>11</u>	
Lathes	No.	114	4,656	- Electricity	000 KWH	53.4	110
				- Fuel oils	Kilo litres	9	362
				- Water	000 K.l.	18.8	80
				2. <u>Direct production materials: total</u>		<u>186</u>	
				a. Iron castings	ton	71.5	780
				b. Steel	"	10.0	5,540
				c. Brass castings	"	1.2	12,000
				d. Paints and chemicals	"	2.5	6,000
				e. Motors and other electricals	Re.000	23	..
				f. Consumable stores	Rs.000	22	..
				3. <u>Finishing materials: total</u>		<u>5</u>	
				Paper and paper products			
				4. <u>Work performed by sub-contractors ( )</u>		<u>-</u>	
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>		<u>20</u>	
				6. <u>Material inputs for auxiliary activities</u>		<u>8</u>	
				Stationary and printing Rs. 2,000 Administration Rs. 6,000			
				7. <u>Non-factor service inputs: total</u>		<u>7</u>	
				Of which transportation, insurance and storage (purchased separately) Rs. 3,000			
* The prices of lathes vary according to size and capacity. Unit price given here is obtained as a weighted average of various prices.							
<b>CAPACITY OUTPUT:</b>							
20% higher than the 1964 actual production level with additional man-hours 12,000 on 1st. shift. The underutilisation is due to insufficient supply of materials arising from inadequate import licence. Various types of lathes can be made on the present facility.							
Unit value of product: Market value f.o.b. before sales tax							
Unit value of material: Market price :i.f.							
- Steel, brass castings, paints and chemicals are imported. Steel is delivered by railroad, road and river with freight rate 2%. Iron castings are domestically made and delivered by railroad with freight rate 2%.							
VI. VALUE ADDED TOTAL 1964 ( Re. 000 ) <u>294</u>				SELECTED COEFFICIENTS			
1. Wages & salaries (before income tax)				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 16,216 (Rs. 10,720 1/2)			
- Employees in direct production		83		- Value added per employee: Rs. 6,682			
- Other employees		16		- Annual wage per employee in direct production: Rs. 2,243			
2. Other expenditures for employees		9		- Variable input costs/gross production ratio: 53.7%			
3. Annual depreciation allowance		40		- Gross profit/gross production ratio: 27.5% (at full capacity : 30.6 %)			
4. Rental paid		-		- Level of production at break-even point is approximately 41 % of the 1964 actual level.			
5. Sales & other indirect taxes (less subsidies)		- 2/					
6. Other gross business income (before income tax)		146					
VII. EXPANSION: HISTORY & PLAN							
1. <u>Recent Expansion</u>				2. <u>Future Plan</u>			
From 1962 to 1964				a. Investment proposed for the period 1964 to 1966			
a. Total Investment ( Re. 000 )		<u>307</u>		Total value ( Re. 000 ) <u>400</u>			
- Land		-		Of which: - Mach. & equipment 90 %			
- Land improvements		-		- Land improv. & bldg. -			
- Buildings		165	6	- Land -			
- Other construction work		-		- Others 10			
- Machinery & equipment		126	3	b. Net increase in no. of employees envisaged for the same period:			
- Tools & instruments		-		- Direct production: -			
- Vehicles		14	-	- Auxiliary: -			
- Office furniture & fixtures		2	-	c. <u>Purpose:</u> Introduction of new products (more sophisticated machines like all geared head stock lathes); overhauling and expanding machine shop assembly section; and largely balanced expansion of existing capacity in the same location.			
b. Corresponding increase:		<u>From 19</u>	<u>to 19</u>				
In no. of employees		37	44				
In annual gross production ( Re. 000 )		448	531				
VIII. SUPPLEMENT				Structure of liquid assets and current liabilities; (end of 1964; Rs. 000)			
Cash on hand and in bank		9		Accounts payable		157	
Marketable securities and bonds		10		Short-term loans from bank		50	
Accounts receivables		20					
1/ Using the 1964 replacement value.							
2/ The selling of this enterprise's products is done mostly through registered dealers and hence no sales tax is involved.							

**MAJOR PRODUCTS:** Metal structural (those for buildings and transmission towers), storage vessels, electric hoists, band saws, sugar machinery and paper machinery. Annual capacity output amounts to Re. 12 million worth of structurals and machinery on a one-shift operations.

**REPORTING UNIT:** A one-establishment enterprise, with 863 employees as of 1965; founded in 1942.

**I. FIXED CAPITAL ASSETS**

(Rs. million)	End of 1964 After deprec.	End of 1965 After deprec.
<b>TOTAL BOOK VALUE</b>	1.65	1.54
1. Land	0.65	0.65
2. Land improvements	-	-
3. Buildings	0.14	0.13
4. Other construction works	-	-
5. Machinery & equipment	0.65	0.58
6. Tools & instruments	-	-
7. Vehicles	0.21	0.18
8. Office furniture & fixtures	-	-

**DETAIL OF I.5 (No.)**

	Total Bk value after deprec.	Avg. Age (Yr.)	Oper. Cond.	Depr. rate (%)	1965 replac. value
a. Welding sets (20)			A		
b. Transformers (19)			A		
c. Cutting machines (6)			B		
d. Punching machines (3)			B		
e. Planing machines (5)			A+B		
f. Rolling and bending machines (5)	Rs. 0.65 mill.	5-20 years	B+C	6%	Rs. 0.75 mill.
g. Drilling machines (43)			B+C		
h. Chipping hammers (13)			A+B		
i. Riveting hammers (29)			B		
j. Grinders (18)			A+B		
k. Electric hoists and cranes (3)			B+C		

**II. INVENTORIES**

(end of 1965)	Actual	Normal
<b>TOTAL VALUE (Rs. million)</b>	4.50	- 30 %
1. Direct production materials	2.05	+ 7
2. Other input materials		
3. Work in process	2.40	- 43
4. Finished products	0.05	- 20

- Normal inventories of finished products 0.4 % of annual gross production

- Seasonal variations:

No seasonal variations.

Capacity of electr. motors: 1,440 KW

Total load, capacity of trucks: - t

Part of (b), (g) to (j) were of local makes; (k) and part of (a) internally built; the rest imported. The present capacity of the enterprise is about 2.5 times higher than the original level in the 1940's.

**GENERAL CONDITIONS:**

Transport, utilities and community facilities are excellent.

**III. LABOUR (1965 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	863		
1. Direct production ( all male )	608		
Annual total manhours (000)	(1,476)	( )	( )
a. Machine shop	256		
b. Fabrication shop	135		
c. Cutting and welding shop	160		
d. Finishing and packing shop	58		
2. Auxiliary activities ( all male )	254		
Technical and managerial control (including electricians and watchmen)	254		

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher	Sr. High sch. or equiv.	Other	Others
Engrs			
<b>TOTAL</b>	15	10	252
Management	15	-	-
Direct Production	-	-	220
Skilled	-	-	24
Semi-skilled	-	-	115
Unskilled	-	-	250
Auxiliary Activities	-	-	7
Skilled	-	10	25
Semi-skilled	-	-	7
Unskilled	-	-	127

- Average hours worked per annum per direct production worker: 2,420 hours.

- Proportions of motors occupied: 98 %.

**Technological features:**

- a) Turning, grinding and machining of various components of the products.
- b) Fabrication of various products.
- c) Cutting of heavy girders, angles, channels, etc. by gas cutters; welding of the structures.
- d) Spray painting of the various products; packing.

- Mechanisation is fair in all shops; automation is generally poor (in the cutting and welding section, outmoded).

- Skilled workers in direct production are machine operators, turners, fitters, etc.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION (Rs. million)		10.19		TOTAL VALUE OF CONSUMPTION (Rs. million)		5.27	
<u>Product</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Value</u>				
		<u>Prod.</u>	<u>(Rs.)</u>				
a. Fabricated structurals for buildings and transmission towers	ton	2,413	1,255	1. <u>Energy &amp; water: total</u> 0.145			
b. Storage vessels	ton	130	2,956	(including 7 kl of lubrlcoating oils at Rs. 1.4/l)			
c. Sugar refining machinery	No.	9	93,820	Quantity Unit value			
d. Electric hoists	No.	96	6,347	Unit cum- (Rs.)			
e. Band saws	No.	82	2,901	- Water	million litres	33.30	330
f. Castings	ton	580	1,707	- Electricity	000 kWh	545	112
g. Others	Rs. million	4.10	..	- Coal	ton	80	124
				- Coke	ton	206	169
				- Firewood	ton	151	75
				- Fuel oils	000 litres	12.60	584
				2. <u>Direct production materials: total</u> 4.795			
				a. Joists	ton	930	788
				b. Angle and tees	"	580	786
				c. Bare and rods	"	40	756
				d. Channels	"	367	788
				e. Plates and sheets	"	1,121	862
				f. Bolts, nuts and rivets	"	42	2,129
				g. Welding electrodes	000 No.	329	167
				h. Plg iron	ton	462	293
				1. Ball bearings	No.	3,173	19
				j. Parts and accessories	Rs. million	1.93	..
				k. Oxygen and acetylene	000 cu.m.	8	3,800
				1. Paints and varnishes	ton	4.25	5,329
				3. <u>Finishing materials: total</u> 0.073			
				- Wooden materials	cu.m.	25	312
				- Wire nails	ton	4.2	2,125
				- Others	000 Re.	57	..
				4. <u>Work performed by sub-contractors</u> ( )			
				5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u>			
				6. <u>Material inputs for auxiliary activities</u> 0.061			
				- Stationery and printing 0.029			
				- Administration 0.032			
				7. <u>Non-factor service inputs: total</u> 0.196			
				- Transportation, insurance and storage 0.162			
				- Other services purchased 0.034			
				6. <u>Material inputs for auxiliary activities</u> 0.061			
				- Stationery and printing 0.029			
				- Administration 0.032			
				7. <u>Non-factor service inputs: total</u> 0.196			
				- Transportation, insurance and storage 0.162			
				- Other services purchased 0.034			
CAPACITY OUTPUT:							
10 % higher than the actual 1965 production level with sufficient labour supply on the first shift (additional 97,000 manhours). Product mix is flexible with regard to fabricated structurals, electric hoists and castings.							
Unit value of product: Market value f.o.b. before sales tax							
Unit value of material: Market price c.l.f.							
- V 2: Part of (e), (i) and (j) are directly imported; the rest also contains a significant amount of imported products.							
Delivery by road and railroad with freight rates ranging from 1 to 3 %, except (f), for which the freight cost is 6 % of the c.l.f. value.							
VI. VALUE ADDED		TOTAL 1965 (Rs. million)		SELECTED CONVEYANCE (in 1965 replacement value)			
		4.92		- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 1,230			
1. Wages & salaries (before income tax)				- Value added per employee: Rs. 5,701			
- Employees in direct production		2.50		- Annual wage per employee in direct production: Rs. 4,105			
- Other employees		1.13		- Variable input costs/gross production ratio: 73.7 %			
2. Other expenditures for employees		0.30		- Gross profit/gross production ratio: 8.5 %			
3. Annual depreciation allowance		0.10		- (at full capacity: 10.2 %)			
4. Rental paid (buildings)		0.02		- Level of production at break-even point is approximately 68 % of the 1965 actual level.			
5. Sales & other indirect taxes (less subsidies) (not included in total)		[0.29]					
6. Other gross business income (before income tax)		0.87					
VII. EXPANSION: HISTORY & PLAN							
1. <u>Recent Expansion</u>		Gross equi- sition		2. <u>Future Plan</u>			
From 1963 to 1965				a. Investment proposed for the period 1965 to 1968			
a. Total Investment (Rs. million)		0.79		Total value (Rs. million)			
- Land		0.46		1.5			
- Land improvements		-		Of which: - Mach. & equipment 10 %			
- Buildings		0.02		- Land improv. & bldg. 90			
- Other construction work		-		- Land -			
- Machinery & equipment		0.16		- Others -			
- Tools & instruments		-		b. Net increase in no. of employees envisaged for the same period:			
- Vehicles		0.15		- Direct production: 30			
- Office furniture & fixtures		-		- Auxiliary: 15			
b. Corresponding increase:		From 1963 to 1965		c. Purposes: Largely balanced expansion of existing capacity in the same location.			
In no. of employees		605					
In annual gross production (decrease)		863					
		- 10 %					
VIII. SUPPLEMENT							

**MAJOR PRODUCTS:** Pumps and switches. Capable of producing annually 1,500 complete power-driven pumps (horizontal and vertical spindle) and 500 switches on one shift operation.

**REPORTING UNIT:** An enterprise with total assets Rs. two million (of which more than 90 % is net worth) and employees 190 as of 1964. Founded in 1950. The enterprise has a separately located headquarters.

I. FIXED CAPITAL ASSETS		End of 1963	End of 1964	II. INVENTORIES	
		After deprec.	After deprec.	(end of 1964)	
<b>TOTAL BOOK VALUE</b>	( 000 Rs. )	1,387	1,272	<b>TOTAL VALUE ( 000 Rs. )</b>	429 + 10 %
1. Land (10 acres)		34	34	1. Direct production materials	407 + 10
2. Land improvements		-	-	2. Other input materials	
3. Buildings (total floor space: 2 acres)		173	166	3. Work in process	5 + 30
4. Other construction works		-	-	4. Finished products	17 -
5. Machinery & equipment		1,070	970	- Normal inventories of finished products	1.3 % of annual gross production
6. Tools & instruments		23	22	- Seasonal variations: ..	
7. Vehicles		-	-		
8. Office furniture & fixtures		87	80		
		<b>Total Bk. value</b>	<b>Avr. Age Oper. rate</b>	<b>1964 replace value</b>	
<b>DETAIL OF I.5 (No.)</b>		<b>After deprec. (end of 1963)</b>	<b>(Yr.) Cond. (%)</b>		
a. Lathe (12)		7	A 10	180	
b. Drilling machines (8)		7	A 10	100	
c. Grinding machines (6)		6	A 10	90	
d. Shaping machines (2)		8	B 10	24	
e. Boring machines (4)		6	A 10	400	
f. Milling machines (3)	850	9	A 10	150	
g. Shot Blasting machine (1)		10	B 10	15	
h. Moulding machines (2)		9	B 10	20	
i. Hydraulic press (1)		10	B 10	30	
j. Air compressors (3)		7	A 10	20	
k. Pipe machine (1)		10	B 10	10	
l. Welding sets (3)		6	A 10	7	
m. Coal pulverizer (1)		10	B 10	50	

Capacity of electr. motors: 150 KW

Total load, capacity of trucks: - t

- Only (e) was imported; the rest was domestically produced.

- Average age of machinery (79 % of total) is 7 years.

**GENERAL CONDITIONS:** Electricity, fair.

Transportation, water and community facilities, poor.

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				- Average working hours per annum per direct production worker: 2,703 hours.
					Univ. or higher	Sr. High sch. or	Other	Other	
<b>TOTAL EMPLOYED</b>		190	-	-					- Proportion of motors occupied: 60 % on the first shift.
1. Direct production ( all male )		148	-	-					
Annual total manhours (000)		(400)	( )	( )					- Technological features:
a. Foundry		28							
b. Machine shop		60							a) Grey iron melting and casting; poorly mechanized and automated.
c. Fabrication shop		10							
d. Assembly		10							b) Machining of components; fairly mechanized and automated.
e. Tool room		12							
f. Testing shop		5							c) Marking, gas cutting and welding; fairly mechanized and automated.
g. Repairs & maintenance		10							
h. Stores		5							d) Assembly of pumps; poor mechanisation & automation.
i. Packing & dispatch		8							
2. Auxiliary activities (all male)		42	-	-					
a. Technical and administration staff in the factory		10							
b. Central office		32							

(\* The information on the employees in management & auxiliary activities exclude those in the central offices.)

- **Skilled workers** in direct production are: turners, fitters, welders, moulders, pattern makers, melters, chapers, etc. In auxiliary activities: administrative assistants, accountants, sales and purchase assistants, etc.

IV. ANNUAL PRODUCTION (1964)		TOTAL VALUE OF PRODUCTION ( 000 Rs. )		1,263	
Product	Unit	Quantity Produced	Unit Value (Rs.)		
a. Complete power driven pumps; horizontal spindle	No.	894	922		
b. Complete power driven pumps; vertical spindle	No.	26	9,000		
c. Total switchee	No.	313	80		
d. Spares	000 Rs.	180	..		

**CAPACITY OUTPUT:** 60 % higher than the 1964 actual output level with additional 50,000 manhours on the first shift. This in itself is constrained by the installed capacity of the foundry and tool room. An investment of Rs. 0.1 million on those shops would raise the overall capacity by 150 % over the present production. The strict restriction of imports of machinery also hinders the more rapid expansion of the capacity along with the increasing demand. Various types of pumps can be produced without altering the present production facility.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price o.l.f.

- Ball bearings are directly imported with freight rate 10 %.
- Alloy steel and non-ferrous metals are made domestically but contain significant amounts of import contents; freight rates are 8 %. The rest are domestically made with little import contents and delivered with freight rate 5 %.

V. INTERMEDIATE INPUTS (1964)		TOTAL VALUE OF CONSUMPTION ( 000 Rs. )		671	
1. Energy & water: total		27			
(* Water is drawn from the tube well within the establishment)		Quantity consumed	Unit value (Rs.)		
- Hard Coke	ton	89	94		
- Electricity	000 kWh	78.9	140		
- Steam Coal	ton	55	59		
- Lubricants	000 ltr	1.6	1,100		
- Kerosene & petrol	000 ltr	6.1	500		
2. Direct production materials: total		543			
a. Pig iron	ton	217	310		
b. Mild steel	"	63	1,000		
c. Alloy steel	"	3	9,000		
d. Non-ferrous metals	"	.5	12,000		
e. Ball bearings	No.	6,047	15		
f. Scrap iron	ton	123	400		
g. Others	000 Rs.	240	..		
3. Packaging materials: total		11			
Paper products Rs. 1,000; wooden materials Rs. 10,000; 120 m hessian & gunny clothes (Rs. 1.38/m).					
4. Work returned by sub-contractors ( )		-			
5. Repairs & maintenance (materials & services purchased)		16			
6. Material inputs for auxiliary activities		8			
Administration and welfare					
7. Non-factor service inputs: total		66			
of which Rs. 50,000 are costs for central office.					

VI. VALUE ADDED TOTAL 1964 ( 000 Rs. )		592	
1. Wages & salaries (before income tax)			
- Employees in direct production	142		
- Other employees	191	✓	
2. Other expenditures for employees	7		
3. Annual depreciation allowance	115		
4. Rental paid	-		
5. Sales & other indirect taxes (less subsidies)(not included in total)	[24]		
6. Other gross business income (before income tax)	137		

**SELECTED COEFFICIENTS** (in 1964 replacement value)

- Mach., equip., instruments & tools/per employee in direct production on 1st shift: Rs. 9,550
- Value added per employee: Rs. 3,115
- Annual wage per employee in direct production: Rs. 959
- Variable input costs/gross production ratio: 57.2 %
- Gross profit/gross production ratio: 10.8 % (at full capacity: 22.9 %)
- Level of production at break-even point is approximately 75 % of the 1964 actual level.

VII. EXPANSION: HISTORY & PLAN		Gross equi- sition	
1. Recent Expansion			
From 19 60 to 19 64			
a. Total Investment ( 000 Rs. )	845	2/	% of rep. & mainin.
- Land	-	-	-
- Land improvements	-	-	-
- Buildings	100	20	
- Other construction work	-	-	-
- Machinery & equipment	665	40	
- Tools & instruments	17	-	-
- Vehicles	63	10	
- Office furniture & fixtures	-	-	-
b. Corresponding increase:	From 1960	to 1964	
In no. of employees	60	158	
In annual gross production ( 000 Rs. )	390	1,263	
2. Future Plan			
a. Investment proposed for the period 1964 to 1968	Total value ( Rs. million)		1.5
Of which:	- Mach. & equipment	53	\$
	- Land improv. & bldg.	33	
	- Land	-	
	- Others	14	
b. Net increase in no. of employees envisaged for the same period:	- Direct production:	50	
	- Auxiliary:	40	
c. Purposes:	Introduction of pneumatic grain conveyors, crop driers and level controls; selective expansion of the foundry and fabrication shop; overhauling the machine shop.		

VIII. SUPPLEMENT		Structure of liquid assets and short term liabilities (end of 1964; 000 Rs.)	
Cash on hand and in bank	4	Taxes payable	7
Marketable securities and bonds	4	Accounts payable	103
Accounts receivable	428		

1/ Of which Rs. 150,000 are the salaries of the employees at the central office.  
2/ Of which some Rs. 300,000 relate to the introduction of high capacity pumps and float switches into the production line at the early part of the expansive period.



**MAJOR PRODUCTS:** Pumps. Annual capacity output is around 160 pumps on one shift operation.

**REPORTING UNIT:** A small one-establishment enterprise with total assets IE 0.4 million and employees 22 as of 1964. Founded in 1960.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( 000 IE )	103	47
1. Land	-	-
2. Land improvements	-	-
3. Buildings	-	-
4. Other construction works	-	-
5. Machinery & equipment	56	26
6. Tools & instruments	-	-
7. Vehicles	32	21
8. Office furniture & fixtures	-	-
9. Models	15	-
	<b>Total</b>	<b>1964</b>
	<b>bk. value</b>	<b>replac.</b>
	<b>ref. base</b>	<b>value</b>
	<b>(Yr.)</b>	<b>(\$)</b>

**DETAIL OF I.5 (No.)**

	Total	Avr. Age	Oper. rate	Depr. rate	1964 replac. value
a. Lathes (3)	..	2-20	B	10	30
b. Drilling machines (5)	..	5-30	"	"	20
c. Electric saws (2)	..	5,10	"	"	6

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> ( 000 IE )	90	-
1. Direct production materials	30	-
2. Other input materials	-	..
3. Work in process	30	-
4. Finished products	30	-
- Normal inventories of finished products		
4.3% of annual gross production		
- Seasonal variations:	..	

Capacity of electr. motors: 11 KW

Total load, capacity of trucks: - t

All machines were imported. Average age of machinery is 13 years.

**GENERAL CONDITIONS:**

Transportation, public utilities and community facilities, excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	22	-	-
1. Direct production (all male)	20	-	-
Annual total manhours (000)	(44)	( )	( )
2. Auxiliary activities ( M. f. )	1	1	2

**EDUCATIONAL BACKGROUND** (No. of employees)

	Univ. or higher		Sr. High sch. or equiv.	
	Engl- base	Other	Engl- base	Other
<b>TOTAL</b>	1	-	21	-
<b>Management</b>	1	-	-	-
<b>Direct Production</b>	-	-	-	-
<b>Skilled</b>	-	-	-	-
<b>Semi-skilled</b>	-	-	10	-
<b>Unskilled</b>	-	-	10	-
<b>Auxiliary Activities</b>	-	-	-	-
<b>Skilled</b>	-	-	-	-
<b>Semi-skilled</b>	-	-	-	-
<b>Unskilled</b>	-	-	-	-
	-	-	1	-

- Actual hours worked per annum per direct production worker: 2,200 hrs.

- **Technological features:**  
Simple process with no need to differentiate shops. No automation is involved. Mechanisation is obsolete, too.

IV. ANNUAL PRODUCTION (1964)		TOTAL VALUE OF PRODUCTION ( 000 I£ )		703	
Product	Unit	Quantity Produced	Unit Value ( I£ )		
a. Pumps	pc.	160	3,300		
b. Receipt for repair work done for others	000 I£	175	..		

V. INTERMEDIATE INPUTS (1964)		TOTAL VALUE OF CONSUMPTION ( 000 I£ )		274	
1. Energy & water: total		1			
	Unit	Quantity consumed	Unit value ( I£ )		
- Electricity	000 kwh	30	45		
- Liquid fuel )				negligible	
- Water					
2. Direct production materials: total		161			
a. Iron	ton	40.0	2,000		
b. Bronze	"	17.5	4,600		
c. Iron pipes *	..	..	..		
d. Electric motors *	pc	160	..		
* These products are much diversified and no information on prices & values are available.					
3. Packaging materials: total		-			
4. Work performed by sub-contractors ( )		-			
5. Repairs & maintenance (materials & services purchased)		30			
6. Material inputs for auxiliary activities		10			
7. Non-factor service inputs: total		72			
Transportation, insurance and storage services (purchased separately) I£ 20,000					

VI. VALUE ADDED		TOTAL 1964 ( 000 I£ )		429	
1. Wages & salaries (before income tax)					
- Employees in direct production		130			
- Other employees		75			
2. Other expenditures for employees		-			
3. Annual depreciation allowances		4			
4. Rental paid (for land 10; for buildings 10)		20			
5. Sales & other indirect taxes (less subsidies)		-			
6. Other gross business income (before income tax)		200			

VII. EXPANSION: HISTORY & PLAN		Gross acquisition		Scrapped or sold	
1. Recent Expansion		None		None	
From 19 to 19					
a. Total Investment ( )					
- Land					
- Land improvements					
- Buildings					
- Other construction work					
- Machinery & equipment					
- Tools & instruments					
- Vehicles					
- Office furniture & fixtures					
b. Corresponding increase:		From 19	to 19		
In no. of employees					
In annual gross production ( )					
2. Future Plan		None		None	
a. Investment proposed for the period 19 to 19		Total value ( )			
Of which:		- Mach. & equipment			
		- Land improv. & bldg.			
		- Land			
		- Others			
b. Net increase in no. of employees envisaged for the same period:		- Direct production:			
		- Auxiliary:			
c. Purposes:					

VIII. SUPPLEMENT	
1/	The numerator includes vehicles and office furniture.
2/	Assuming three-shift operation.

Japan : 360 - ( 4 )

**MAJOR PRODUCTS:** Tractor plows, tractor loaders, tractor harrows and other metal products. Capable of producing annually ¥ 420 million worth of these products on one shift.

**REPORTING UNIT:** A small two-establishment (one is a sales office) enterprise with total assets ¥ 280 million (net worth ¥ 60 million) and employees 187 as of 1964. Founded in 1954.

**I. FIXED CAPITAL ASSETS**

	End of 1963 After deprec.	End of 1964 After deprec.
<b>TOTAL BOOK VALUE</b> ( ¥ million )	90.57	76.30
1. Land (10,296 m <sup>2</sup> )	4.29	4.29
2. Land improvements	1.09	.94
3. Buildings (total floor space 5,126 m <sup>2</sup> )	35.67	32.67
4. Other construction works	-	-
5. Machinery & equipment	34.85	28.13
6. Tools & instruments	7.34	5.91
7. Vehicles	7.33	4.98
8. Office furniture & fixtures	-	-

**DETAIL OF I.5 (No.)**

	Total Bk. value after depr.	Avr. Age (Yr.)	Oper. Cond.	Depr. rate (\$)	1964 replac. value
a. Engine lathes (8)	3.60	4,15	B,C	16.2	8.0
b. Automatic engine lathe (1)	1.88	4	B	"	2.8
c. Drilling machines (23)	2.14	3,8,15	A,C	"	10.0
d. Milling machines (5)	3.97	4,7,15	B,C	"	8.5
e. Shapers (3)	2.58	2	A	"	2.4
f. Mechanical presses (13)	8.73	3,7,14	A,B,C	"	10.0
g. Shearing machines (2)	.97	1,6	A,B	"	1.8
h. Wood working machines (15)	.54	4,15	B,C	"	1.5
i. Welders (19)	3.20	2,5,10	A,B,C	"	1.6
j. Cutter (1)	.47	2	A	"	.5
k. Heating furnaces (2)	2.97	5	B	"	8.0
l. Electrostatic painting equipment (1)	1.61	2	A	"	2.0
m. Infra reddrying machine (1)	1.38	4	A	"	2.5
n. Other machines (8)	.81	7	B	"	1.5

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> ( ¥ million )	89.55	...
1. Direct production materials	9.92	...
2. Other input materials		
3. Work in process	32.58	...
4. Finished products	48.15	...

- Actual inventories of finished products 12. % of annual gross production

- Seasonal variations: Seasonal high and low of finished products are + 50% (Dec.) and - 40% (Apr.), respectively, of the normal level.

Capacity of electr. motors: 80 KW  
Capacity of electr. furnaces: 50 KW  
Total load, capacity of trucks: 15 t

- All machines are of domestic make.

- Average age of machinery is 6 years.

- About one third of machines were installed during the recent expansion period (see VII.1. ).

**GENERAL CONDITIONS:**

Transportation, public utilities, and community facilities, excellent.

**III. LABOUR (1964 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> m. 118	187	--	--
1. Direct production ( f. 6 )	124	( )	( )
Annual total manhours (000)	(293.6)	( )	( )
a. Cutting	4		
b. Machine processing	40		
c. Woodworking	8		
d. Forging	8		
e. Press	15		
f. Welding	8		
g. Heat treating	5		
h. Assembly	25		
i. Coating (with paints)	6		
j. Others	5		
2. Auxiliary activities ( m. 51 f. 12 )	63		
a. Management and office work (incl. those working at the sales office)	47		
b. Technical and factory control	16		

**EDUCATIONAL BACKGROUND (No. of employees)**

	Univ. or Higher		Sr. High sch. or equiv.		Other	
	Engi-ners	Other	Manu-fact	Other	Manu-fact	Other
<b>TOTAL</b>	2	5	55	125		
<b>Management</b>						
2	5	14		3		
<b>Direct Production</b>						
Skilled			21	89		
Semi-skilled			3	6		
Unskilled			1	4		
<b>Auxiliary Activities</b>						
Skilled			11	18		
Semi-skilled			3	2		
Unskilled			2	3		

- Annual work hours per direct production worker: 2,370 hours.

- **Technological features:**

i) Electrostatic painting and infra red drying.  
- Other shops employ conventional techniques.

- Mechanization and automation are generally poor except for (i), which is fair.

- **Skilled workers** are manned in all shops in direct production.

**Structure of liquid assets (end of 1964, ¥ mil.)**

Cash on hand and in banks 38.9; marketable securities and bonds 1.3; accounts receivable 40.6; suspense payments and loans 15.9.

Accounts payable 38.2; short - term borrowing from commercial banks 106.0

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( ¥ million )			
			378.9
Product	Unit	Quantity Produced	Unit Value ( ¥ 000 )
a. Tractor plows	No.	544	23.0
b. Tractor plows of Japanese type	"	37,740*	6.75
c. Tractor loaders	"	1,455	25.4
d. Tractor harrows of Japanese type	"	804	13.9
e. Fixed body warmers ("Kotatsu")		26,866	1.85
f. Others	"	1,928	6.1
g. Scrap	ton	52	43.0

\* Of which 22,580 are made by a subcontractor using its own materials (see VIII).

**CAPACITY OUTPUT:**

10% higher than the 1964 actual production level with additional manhours 24,000. The underutilization due to insufficient demand for the products and insufficient supply of labour, both seasonally. Desirable production pattern is loaders 70% and plows 30%.

Unit value of product: Market value f.o.b. before sales tax.  
Unit value of material: Market price c.i.f.

- Tractor plows are partly exported.

- Direct production materials are all domestically produced and delivered mostly by railroad (part of lumber is delivered seaborne) with freight rate 2% of c.i.f. value.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( ¥ million )			
			244.6
1. Energy & water: total			2.22
	Unit	Quantity consumed	Unit value ( ¥ 000 )
- Electricity	000 KWH	147	15.1
<b>2. Direct production materials: total</b>			<b>93.55</b>
a. Ordinary hot-rolled steel	ton	727.8	56.7
b. Special hot-rolled steel	"	108.7	146.9
c. Steel castings	"	84.1	144.6
d. Lumber	Cu.m.	363.8	20.0
e. Others	¥ mil.	17.5	..
<b>3. Packaging materials: total</b>			<b>1.51</b>
Wooden materials	Cu.m.	75.6	20.0
<b>4. Work performed by sub-contractors ( See VIII )</b>			<b>135.33</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>			<b>3.87</b>
Parts and materials	¥	.35 million	
Services purchased	¥	3.52 million	
<b>6. Material inputs for auxiliary activities</b>			<b>—</b>
<b>7. Non-factor service inputs: total</b>			<b>8.12</b>
Of which transport, insurance and storage purchased separately ¥ 2.26 million.			

**VI. VALUE ADDED TOTAL 1964 ( ¥ million )**

TOTAL 1964 ( ¥ million )		134.3
1. Wages & salaries (before income tax)		
- Employees in direct production	56.69	
- Other employees	34.91	
2. Other expenditures for employees	27.78	
3. Annual depreciation allowance	13.75	
4. Rental paid	2.37	
5. other indirect taxes (less subsidies)	.53	
6. Other gross business income (before income tax)	- 1.71	

**SELECTED COEFFICIENTS**

(in 1964 replacement value)

- Mach., equip., instruments & tools per employee in direct production on 1st shift: ¥ 480,000
- Value added per employee: ¥ 718,000
- Annual wage per employee in direct production: ¥ 457,000
- Variable input costs/gross production ratio: 76.3%
- Gross profit/gross production ratio: - 0.4% (at full capacity: 1.7%)
- Level of production at break-even point is approximately 102 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
<b>1. Recent Expansion</b>		
From 1962 to 1964		
a. Total Investment ( ¥ million )	38.13	2.78
- Land	.18	-
- Land improvements	.18	-
- Buildings	24.64	-
- Other construction work	-	-
- Machinery & equipment	11.81	1.53
- Tools & instruments	-	-
- Vehicles	1.50	1.25
- Office furniture & fixtures	-	-
b. Corresponding increase:	From 1962 to 1964	
In no. of employees (decrease)	198	187
In annual gross production ( ¥ million )	310	379

**2. Future Plan**

a. Investment proposed for the period 1965 to 1968

Total value	¥ 100 million
Of which:	
- Mach. & equipment	80
- Land improv. & bldg.	10
- Land	-
- Others	10

b. Net increase in no. of employees envisaged for the same period:

- Direct production: 10
- Auxiliary: 5

c. Purposes: Introduction of new products and new processes; other selective expansion to balance the overall capacity.

**VIII. SUPPLEMENT**

**Work performed by subcontractors:** A subcontractor with about 50 employees working exclusively for this establishment produced 22,580 pieces of Japanese plows with own-supplied materials, receiving fees ¥ 115.11 million. The products were sold with the labels of this establishment attached. The other subcontractor of about the same size made parts from ordinary hot-rolled steel and castings supplied by this establishment and earned fees ¥ 20.22 million. Parts were further assembled within this establishment.

1 In 1963, the enterprise had only a small gross profit. From 1963 to 1964, the production of tractor plows and tractor harrows was curtailed and tractor loaders and body warmers were newly added to the product-mix. The enterprise is preparing for a more substantial change in its production lines for better markets.



**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( ¥ million )			
215.2			
Product	Unit	Quantity	Unit Value ( ¥ 000 )
a. Paddy field hillers	No.	29,937	3.7
b. Rotors	"	26,200	2.5
c. Rakes	"	8,429	3.5
d. Paddy field weeders	"	1,022	9.1
e. Scrap	ton	29	4.3

**CAPACITY OUTPUT:**

15% higher than the 1964 actual production level with additional 24,000 man-hours.  
The underutilization is due to the seasonally insufficient demand for the products, seasonally insufficient supply of labour and inadequate sales network. Product - mix is not flexible.

Unit value of product: Market price f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Direct production materials are all produced

domestically and delivered by railroad; freight rate about 3% of c.i.f. value.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( ¥ million )			
146.5			
1. Energy & water: total	1.44		
	Quantity	Unit	Value ( ¥ 000 )
	Unit	used	( ¥ 000 )
- Electricity	000 KWH	95.6	15.1
2. Direct production materials: total	116.09		
a. Hot rolled steel products	ton	2,101	51.0
b. Others	¥ mil.	8.97	..
3. Purchasing materials: total	1.20		
Wooden materials	Cu. m.	58.5	20.6
4. Work performed by sub-contractors ( See V111 )	20.04		
5. Repairs & maintenance (materials & services purchased)	3.30		
Parts and materials	¥ .98 Million		
Services purchased	¥ 2.32 Million		
6. Material inputs for auxiliary activities	--		
7. Non-factor service inputs: total	4.43		
Of which transport, insurance and storage purchased separately ¥ 1.95 million			

**VI. VALUE ADDED TOTAL 1964 ( ¥ million )**

TOTAL 1964 ( ¥ million )	
68.7	
1. Wages & salaries (before income tax)	
- Employees in direct production	22.79
- Other employees	12.95
2. Other expenditures for employees	18.75
3. Annual depreciation allowance	5.40
4. Rental paid (land .15; building 1.05)	1.20
5. other indirect taxes (less subsidies)	1.09
6. Other gross business income (before income tax)	6.54

**ANALYSIS OF EFFICIENCY**

(in 1964 replacement value)

- Mach., equip., instruments & tools/per employee in direct production on 1st shift: ¥ 1,250,000
- Value added per employee: ¥ 700,000
- Annual wage per employee in direct production: ¥ 380,000
- Variable input costs/gross production ratio: 7%
- Gross profit/gross production ratio: 3.0% (at full capacity : 5.7%)
- Level of production at break-even point is approximately 88 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
1. <b>Recent Expansion</b>		
From 1962 to 1964		
a. Total Investment ( ¥ million )	22.60	1.08
- Land	1.00	-
- Land improvements	-	-
- Buildings	7.74	-
- Other construction work	-	-
- Machinery & equipment	11.36	-
- Tools & instruments	-	-
- Vehicles	2.50	1.08
- Office furniture & fixtures	-	-
b. Corresponding increase:	From 19 62	To 19 64
In no. of employees	85	97
In annual gross production ( ¥ million )	139	215

**2. Future Plan**

a. Investment proposed for the period 1965 to 1968  
Total value ¥ 50 million  
Of which: - Mach. & equipment 60 %  
- Land improv. & bldg. 20  
- Land 20  
- Others -

b. Net increase in no. of employees envisaged for the same period: - Direct production: 20  
- Auxiliary: 10

c. Purpose: Introduction new products and new processes and largely balanced expansion of the existing capacity in the same location.

**VIII. SUPPLEMENT****Structure of liquid assets and current liabilities of the company ( ¥ million; end of 1964. )**

Cash on hand and in bank	39.1	Taxes payable	3.1
Marketable securities and bonds	.5	Accounts payable	28.6
Accounts receivable	8.6	Short-term borrowing from commercial banks	12.1
Suspense payments and loans	1.0	Other current liabilities	39.0

**Work performed by subcontractors:** A subcontractor (with about 20 employees) manufactures parts for wheels and rotors from hot-rolled steel supplied by this establishment and receives a fee of some ¥ 20 billion, which accounts for more than half of the subcontractors' total annual proceeds.

**MAJOR PRODUCTS:** Feed cutters; both cut-down type and blow-up type. Annual capacity output is some 20,000 unite (a little over 1,500 tons) on one-shift.

**REPORTING UNIT:** A small two-establishment (one is a sales office) enterprise with total assets ¥ 110 million (net worth ¥ 12 million) and employee 93 as of 1964. Founded in 1946.

### I. FIXED CAPITAL ASSETS (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (¥ million)	<u>53.91</u>	<u>19.80</u>
1. Land (total acreage 10,500 m <sup>2</sup> )	3.68	3.68
2. Land improvements	-	-
3. Buildings (total floor space 2,500 m <sup>2</sup> )	29.43	1.79
4. Other construction works	-	-
5. Machinery & equipment	10.02	9.34
6. Tools & instruments	7.56	2.82
7. Vehicles	3.25	2.18
8. Office furniture & fixtures (incl. in 5)	-	-

\* Excludes relatively old equipment which is already completely amortized.

DETAIL OF I.5 (No.)	Total bk. value	Avr. Age (Yr.)	Oper. Cond. (C)	Depr. rate (%)	1964 replace. value
a. Engine lathes (8)	1.29	4,15	B,C	16.2	9.0
b. Copying lathes (2)	1.30	5,13	"	"	4.8
c. Turret lathe (1)	.75	15	C	"	1.0
d. Drilling machines (16)	.95	4,13,15	B,C	"	4.7
e. Milling machines (2)	1.03	3,15	"	"	4.2
f. Boring machine (1)	.38	15	C	"	4.1
g. Shaper (1)	.24	15	C	"	.8
h. Grinders (2)	.99	4,15	B,C	"	2.6
i. Mechanical prassees (6)	.48	4,12	"	"	4.5
j. Shearing machine (1)	.07	15	C	"	.5
k. Welders (7)	.89	4,6,11	B,C	"	3.9
l. Electrostatic painting equipment (1)	.75	4	B	"	2.0
m. Infrared drying equipment (1)	.90	5	C	"	2.5

### II. INVENTORIES (end of 1964)

	Actual	Normal
<b>TOTAL VALUE</b> (¥ million)	26.19	..
1. Direct production materials	15.93	..
2. Other input materials		
3. Work in process	5.21	
4. Finished products	5.05	

- Actual inventories of finished products 2.2% of annual gross production

- Seasonal variations:

Seasonal high and low of finished products are ± 20% of the normal level and attained at in December and May, respectively.

Capacity of electr. motors: 80 KW

Total load, capacity of trucks: 15 t

- All machines are of domestic origins.

- Average age of machinery (total) is estimated as about 8 years.

- The enterprise is currently undergoing a major process of rejuvenation/expansion; buildings have been partly reconstructed and an extensive introduction of new equipment is planned for the next three or four years.

### GENERAL CONDITIONS:

Transport, public utilities, community facilities, all excellent.

### III. LABOUR (1964 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> ( m 51 )	93	-	-
1. Direct production ( f. 7 )	58	-	-
Annual total manhours (000)	(140.1)	( )	( )
a. Cutting	2		
b. Mechanical processing	19		
c. Press	8		
d. Welding	5		
e. Assembly	14		
f. Coating (with paint)	5		
g. Testing and packing	5		
2. Auxiliary activities ( m. 11 f. 24 )	35		
a. Management and office work (including those working at the sales offices)	24		
b. Technical and factory control	11		

### EDUCATIONAL BACKGROUND (No. of employees)

	Univ. or higher		Sr. High sch. or equiv.	
	Management	Other	Skilled	Unskilled
<b>TOTAL</b>	2	32	59	
Management	-	2	7	6
Direct Production				
Skilled			5	24
Semi-skilled			6	12
Unskilled			3	8
Auxiliary Activities				
Skilled			8	5
Semi-skilled			2	3
Unskilled			1	1

- Annual working hours per direct production worker: 2,420 hours.

### Technological features:

f) Electrostatic painting and infrared drying.

- Mechanization and automation are generally poor

except for (e) and (f) which are rated as fair.

- Skilled workers are required in all shops in direct production.

**IV. ANNUAL PRODUCTION (1964)**

TOTAL VALUE OF PRODUCTION ( ¥ million )			
Product	Unit	Quantity	Unit Value ( ¥ 000 )
a. Feed cutters; cut-down type	No.	17,785	12.5
b. Feed cutters; blow-up type	No.	246	30.0
c. Scrap	ton	30	43.0

**CAPACITY OUTPUT:** 10% higher than the 1964 actual production level with additional man-hours 24,000. The underutilization is in most part due to the seasonally insufficient demand for the products and seasonally inefficient supply of labour. Also machine tools and presses are inadequate in relation to other facilities. ¥ 15 million, if invested on them, would bring about some 25% increase in the overall capacity. Product-mix is not flexible.

Unit value of product Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.  
- Lumber is partly imported (freight rate 5% of o.i.f.).  
The other direct production materials are all domestically produced and delivered by railroad; freight about 3%.

**V. INTERMEDIATE INPUTS (1964)**

TOTAL VALUE OF CONSUMPTION ( ¥ million )			
1. Energy & water: total	Quantity	Unit	Unit value
	Unit	Value	( ¥ 000 )
- Electricity	000 KWH	60.6	15.2
<b>2. Direct production materials: total</b>			<b>113.03</b>
a. Ordinary hot-rolled steel	ton	635	53.0
b. Special hot-rolled steel	"	60	120.0
c. Foundry pig iron	"	680	71.0
d. Lumber	m <sup>3</sup>	587	23.4
e. Others	¥ mil.	10.3	..
<b>3. Packaging materials: total</b>			<b>1.60</b>
Wooden materials	ou.a.	77.8	20.6
<b>4. Work performed by sub-contractors (See V111)</b>			<b>24.04</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>			<b>1.84</b>
Parts and materials	¥ .66 million		
Services purchased	¥ 1.18 million		
<b>6. Material inputs for auxiliary activities</b>			<b>-</b>
<b>7. Non-factor service inputs: total</b>			<b>11.07</b>
Of which transport, insurance and storage purchased separately ¥ 1.93 million.			

**VI. VALUE ADDED TOTAL 1964 ( ¥ million )**

1. Wages & salaries (before income tax)	
- Employees in direct production	17.80
- Other employees	17.65
2. Other expenditures for employees	32.39
3. Annual depreciation allowance	4.29
4. Rental paid	.51
5. other indirect taxes (less subsidies)	.56
6. Other gross business income (before income tax)	5.31

**SELECTED COEFFICIENTS (in 1964 replacement value)**

- Mach., equip., instruments & tools/ per employee in direct production on 1st shift: ¥ 1,320,000
- Value added per employee: ¥ 845,000
- Annual wage per employee in direct production: ¥ 307,000
- Variable input costs/gross production ratio: 68%
- Gross profit/gross production ratio: 2.3% (at full capacity : 5.1%)
- Level of production at break-even point is approximately 92 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

	Gross acquisition	Scrapped or sold
<b>1. Recent Expansion</b>		
From 1962 to 1964		
a. Total Investment ( ¥ million )	42.6	1.02
- Land	2.1	-
- Land improvements	-	-
- Buildings (mostly not yet capitalized)	27.8	-
- Other construction work	-	-
- Machinery & equipment	3.5	1.02
- Tools & instruments	6.0	-
- Vehicles	2.5	-
- Office furniture & fixtures	.7	-
b. Corresponding increase:	From 1962	to 1964
In no. of employees	87	93
In annual gross production ( ¥ million )	102	231

**2. Future Plan**

- a. Investment proposed for the period 1965 to 1968  
Total value **¥ 50 million**  
Of which: - Mach. & equipment 60  
- Land improv. & bldg. 20  
- Land 10  
- Others 10
- b. Net increase in no. of employees envisaged for the same period:  
- Direct production: 20  
- Auxiliary: 10
- c. Purpose: Introduction of new products and new processes. Selective expansion of the mechanical shop and the press shop.

**VIII. SUPPLEMENT****Structure of liquid assets and current liabilities of the company ( ¥ million; end of 1964)**

Cash on hand and in banks	41.4	Taxes payable	1.6
Marketable securities & bonds	.7	Accounts payable	13.5
Accounts receivable	13.8	Short-term borrowing from commercial banks	44.9
Suspense payments & loans	5.6	Other current liabilities	14.2

**Work performed by subcontractors:** A subcontractor (with a few dozen employees) produced parts from ordinary hot-rolled steel and cast iron supplied by this establishment. The subcontractor is mostly dependent on this establishment.



An enterprise, founded in 1946, producing turbines, pumps, diesel motors and other industrial machines. Annual capacity output is 14,500 t on 3-shift operation. About 1% of products are exported and 30% of materials (such as coke, steel, metal sheets, electric motors, parts of diesel motors and turbines, casting and forgings, ball bearings, etc.) are imported. Located near a foundry; also close to a sea port with good access to both domestic and foreign markets.

I. FIXED CAPITAL (end of 1963)	Original purchase value	1963 replacement value
TOTAL (Drs. million)	10,686	12,341
Buildings & land improvements	3,687	4,771
Machinery & equipment	6,980	7,558
Other capital assets	19	12

**Major machinery crucial for determining the overall production capacity:**

**Diesel motors:** semi-automatic universal machine tools for production of motors of medium power with a small capacity (2 shifts). **Water turbines:** special large machine tools (3 shifts). **Semi-automatic universal machines** for making gears, conductors and reducers (2 shifts). **Iron apparel:** semi-automatic universal machines, for preparation, smelting, casting, etc. (2 shifts).

(3% of machinery and equipment were imported).

Capital expenditures in the past years: (Drs. million)				
	1963-54	1955-57	1958-60	1961-63
Gross expenditures	410	852	435	1,633
Retirements	505	813	984	1,191

Calculated average age of fixed assets: 9.3 years

**Electric motors:**

Total installed capacity: 9,261 KW  
Of which actually operated in 1963:

1st shift 100 %; 2nd shift 2 %; 3rd shift 0.8 %

**Technological features:** Involves the processes of casting, welding, preparation of parts and assembly. Assortment of products is considered too large. About 15% of current input materials are purchased through long term contract. Moderate mechanization and automation (fall short by about 30% & 7%, resp., of the world advanced standard).

II. LABOUR (1963)	TOTAL no. of employees: 3,520		
	1st shift	2nd shift	3rd shift
1. <b>Factory workers:</b>			
Total 2,285 persons	1,807	338	140
(5,194 thous. manhrs.) (4,102) (768) (324)			
- Mechanography and technical control	29	11	4
- Foundry	480	90	93
- Metal processing	151	51	3
- Turbines and pumps	264	55	11
- Diesel motors	256	29	3
- Carpentry	281	37	-
- Maintenance and transport	351	65	26
2. <b>Non-factory workers:</b> 1,235 persons			
(3,004 thous. manhours)			

**Educational background of workers:**

	Techn.	Elem.	Low	Others	Total
Univ. or higher	-	10	9	5	24
Tech. Higher sch.	-	1	3	4	8
Secondary sch.	-	50	-	58	108
Primary school	-	-	-	3,380	3,380

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1963 *		14,073*
- Water turbines	1,523 t	1,666
- Suction pumps	917 t	1,261
- Diesel motors	612 t	1,622
- Construction machines	1,049 t	1,101
- Other machines & equipment	3,019 t	3,170
- Machine parts	690 t	725
- Apparatus made of iron & steel	3,287	3,616
- Others	..	912

\* Includes turnover tax.

**Capacity output:**

- Water turbines	1,550 t	Overall rate of utilization is 79%
- Suction pumps	1,800 t	
- Diesel motors	850 t	
- Construction machines	1,100 t	
- Other machines and equipment	8,300 t	
- Machine parts	700 t	

Underutilization due to insufficient supply of materials and shortage of man-power.

Number of workers necessary on 1st. shift for full utilization of the existing capacity is 2,500.

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. Million)
TOTAL actual consumption 1963		8,192
1. <b>Energy inputs: total</b>		443
- Electricity	24,662 MWH	263
- Coke	1,181 t	28
- Brown coal	634 t	6
- Lignite	15,453 t	46
- Liquid fuel	1,236 t	100
2. <b>Major production materials: total</b>		6,054
- Scrap iron	16,665	500
- Grey pig iron	1,517 t	99
- Rolled ferrous products	7,672 t	974
- Timber	2,461 m <sup>2</sup>	98
- Cast iron	4,138 t	1,531
- Others	..	2,852
3. <b>Repairs &amp; maintenance: total</b>		428
4. <b>Other material &amp; non-factor service inputs</b>		1,267

V. VALUE ADDED (1963)	(Drs. Million)
TOTAL (except turnover tax)	5,653
- Wages of factory workers	2,399
- Salaries of non-factory workers	1,045
- Depreciation	439
- Interests paid	853
- Other accumulation	917
(Turnover tax)	228

- VI. SUPPLEMENT **Future plans:** a) Introduction of new technology and serial production.  
b) Raising of the degree of mechanization & automation.  
c) Expansion of the foundry capacity.  
d) Reduction of the assortment of products.

1/ Of which Drs. 155 million are funds belonging to the enterprise.

2/ Gross accumulation includes interest paid.

**SELECTED COEFFICIENTS**

- Mach. & equip. per factory worker on 1st shift: Drs. 4,182,000
- Value added per employee: Drs. 1,606,000
- Annual wage per factory worker: Drs. 1,050,000
- Variable input cost/gross production ratio: 64 %
- Gross accumulation/gross production ratio: 12.82/ %  
(at full capacity: 17.5 %)
- Level of production at break-even point: 64 % of the 1963 actual level.

An enterprise, founded in 1948, producing diesel engines and tractors. Annual capacity output is 11,000 diesel engines, 7,300 tractors and 20,700 t of spare parts, metal structurals, and cast iron on two-shift operation (casting operates with three shifts), 12% of materials, mostly grey pig iron, are imported. All products are for domestic market. Communication lines are favourable.

I. FIXED CAPITAL (end of 1963)	Original	1963 re-	Capital expenditures in the past years: (Drs. million)			
	purchase value	placement value	1953-54	1955-57	1958-60	1961-63
TOTAL (Drs. million)	14,801	16,560	681	982	5,107	2,597
Buildings & land improvements	3,906	5,100	216	563	741	2,188
Machinery & equipment	10,741	11,300				
Other capital assets	154	160				

**Major machinery crucial for determining the overall production capacity:**

**Motors:** special and universal machine tools and conveyors of small capacity but automated (2 shifts); **Tractors:** semi-automatic special and universal machine tools for processing of casting and for making of gears (2 shifts); **Pig iron:** semi-automatic machines for sand moulders of medium to large capacity. Highly specialised line for small motor moulding. (2 shifts). **Structures:** semi-automatic universal machines for cutting, shaping and welding, etc. (1 shift).

**Electric motors:**

Total installed capacity: 11,752 KW

Of which actually operated in 1963:

1st shift 100 %; 2nd shift 44 %; 3rd shift 12 %

**Technological features:** Tractors: mechanical processing of parts by special machines, up-to-date techniques of thermal processing and semi-automatic assembly. **Casting:** electric ovens, mechanised preparation of moulds and conveyor system for melting and pouring. Inefficient mechanisation (80%) and automation (40%), but can compete in the domestic market.

II. LABOUR (1963)	TOTAL no. of employees: 5,560		
	1st shift	2nd shift	3rd shift
1. Factory workers:			
Total 4,011 persons	3,315	596	100
(8,014 thous. manhrs.)	(6,300)	(1,414)	(300)
- Castings	830	336	100
- Motors	1,385	110	-
- Tractors	1,100	100	-
2. Non-factory workers: 1,549 persons			
(3,861 thous. manhours)			

**Educational background of workers:**

	Tech. sch.	High. sch.	Low	Others	Total
Univ. or higher	72	22	7	8	109
Tech. Higher sch.	20	2	-	3	25
Secondary sch.	175	60	-	268	503
Primary school	-	-	-	4,923	4,923

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. million)
TOTAL actual revenue output 1963 *		31,177
- Cast grey pig iron	12,190 t	3,314
- Structural metal products	3,588 t	1,812
- Diesel engines for tractors	3,783t/10,346units	11,398
- Ship engines	44t/ 120units	222
- Rotating crushers	66t/ 168units	119
- Spare parts for tractors	686 t	1,302
- Tractors	4,165t/ 6,501units	8,516
- Services	116,000 hr.	268
- Repairs & maintenance	213,000 hr.	422
- Secondary products	..	1,904
- Others	..	2,000

\* Includes turnover tax on sold products.

**Capacity output:**

- Cast grey pig iron	16,000 t	Overall rate of utilisation is 89 %.
- Diesel engines for tractors	11,000 units	
- Tractors	4,630 t	
- Spare parts for tractors	1,070 t	
- Structure	3,600 t	

Underutilization due to unbalance in capacities, occasional deficiency in the supply of materials and fluctuations in manpower. No additional workers are required on the first shift for full utilisation.

IV. INTERMEDIATE INPUTS	Quantity	Value (Drs. million)
TOTAL actual consumption 1963		20,687
1. Energy inputs: total		452
- Electricity	14,338 MWH	227
- Coks	4,373 t	98
- Brown coal	4,428 t	46
- Lignite	586 t	4
- Liquid fuel	766 t	77
2. Major production materials: total		16,665
- Coks	2,980 t	75
- Grey pig iron	6,320 t	430
- Scrap iron	12,840 t	770
- Rolled ferrous products	2,861 t	338
- Drawn ferrous products	3,353 t	737
- Cast grey pig iron	5,370 t	14,257
- Cast steel	26 t	13
- Cast non-ferrous metal products	19 t	18
- Timber	335 m <sup>3</sup>	27
3. Repairs & maintenance: total		473
4. Other material & non-factor service inputs		3,097

V. VALUE ADDED (1963)	(Drs. million)
TOTAL (except turnover tax)	10,196
- Wages of factory workers	3,221
- Salaries of non-factory workers	1,244
- Depreciation	908
- Interests paid	2,700
- Other accumulation (Turnover tax)	2,123 1/2

VI. SUPPLEMENT	Future plans:
a)	Improvement of existing type of tractors & introduction of new types
b)	At the first stage, to expand capacities of tractors and castings to 12,000 and 22,200 pcs. respectively, and of the second stage to 18,000 pcs. and 32,000 pcs. resp.
c)	Raising of mechanization and automation by 30%.
1/	Drs. 795 million are funds belonging to the enterprise.
2/	Wages and salaries are considered as fixed costs in the vicinity of current operation scale.
3/	Gross accumulation includes interest paid.

**SELECTED COEFFICIENTS**

- Mech. & equip. per factory worker on 1st shift:	Drs. 3,408,000
- Value added per employee:	Drs. 1,834,000
- Annual wage per factory worker:	Drs. 803,000
- Variable input cost/gross production ratio:	2/ 55.4 %
- Gross accumulation/gross production ratio:	1/ 15.6 %
	(at full capacity: 18.7 %)
- Level of production at break-even point:	2/ 65 % of the 1963 actual level.

An enterprise, founded in 1948, producing sewing machines. Annual capacity output is some 90,000 units on a partial (wood cabinets are working only one shift) 3-shift basis. About 2% of the products are exported. Only 1% of total materials, such as steel, steel track etc. are imported. Located rather far from both material and product markets.

I. FIXED CAPITAL (end of 1963)		Original purchase value	1963 re-placement value	Capital expenditures in the past years: (Drs. million)					
				1953-54	1955-57	1958-60	1961-63		
TOTAL (Drs. million)		2,573	2,850	-	46	1,425	780		
Buildings & land improvements		881	1,150	-	26	97	319		
Machinery & equipment		1,617	1,700	-	-	-	-		
Other capital assets		75	-	-	-	-	-		
<p><u>Major machinery crucial for determining the overall production capacity:</u></p> <p><u>Sewing machines:</u> special machine tools of medium capacity for production of sewing machine heads ( 2 shifts ).</p> <p>About 57% of machinery and equipment were imported.</p>				<p>Calculated average age of fixed assets: <u>4.9</u> years</p> <p><u>Electric motors:</u></p> <p>Total installed capacity: <u>1,320</u> KW</p> <p>Of which actually operated in 1963:</p> <p>1st shift <u>82</u> %; 2nd shift <u>18</u> %; 3rd shift <u>4</u> %</p> <p><u>Technological features:</u></p> <p>Serial and continuous production with the Italian "NECCHI" device (which is among the most conventional for sewing machine production). Mechanization and automation no higher than the Yugoslav standard.</p> <p>The variation of models is limited; zig-zag models have not yet been introduced.</p>					
II. LABOUR (1963)		TOTAL no. of employees: 1,298			Educational background of workers:				
		1st shift	2nd shift	3rd shift	Techn.	Elem.	Low	Others	Total
1. <u>Factory workers:</u>									
Total <u>1,076</u> persons		622	285	169	13	8	3	3	27
(2,120 thous. manhrs.)		(1,220)	(564)	(336)	-	-	-	-	-
- Processing of parts and manufacturing of machines		524	285	169	92	3	3	5	103
- Wood cabinets		98	-	-	-	-	-	1,168	1,168
2. <u>Non-factory workers:</u> <u>222</u> persons									
(388 thous. manhours)									
III. ANNUAL PRODUCTION & CAPACITY		Quantity	Value (Drs. Million)		IV. INTERMEDIATE INPUTS				
					Quantity	Value (Drs. Million)			
TOTAL actual revenue output 1963 *			3,872 *		TOTAL actual consumption 1963				
- Sewing machines		51,030 units	3,846		1,607				
- Sewing table cabinets		1 t	26		1. <u>Energy inputs:</u> total				
* Includes turnover tax on sold products.				- Electricity 3,551 MWH 41					
				- Liquid fuel 141 t 19					
<u>Capacity output:</u>				2. <u>Major production materials:</u> total 1,338					
- Sewing machines: 90,000 units Rate of utilization is 56%.				- Rolled ferrous products 129 t 45					
				(36% of which are imported)					
				- Drawn ferrous products 105 t 33					
				(all imported)					
				- Cast grey pig iron 1,030 t 625					
				- Dynamo metal sheets 2 t -					
				- Cast non-ferrous metal 60 t 48					
				products					
				- Sawn timber 1,287 m <sup>3</sup> 55					
				- Other materials .. 533					
				3. <u>Repairs &amp; maintenance:</u> total -					
				4. <u>Other material &amp; non-factor service inputs</u> 209					
VI. SUPPLEMENT		Future plans:			V. VALUE ADDED (1963) (Drs. Million)				
a) Introduction of zig-zag sewing machines.					TOTAL (except turnover tax) 2,156				
b) Raising of level of mechanisation and automation.					- Wages of factory workers 796				
1/ Of which Drs. 303 million are funds belonging to the enterprise.					- Salaries of non-factory workers 156				
2/ Gross accumulation includes interests paid.					- Depreciation 130				
					- Interests paid 147				
					- Other accumulation 927 1/				
					(Turnover tax) 109				
					<p><u>SELECTED COEFFICIENTS</u></p> <p>- Mech. &amp; equip. per factory worker on 1st shift: Drs. 2,733,000</p> <p>- Value added per employee: Drs. 1,661,000</p> <p>- Annual wage per factory worker: Drs. 740,000</p> <p>- Variable input cost/gross production ratio: 58 %</p> <p>- Gross accumulation/gross production ratio: 28.5 %</p> <p>(at full capacity: 34.4 %)</p> <p>- Level of production at break-even point: 31 % of the 1963 actual level.</p>				

An enterprise, founded in 1948, producing elevators, related staircases and other metal structures; also provides elevator assembly and other services on contracts. Annual manufacturing capacity output is some 460 t of elevators and 100 t of other metal structures on a 1 shift basis. 5% of products are sold on foreign markets, while 32% of materials (electric motors, plugs, carbon-graphite, contacts, graphite coatings, photo-cells, switches, copper products, tubes, etc.) are imported. Located in a large industrial centre.

I. FIXED CAPITAL (end of 1963)	Original purchase value	1963 re-placement value	Capital expenditures in the past years: (Drs. million)			
			1953-54	1955-57	1958-60	1961-63
TOTAL (Drs. million)	679	793	254	104	55	176
Buildings & land improvements	320	416	47	37	43	66
Machinery & equipment	359	377				
Other capital assets	-	-				

**Major machinery crucial for determining the overall production capacity:**

Cabins for elevators and related structures: universal machine tools of medium capacity (1 shift).

Electrical equipment for elevators: universal machine tools of small capacity (1 shift).

Aluminum Venetian blinds: a set of universal machine tools for cutting and bending (1 shift).

3% of machinery and equipment was imported.

Capital expenditures in the past years: (Drs. million)

	1953-54	1955-57	1958-60	1961-63
Gross expenditures	254	104	55	176
Retirements	47	37	43	66

Calculated average age of fixed assets: 7.6 years

**Electric motors:**

Total installed capacity: 531 KW

Of which actually operated in 1963:

1st shift 100 %; 2nd shift — %; 3rd shift — %

**Technological features:**

Production of elevators and staircases using the license of "Wertheim". The degree of mechanisation and automation is appreciably lower than the Yugoslav standard. About 20% of material input is supplied by contract work. The production of structures is considered as responsible for the relatively low overall productivity of labour.

II. LABOUR (1963)	TOTAL no. of employees: 892		
	1st shift	2nd shift	3rd shift
1. Factory workers:	557	—	—
Total	557	—	—
(1,159 thous. manhrs.)	(1,159)	(—)	(—)
- Production of elevators and structures	308		
- Assembly of elevators	164		
- Maintenance of elevators	85		
2. Non-factory workers:	335		
(694 thous. manhours)	(694)		

**Educational background of workers:**

	Techn.	Engn.	Low	Others	Total
Univ. or higher	11	10	2	1	23
Tech. Higher sch.	—	—	1	—	1
Secondary sch.	46	15	—	—	61
Primary school	—	—	—	806	806

**IV. INTERMEDIATE INPUTS**

	Quantity	Value (Drs. Million)
TOTAL actual consumption 1963		1,204
1. Energy inputs: total		16
- Electricity		12
- Brown coal	595 MWH 551 t	4

	Quantity	Value (Drs. Million)
2. Major production materials: total		1,025
- Rolled ferrous products	680 t	82
- Drawn ferrous products	8 t	5
- Non-ferrous metal products (mainly aluminum)	115 t	120
- Cast pig iron	224 t	40
- Sawn timber (oak)	19 e <sup>3</sup>	2
- Sawn timber (conifer)	50 m <sup>3</sup>	4
- Other timber	75 e <sup>3</sup>	5
- Plywood, panel wood & veneers	54 m <sup>3</sup>	1
- Electrical and coupling materials	..	540
- Chemicals	..	8
- Other materials	..	218

**3. Repairs & maintenance: total**

9

4. service inputs non-factor 154

III. ANNUAL PRODUCTION & CAPACITY	Quantity	Value (Drs. Million)
TOTAL actual revenue output 1963		2,007*
- Elevators (residential & industrial)	438 t	1,320
- Other metal structures	104 t	392
- Services	117,000 hours	143
- Assembly work	246,000 hours	152

\* Includes turnover tax on sold products.

**Capacity output:**

- Elevators	460 t	Overall rate of utilisation is 97%.
- Other metal structures	100 t	

Underutilization due to irregular and low-quality supply of materials from co-operating factories.

550 workers on the 1st shift will suffice to fully operate the existing capacity.

**V. VALUE ADDED (1963) (Drs. Million)**

TOTAL (except turnover tax)	783
- Wages of factory workers	292
- Salaries of non-factory workers	163
- Depreciation	26
- Interests paid	102
- Other accumulation	200 1/2
(Turnover tax)	20

**VI. SUPPLEMENT** Future plans: specialisation in the designing of elevators, auxiliary staircases and aluminum venetian blinds (which is expected to reduce the production cost.)

1/ Of which Drs. 106 million belongs to the enterprise.

2/ Gross accumulation includes interest paid.

**SELECTED COEFFICIENTS**

- Mach. & equip. per factory worker on 1st shift: Drs.	677,000
- Value added per employee: Drs.	879,000
- Annual wage per factory worker: Drs.	524,000
- Variable input cost/gross production ratio:	67 %
- Gross accumulation/gross production ratio:	15.2 2/3 %
(at full capacity):	16.2 %
- Level of production at break-even point:	54 % of the 1963 actual level.

FRANCE : 370 - ( 1 )

**MAJOR PRODUCTS:** Electrical motors, industrial and non-industrial. Annual capacity production about 350,000 units (of which 60% are industrial motors) on one shift operation.

**REPORTING UNIT:** Major branch of a two-establishment enterprise with about Fr. 4.5 million capital stock and total employees 1,000 as of 1965. This branch was established in 1912.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( Fr. million)	13.23	1.32
1. Land	.09	.09
2. Land improvements	-	-
3. Buildings	3.31	1.69
4. Other construction works	1.33	.13
5. Machinery & equipment	5.99	1.35
6. Tools & instruments	2.04	.03
7. Vehicles	.29	.02
8. Office furniture & fixtures	.17	.01

Total Bk. value net. deprec.	Avg. Age (Yr.)	Depr. Oper. rate ann. (%)
5.99	10	A ..

**DETAIL OF I.5 (No.)**

Cutting presses

Stamping presses

Lathes

Fraises

Drilling machines

Bath for electrolysis

Centrifuge

Shears

etc.

5.99 10 A ..

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> ( Fr. million)	7.54	.. \$
1. Direct production materials	2.50	
2. Other input materials	.04	
3. Work in process	2.95	
4. Finished products	2.04	

- Actual inventories of finished products 7.1 % of annual gross production

The total increase in inventories from 1964 to 1965 was Fr. 1.36 million, of which Fr. 0.93 was the increase in work-in-process and finished goods.

Capacity of electr. motors: KW

Total load, capacity of trucks: 6 t

Internal electricity generation capacity 600 KW; not actually used in 1965.

**GENERAL CONDITIONS:**

All favourable.

**III. LABOUR** (End of 1965)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	954		
1. Direct production ( .. )	764		
Annual total manhours (000)	(1,316)	( )	( )
- Tooling, adjustment, regulation and milling	174		
- Coiling, connections and cutting	64		
- Operation of fraises and drilling machines for fabrication	12		
- Lathing	98		
- Control of plate form	42		
- Rasping	15		
- Rectification	22		
- Assembly	11		
- Painting	19		
- Packing and dispatching	26		
- Electricians and maintenance	45		
- Repair	8		
- Miscellaneous handling	95		
- Warehouses	15		
2. Auxiliary activities ( .. )	190		

Managerial and technical control

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher		Sr. High sch. or equiv.		Other	
Engl.-born	Other	Engl.-born	Other	Engl.-born	Other
TOTAL	10	13	-	931	
Maintenance	10	13	-		
Direct Production					
Skilled					
Semi-skilled				764	
Unskilled					
Auxiliary Activities					
Skilled					
Semi-skilled				167	
Unskilled					

- Average annual work hours per production worker: 1,730 hours. (not adjusted for the man-days of the newly employed).

- All shops are highly mechanised.

- Manning by shops (except those 118 newly employed) reflects the actual pattern in 1964, when total operatives were 646 persons working altogether 1,819,000 hours. The manning table for those newly employed not available.

- High skills are required particularly in tooling, adjustment, milling and lathing; also in the maintenance shop.

IV. ANNUAL PRODUCTION (1965)			V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION ( Fr. million ) 28.59			TOTAL VALUE OF CONSUMPTION (Fr. million ) 11.65			
Product	Unit	Quantity Unit Pre-Value (Fr.)		Quantity Unit con-Value Unit summed (Fr.)		
Industrial motors			- Electricity	Fr. 38,200	..	
- a) triphase	}	No. 170,887 103 (average)	(Other items are included in V.6).			
- b) two speed						
- c) noiseless						
- d) closed triphase						
- e) closed triphase & diphas						
Non-industrial motore	No.	117,000 92	2. Direct production materials: total		9.33	
Accessories	Fr.	.22 ..	(Details not available)			
Scrap	Fr.	..				
<b>CAPACITY OUTPUT:</b>						
About 20% higher than the 1965 actual production if the existing bottlenecke at outting preeese and colling were eliminated.			3. Subsidies materials: total (included in V. 2).			
Man-hour requirements would be practically proportional to production level.			4. Work performed by sub-contractors ( )			
Unit value of product: Market price f.o.b. before sales tax			5. Repairs & maintenance (materials & services purchased)		.43	
Unit value of enterial: Market price c.i.f.			6. Material inputs for auxiliary activities		.69	
Unit value of product a) varies from Fr. 226 to 1,172;			(includes some expencee classifiable under energy).			
b) Fr. 287 to 1,414; d) Fr. 812 to 878;			7. Non-factor service inputs: total		1.15	
e) Fr. 650 to 3,200.			Of which transport, insurance and storage services purchased separetely Fr. 146 thousand.			
Most of the industrial motore are directly exported; non-industrial motore partly exported.						
<b>VI. VALUE ADDED</b>			<b>SELECTED COEFFICIENTS</b>			
TOTAL 1965 ( Fr. 000 ) 16,939			- Mech., equip., instruments & tools per employee in direct production on 1st shift: Fr. 10,500			
1. Wages & salaries (before income tax)			- Value added per employee: Fr. 17,800			
- Employees in direct production		5,034	- Annual wage per employee in direct production: Fr. 6,600			
- Other employees		3,688	- Variable input costs/gross production ratio: 64.4% <sup>1/</sup>			
2. Other expenditures for employees		4,824	- Gross profit/gross production ratio: 5.7			
3. Annual depreciation allowance		887	(at full capacity : 10.8%)			
4. Rental paid		804	- Level of production at break-even point is approximately 84 % of the 1965 actual level.			
5. Sales & other indirect taxes (less subsidies) (not included in total)		[4,472]				
6. Other gross business income <sup>2/</sup> (before income tax)		1,704				
<b>VII. EXPANSION: HISTORY &amp; PLAN</b>			<b>2. Future Plan</b>			
1. Recent Expansion		Gross equi- pation	a. Investment proposed for the period 1967 to 19 ..			
From 1961 to 1965		or sold	Total value ( ) (Not yet fixed)			
a. Total Investment ( Fr. million )		4.05	Of which: - Mech. & equipment 80 \$			
- Land		-	- Land improv. & bldg. 20			
- Land improvements		-	- Land -			
- Buildings		-	- Others -			
- Other construction work		-	b. Net increase in no. of employees envisaged for the same period:			
- Machinery & equipment		2.75	- Direct production: 90 persons			
- Tools & instruments		.50	- Auxiliary: 10 persons			
- Vehicles		-	c. Purposes: Introduction of new products; overhauling the machining and foundry facilities; other devices to reduce production costs.			
- Office furniture & fixtures		.80				
b. Corresponding increase:		From 1961 to 1965				
In no. of employees		755 954				
In annual gross production		No significant increase				
<b>VIII. SUPPLEMENT</b>						
1/ One half of "Other expenditures for employees" (VI. 2) is considered as a variable cost.						
2/ In 1964, the production was about 10% higher than the 1965 level, though total number of employee was only 789. The 1964 "Other gross business income" was around Fr. 2 million.						

**MAJOR PRODUCTS:** Electrical apparatus and machine parts. Annual capacity output is about Frs. 6.3 million worth of the products on a basis of one shift operation.

**REPORTING UNIT:** A branch of a two-establishment enterprise with capital stock a little over Fr. one million and employees 400 as of 1964. This establishment, founded in 1955, has 163 employees. The other establishment is engaging in manufacture of resistance soldering equipment.

**I. FIXED CAPITAL ASSETS** (end of 1964)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> ( 000 Frs. )	2,131	808
1. Land (5700 m <sup>2</sup> )	238	238
2. Land improvements	-	-
3. Buildings (total floor space 2279m <sup>2</sup> )	278	132
4. Other construction works	-	-
5. Machinery & equipment	980	180
6. Tools & instruments	270	15
7. Vehicles	115	45
8. Office furniture & fixtures	250	198

**DETAIL OF 1,5 (No.)**

Not available

Total bk. value net. depr.	Avg. Age (Yr.)	Depr. rate Oper. Cond.	196 replac. value
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**II. INVENTORIES** (end of 1964)

	Actual	Normal
<b>TOTAL VALUE</b> ( 000 Frs.)	1,230	-8
1. Direct production materials	1,085	-10
2. Other input materials	-	-
3. Work in process	-	-
4. Finished products	195	-

- Normal inventories of finished products  
3.9 % of annual gross production

- Seasonal variations:

Not significant.

Capacity of electr. motors: 300 KW

Total load, capacity of trucks: 23 t

For the recent five years the number of employees has been remaining more or less at the same level, but more than a half of machinery and equipment were installed during this period.

**GENERAL CONDITIONS:** Transportation, public utilities, health recreational and educational facilities, excellent. Residential facilities, fair.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift	<b>EDUCATIONAL BACKGROUND</b> (No. of employees)				Actual hours worked per annum per direct production worker (excluding supervisory staff): 2,210 hours.
				Univ. or higher	Sr. High sch. or equiv.	Other	Others	
<b>TOTAL EMPLOYED</b>	163	-	-					
1. Direct production ( )	83	-	-					
Annual total manhours (000)	(146)	( )	( )					90% of motors occupied.
a. Machining	31							Technological features a) Uses machine tools; also involves plastic moulding. Degree of mechanization and automation are rated 70% and 15%, respectively. b) Degree of mechanisation; 10%. No automation.
b. Pliers and winders assembly	7							
c. Pneumatic assembly	10							
d. Special machines	10							
e. Repair	8							
f. Foremen and other supervisory staff at factory	17							
2. Auxiliary activities ( )	80							
(including prototype making and tooling units)								

- Skilled workers in direct production are engaged in tracing, adjusting and attending special machines. Those in auxiliary activities are engaged in prototype making and tooling.

IV. ANNUAL PRODUCTION (1964)			V. INTERMEDIATE INPUTS (1964)		
TOTAL VALUE OF PRODUCTION ( 000 Frs. ) 5,495.			TOTAL VALUE OF CONSUMPTION ( 000 Frs. ) 1,750		
<u>Product</u>	<u>Unit</u>	<u>Quantity</u> <u>Pre-</u> <u>Value</u> <u>( Fr. )</u>	<u>Quantity</u> <u>Unit</u> <u>consumed</u> <u>( Fr. )</u>	<u>Unit</u> <u>consumed</u> <u>( Fr. )</u>	
a. Pliers for soldering	No.	1,100	1,750		
b. Winders (enrouleurs)	"	2,900	280		
c. Electro-valves	"	5,400	120		
d. Special machines	"	15	40,000		
e. Various accessories and spare parts	000 Frs.	1,070	..		
f. Revenue from repair work done for others.	"	440	..		
* The unit prices are average prices for diverse products within respective categories.			1. <u>Energy &amp; water: total</u> 53		
			- Electricity 000 Kwh 200 236		
			- Gas 000 thermal unit 41 146		
			2. <u>Direct production materials: total</u> 1,555		
			a. Copper and alloys Kg 40,800 5.0		
			b. Steel " 6,240 .9		
			c. Duraluminium " 6,840 5.8		
			d. Plastic " 2,900 15.0		
			e. Others (including packaging materials for auxiliary activities and services purchased. (000 Frs) 1,262		
CAPACITY OUTPUT: 15% higher than the 1964 actual production level. The underutilization was to the bottlenecks in between-factory transport and "pre-series" work. Pneumatics may be produced more depending on order.			- Materials (a) to (d) are supplied by the other establishment of the company and valued at intra-firm accounting prices.		
Unit value of product: Market value f.o.b. before sales tax.			3. <u>Packaging materials: total</u> : Included in 2e.		
Unit value of material: Intra firm accounting price.			4. <u>Work performed by sub-contractors</u> (See VIII ) 118		
- IV(a) and (b) mostly exported, (c) and (d) partly exported.			5. <u>Repairs &amp; maintenance (materials &amp; services purchased)</u> 24		
VI. VALUE ADDED TOTAL 1964 ( 000 Frs. ) 3,745			6. <u>Material inputs for auxiliary activities</u> ) Included in 2e.		
1. Wages & salaries (before income tax)			7. <u>Non-factor service inputs: total</u>		
- Employees in direct production 1,342					
- Other employees 2,075					
2. Other expenditures for employees 24					
3. Annual depreciation allowances 19					
4. Rental paid -					
5. Sales & other indirect taxes (less subsidies) (not included in total) [801]					
6. Other gross business income (before income tax) 285					
VII. EXPANSION: HISTORY & PLAN			SELECTED CONCLUSIONS		
1. <u>Recent Expansion</u>			- Mach., equip., instruments & tools per employee in direct production on 1st shift: Frs. 15,060		
From 1960 to 1964			- Value added per employee: Frs. 22,975.		
a. Total Investment ( 000 Frs. ) 780			- Annual wage per employee in direct production: Frs. 16,169		
- Land -			- Variable input costs/gross production ratio: 56%		
- Land improvements -			- Gross profit/gross production ratio: 5.2% <sup>1/2</sup> / 10.1% <sup>1/2</sup>		
- Buildings -			(at full capacity)		
- Other construction work -			- Level of production at break-even point is approximately 89 % of the 1964 actual level.		
- Machinery & equipment ) 609					
- Tools & instruments )					
- Vehicles 20					
- Office furniture & fixtures 152					
b. Corresponding increase: From 1960 to 1964			2. <u>Future Plan</u> : None		
In no. of employees 160 163			a. Investment proposed for the period 19 to 19		
In annual gross production + 33%			Total value ( ) \$		
			Of which: - Mach. & equipment		
			- Land improv. & bldg.		
			- Land		
			- Others		
			b. Net increase in no. of employees envisaged for the same period:		
			- Direct production:		
			- Auxiliary:		
			c. Purposes:		
VIII. SUPPLEMENT Contract work performed by sub-contractors.					
A small sub-contractor (employees 25) makes castings of duraluminium; another (employees 10) engages in machining of copper. The products are further processed by this establishment.					
1. Prior to intra-firm adjustment.					



India : 370 - ( 1 )

**MAJOR PRODUCTS:** Electrical switch boards, distributing boards, cartridge fuses and industrial motors. Annual capacity of some 200 switch boards, 45,000 other distributing units, 700,000 cartridge fuses, amounting to Rs. 23 million (incl. Rs. 6 million worth motors) on two shifts.

**REPORTING UNIT:** A one - establishment enterprise with total assets Rs.32 million (net worth Rs.12.5 million) and 1,001 employees as of 1964. The enterprise was founded in 1958.

**I. FIXED CAPITAL ASSETS** (end of 1964)

TOTAL BOOK VALUE (Rs. 000)	Before deprec.	After deprec.
	11,310	8,000
1. Land	250	190
2. Land improvements	-	-
3. Buildings (total floor space 13,500 sq. ft.)	4,330	3,880
4. Other construction works	-	-
5. Machinery & equipment	3,790	2,340
6. Tools & instruments	1,370	530
7. Vehicles	490	340
8. Office furniture & fixtures	1,080	720

**DETAIL OF I.5 (No.)**

	Total Bk. value	Avg. Age	Oper. rate	Deprec. rate	1964 replace value
	(Rs. 000)	(Yr.)	(%)	(%)	(Rs. 000)
a. Capstan lathes (3)	80	4	A	15	100
b. Ward 2C lathes (3)	50				60
c. H.M.T. lathes (1)	20				60
d. Milling machines (4)	190				250
e. Topping machine (1)	10				10
f. Guillotines (2)	50				60
g. Pellating machine (1)	20				30
h. Tool and cutter grinders (3)	60				80
i. Moulding machine (1)	90				110
j. Welding machines (3)	30				40
k. Drilling machines (8)	100				130
l. Power presses (10)	260				340
m. Plastic die moulds (3)	260				..
n. Coil winding machines (4)	100				140
o. Dynamic balancing machine (1)	50				80

**II. INVENTORIES**

TOTAL VALUE (Rs. 000)	Actual	Normal
	11,430	- 21 %
1. Direct production materials	5,440	- 8
2. Other input materials		
3. Work in process	2,260	- 30
4. Finished products	3,710	- 27
- Normal inventories of finished products 11 % of annual gross production		
- Seasonal variations: ..		

Capacity of electr. motors: 1,072 KW

Total load, capacity of trucks: 5 t

(o) and (i) were domestically produced; all other items were imported.

**GENERAL CONDITIONS:**

Transport, utilities and community facilities are all excellent.

**III. LABOUR** (1964 average)

	1st shift	2nd shift	3rd shift
TOTAL EMPLOYED	930	71	--
1. Direct production (r. 86)	558	67	--
Annual total manhours (000)	(1,437)	(125)	(--)
a. Machine shop	80	20	
b. Fabrication shop	92	22	
c. Moulding shop	32	8	
d. Assembly shop	121	-	
e. Painting, plating and metal treatment	100	-	
f. General manufacturing shop	133	17	
2. Auxiliary activities (all male)	372	4	
a. Repairs and maintenance	70	-	
b. Technical and managerial control	302 1/2	4	

1/2 Of which 50 are working at a central office located separately from the factory. Annual operating out of the central office is Rs. 165,000 for wages and salaries (included in V1) + Rs. 50,000 for others (incl. in V7).

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other	Other
Engl. B.A.			
Other			
TOTAL	46	7	119
Management	46	7	6
Direct Production			
Skilled			48
Semi-skilled			61
Unskilled			102
Auxiliary Activities			414
Skilled			
Semi-skilled		4	
Unskilled			85
TOTAL			228

- Actual hours worked per annum per direct production worker: 2,499 hours.

- Proportion of motors occupied: 90% for 1st. shift and 86% for 2nd. shift.

**Technological features:**

- Involves turning; dressing, milling and drilling.
- Cutting, bending and welding applied.
- Plastic and bakelite moulding are used.
- Employs riveting mechanical assembly and wiring.
- Involves winding and fabrication.

- Mechanisation: excellent in (o); fair in (a), (b) and (f); poor in (d).

- Automation: fair in (a), (b), (o) and (f); poor in (d).

- **Skilled workers** in direct production are: electricians, turners, fitters, welders, grinders, coil winders, etc.

Those in auxiliary activities are: administrative assistants, sales and purchase assistants, account assistants, etc.

**IV. ANNUAL PRODUCTION (1964)**TOTAL VALUE OF PRODUCTION (Rs. million) 21.41

Product	Unit	Quantity	Unit Price (Rs.)	Value (Rs.)
a. Combination fuse switch boards	No.	1,121		3,294
b. Distribution boards	"	2,706		248
c. Combination fuse switch units	"	19,900		276
d. Overhead busbars and plug-in-boxes	"	18,900		133
e. Cartridge fuses	"	646,500		5
f. Industrial motors	Value in Rs.mil.	5.67		..

Distribution boards were first introduced into the production line in 1961 with an investment of Rs. 0.3 million.

**CAPACITY OUTPUT:** 10% higher than the 1964 actual production level with sufficient labour supply, i.e., additional 10,000 annual man-hours in the first shift. Product - mix is not flexible.

**N.B.** in the late 1950's when the enterprise first started commercial production, the level of employment at production was 80% and 40%, respectively, of the 1964 level.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Electrical sheet steel directly imported.
- Delivery of all materials by road.
- Freight rates are 1.5% for electrical sheet steel, 2% for bolts, nuts, etc., & 3% for insulating materials.

**V. INTERMEDIATE INPUTS (1964)**TOTAL VALUE OF CONSUMPTION (Rs. million) 15.24

1. Energy & water: total	Quantity	Unit Price	Value (Rs.)
- Electricity	000 KWH	1,542	140
- Lubricating oil	Kg.lit.	10.5	1,620
- Water (used but data unavailable)			
<b>2. Direct production materials: total</b>			<b>12.50</b>
a. M.S. sheets, plates, etc.	ton	2,940	920
b. Electrical sheet steel (laminations)	ton	12	1,250
c. M.S. bolts, nuts, screws and washers	ton	18	16,722
d. Non-ferrous metals	ton	203	11,684
e. Iron castings	ton	1,470	2,065
f. Insulating materials	Rs.mil.	0.86	..
g. Other materials	Rs.mil.	2.50	..
h. Paints and varnishes	K lit.	68	10,000
<b>3. Packaging materials: total</b>			<b>1.84</b>
Timber	cu.ft.	43,560	7.00
Others	Rs.mil.	1.54	..
<b>4. Work performed by sub-contractors ( )</b>			<b>..</b>
<b>5. Repairs &amp; maintenance (materials)</b>			<b>0.05</b>
<b>6. Material inputs for auxiliary activities</b>			<b>0.40</b>
Stationery, printing and other administrative charges			
<b>7. Non-factor service inputs: total</b>			<b>0.22</b>
Of which Rs. 120,000 to transportation, insurance and storage			

**VI. VALUE ADDED TOTAL 1964 (Rs. million) 6.17**

1. Wages & salaries (before income tax)		
- Employees in direct production	1.51	
- Other employees	1.94	
2. Other expenditures for employees	0.10	
3. Annual depreciation allowance	0.35	
4. Rental paid		
5. Sales & other indirect taxes (less subsidies) (not included in total)	0.42	
6. Other gross business income (before income tax)	2.27	

**KEY-WORD COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 9,250 (8,900 1/2)
- Value added per employee: Rs. 6,170
- Annual wage per employee in direct production: Rs. 2,410
- Variable input costs/gross production ratio: 75%
- Gross profit/gross production ratio: 10.6%
- (at full capacity : 11.4%)
- Level of production at break-even point is approximately 57 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition	% of repair
From 1962 to 1964		
a. Total Investment (Rs. million)	10.42	
- Land	0.86	-
- Land improvements	-	-
- Buildings	3.82	5
- Other construction work	0.73	3
- Machinery & equipment	3.38	15
- Tools & instruments	0.34	7
- Vehicles	0.53	7
- Office furniture & fixtures	0.83	5
b. Corresponding increase:	From 1962 to 1964	
In no. of employees	805	1,001
In annual gross production (in value terms)	+ 35%	

2. Future Plan: None
- a. Investment proposed for the period 19 to 19  
Total value ( )  
Of which: - Mach. & equipment \$  
- Land improv. & bldg.  
- Land  
- Others
- b. Net increase in no. of employees envisaged for the same period:  
- Direct production:  
- Auxiliary:
- c. Purposes:

**VIII. SUPPLEMENT**

Structure of liquid assets and current liabilities of enterprise (end of 1964; Rs. million)

Cash on hand and in bank	2.57	Taxes payable	3.40
Marketable securities and bonds	1.19	Accounts payable	12.63
Accounts receivable	8.15	Bank overdraft	2.94
Loans and advances	0.98		

1/ Numerator is the 1964 replacement value; denominator includes the repair and maintenance crew.

**MAJOR PRODUCTS:** - Transformers, switch gears, control gears, capacitors, motors, generators and other heavy electrical machinery. Due to relatively long period needed for attaining full capacity operation for these products, the enterprise is still operating at some 25% below the break-even point. But the break-even point will most likely be surpassed in one or two years.

**REPORTING UNIT:** - A huge one-establishment enterprises (founded in 1960) with total assets of Rs. 1,100 million, (net worth of Rs. 500 million) and 13,227 employees as of 1965.

**I. FIXED CAPITAL ASSETS (end of 1965)**

TOTAL BOOK VALUE (Rs. million)	Before deprec.	After deprec.
1. Land	-	-
2. Land improvements	0.4	0.4
3. Buildings	176.5	159.0
4. Other construction works	48.5	25.4
5. Machinery & equipment	253.0	185.6
6. Tools & instruments	-	-
7. Vehicles	2.3	1.3
8. Office furniture & fixtures	11.0	5.0

**DETAIL OF I.5 (No.)**

	Total Bk. value Ref. descr.	Avr. Age (Yr.)	Depr. Oper. rate Cond. (%)	1965 replac. value
a. Plate flattening press (1)	} Rs. 97.5 million	} 6 yrs. A	} 10%	} Rs.107 million
b. 100 ton gap press (1)				
c. Radial drilling machines (7)				
d. Universal bending and folding mach. (1)				
e. Power press (1)				
f. Plate straightening press (1)				
g. X-ray equipment (1)				
h. S.S. & S.C. lathes (3)				
i. Vertical milling machines (2)				
j. Planing machine (1)				
k. Horizontal floor borer (1)				
l. Vertical boring machines (3)				
m. Hydraulic copying lathes (2)				
n. Short blast plant (1)				
o. Draw out shaping machines (5)				
p. Hydraulic presses (1)				
q. 100 ton core building presses (3)				
r. Steam presses for armature coil pressing (1)				
s. Varnish impregnating plant (1)				
t. Dynamic balancing machines (2)				
u. Bending lathe (5)				

**II. INVENTORIES (end of 1965)**

TOTAL VALUE (Rs. million)	Actual	Normal
1. Direct production materials	} 67.03	} -16
2. Other input materials		
3. Work in process	39.79	-42
4. Finished products	27.33	-30

- Normal inventories of finished products 1/3 % of annual gross production 1/

- Seasonal variations: None.

1/ The normal rate of inventory accumulation was represented by the 1964 level. The increase over the 1964 level was Rs.10 mil. in 1+2, Rs.25 mil. in 3+4.

Capacity of electr. motors: 17,500 KW  
" " " furnaces: 250 KW  
Total load, capacity of trucks: 15 t

- The enterprise has 25,000 KW installed thermo-electrical capacity for emergency and auxiliary purposes, and produced 710,000 KWH in 1965.

- All machinery was imported, except for the power press which was domestic ally made and the radial drilling machines and X-ray equipment which were partly domestically made.

**EXTERNAL CONDITIONS:**

All external conditions are excellent.

**III. LABOUR (1965 average)**

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 13,227	8,003	5,224	--
1. Direct production (7,999 m.)	4,003	3,996	--
Annual total manhours (000)	(7,261)	(7,261)	( )
a. Steam turbine department	43	43	
b. Water turbine	44	44	
c. Heavy rotating plant	13	13	
d. Industrial machine department	53	52	
e. Traction motors department	124	124	
f. Transformer shop	378	378	
g. Capacitor department	39	29	
h. Switch gear department	641	640	
i. Control gear department	947	947	
j. Fabrication department	375	376	
k. Foundry department	243	243	
l. Press shop	13	13	
m. Coil insulation shop	224	224	
n. Maintenance shop	356	356	
o. Outside erection	9	8	
p. Tools and gauges	162	162	
q. Factory maintainors	27	27	
r. Traffic department	75	75	
s. Technical service	7	6	
t. Inspection	138	137	
u. Equipment manufacturing	56	55	
v. C.E.E. department	46	45	

2. Auxiliary activities (5,228 m.) 4,000 1,228 --  
\* Technical and managerial control 4,000 1,228

\* Of which 1,500 work in the central office, with annual wages and salaries amounting to about Rs. 4 million (included in VI. 1.) and Rs. 0.5 million for other operating costs (included in V. 7.)

**EDUCATIONAL BACKGROUND (No. of employees)**

Univ. or higher		Sr. High sch. or eqv.	
Engi-neers	Other	Manu-fact.	Other
TOTAL	840	700	6,300
Management	840	-	-
Direct Production	-	-	-
Skilled	-	600	5,000
Semi-skilled	-	-	359
Unskilled	-	-	400
Auxiliary Activities	-	-	1,640
Skilled	-	100	1,200
Semi-skilled	-	-	132
Unskilled	-	-	100
	-	-	396
	-	-	2,460

- Actual hours worked per annum per direct production workers: 1,815 hours

- Proportion of productive facilities occupied: 96% of motors in both shifts; 92% of furnaces in 1st. and 88% in 2nd. shift.

- Technological features: This being a jobbing industry, mechanisation and automation is not applicable unlike other process industries. Most of the products are manufactured

to suit industrial customer's requirements which demands specialised engineering design and high degree of skill in manufacturing.

- Skilled workers in direct production are: chargeheads, foremen and machine operators.

**IV. ANNUAL PRODUCTION (1965)**TOTAL VALUE OF PRODUCTION (Rs. million) 136.3

Product	Unit	Quantity produced	Unit Value (Rs.)
a. Switch gears and control gears	No.	2,263	17,100
b. Transformers	MVA	1,241	20,400
c. Welding transformers	No.	216	89,000
d. Capacitors	KVAR	80,000	559
e. Traction motors generators & auxiliary mach.	No.	93	51,000
f. Industrial motors	No.	85	32,000
g. Heavy rotating machines	Rs.mil.	0.91	..

**CAPACITY OUTPUT:** Hard to estimate (see VIII, 1/)

However, there was definitely a significant extent of underutilisation of the capacity due to insufficient supply of production materials, a delay in obtaining technical clearance for imported materials, and inadequate compliance of indigenous materials with their specifications. The product - mix between switch gears, traction control gears and traction motors is flexible.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

- Production materials (b) and (f) are imported and transported by railroad and inland waterways; (b) also by road. The freight rate is approximately 5% for (b).

**V. INTERMEDIATE INPUTS (1965)**TOTAL VALUE OF CONSUMPTION (Rs. million) 56.7

1. Energy & water: total	Quantity consumed	Unit Value (Rs.)	Total
- Water (price not given)	000 lit.	1,360	..
- Electricity	000 KWH	328,400	90
- Coal	000 ton	5,900	34
- Petroleum & diesel oil	000 lit.	242	..
* Of which 710 are produced internally + not counted in total.			
<b>2. Direct production materials: total</b>			<b>48.21</b>
a. M.S. plates, sheets and sections	ton	8,300	800
b. Electrical steel sheets	ton	1,929	2,500
c. M.S. bolts and nuts	Re.mil.	1.95	..
d. Non-ferrous metals	"	6.24	..
e. Insulations	"	8.26	..
f. Copper conductors, cables etc.	"	6.26	..
g. Pig iron	ton	445	272
h. High alloy steels	Rs.mil.	0.95	..
i. Others	"	12.97	..
<b>3. Processing materials: total</b>			<b>0.83</b>
- Wooden materials	Re.mil.	0.68	
- Others	"	0.15	
<b>4. Work performed by sub-contractors (materials &amp; services purchased)</b>			<b>2.49</b>
<b>6. Material inputs for auxiliary activities</b>			<b>2.80</b>
- Stores, spare parts and electr. generation		2.60	
- Stationery and printing		0.20	
<b>7. Non-factor service inputs: total</b>			<b>1.60</b>
- Transportation, insurance and storage		1.30	
- Other services purchased		0.30	

**VI. VALUE ADDED TOTAL 1965 (Rs. million) 79.6**

1. Wages & salaries (before income tax)	
- Employees in direct production	13.4
- Other employees	26.2
2. Other expenditures for employees	37.4
3. Annual depreciation allowance for	24.7
4. Rental paid (.18 for bldgs.; .02 machinery)	0.2
5. Sales & other indirect taxes (less subsidies) (not included in total)	8.0
6. Other gross business income (before income tax)	-22.3

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 63,300
- Value added per employee: Rs. 6,020
- Annual wage per employee in direct production: Rs. 1,675
- Variable input costs/gross production ratio: 46.3%
- Gross profit/gross production ratio: - 16.4%
- Level of production at break-even point is approximately 130 % of the 1965 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition	% of repair
From 1963 to 1965		
a. Total Investment (Rs. million)	254.8	
- Land	-	-
- Land improvements	3.9	5
- Buildings	75	15
- Other construction work	10.1	-
- Machinery & equipment	158.3	25
- Tools & instruments	-	-
- Vehicles	2.9	3
- Office furniture & fixtures	9.6	5
b. Corresponding increase:	From 1963 to 1965	
In no. of employees	11,394	13,227
In annual gross production (in value terms)		+ 130%

**2. Future Plan : No future plans.****VIII. SUPPLEMENT CONTINUED :****Structure of liquid assets and current liabilities (end of 1965; Rs. million).**

Cash on hand and in bank	3.7	Accounts payable	155.3
Accounts receivable	338.2	Deposits from contractors', business, incidental suspense, etc.	26.6

**VIII. SUPPLEMENT**

1/ The annual rate of utilisation of installed capacity as applicable to heavy engineering electrical industry is quite difficult to assess due to various factors involved in operating the sophisticated types of equipment, particularly in the initial stage of commercial production. The gestation period for each type of product to reach a full-capacity production level may be: switch gears, 8 years; transformers and traction motors, 5 years; industrial motors and hydraulic turbines, 6 years; control presses, 7 years

2/ As in the case of all other enterprises, the value added is derived as the difference between annual production and annual consumption of intermediate materials, and not as the difference between annual sales and purchases. From 1964 to 1965, the net increase in inventories amounted to some Rs. 35 million. Thus, the normal P/L statement gave nearly 58 million deficit for VI. 6. In 1964, the production was 60% of the 1965 level. The enterprise is, however, considered as an efficient unit from the standpoint of long-run schedule, except that a few more years are needed to complete its over-all gestation requirements.

India : 370 - ( 3 )

**MAJOR PRODUCTS:** - Electric motors: Declared to be capable of producing 13,800 electric motors annually (with an investment of Rs. 0.2 million in tool shop facilities) and on partial two-shift operation. (The current level of production is some 5,500 units).

**REPORTING UNIT:** - An independent one-establishment enterprise with total assets Rs. 2 million (net worth Rs. 0.8 million) and employees 160 as of 1964. Founded in 1959.

I. FIXED CAPITAL ASSETS (end of 1964)						II. INVENTORIES (end of 1964)		
		Before deprec.	After deprec.			Actual	Normal	
TOTAL BOOK VALUE (Rs. 000)		872	552		TOTAL VALUE (Rs. 000)	1,026	- 9	%
1. Land (on a hire purchase basis)		-	-		1. Direct production materials	740	-10	
2. Land improvements		-	-		2. Other input materials	-	-	
3. Buildings		114	94		3. Work in process	88	- 5	
4. Other construction works		-	-		4. Finished products	198	-10	
5. Machinery & equipment		531	335		- Normal inventories of finished products 8.9% of annual gross production			
6. Tools & instruments		106	51		- Seasonal variations: Not significant.			
7. Vehicles		34	16					
8. Office furniture & fixtures		87	56					
		Total Bk. value	Avg. Age (Yr.)	Degr. rate (%)	1964 replace. value			
<b>DETAIL OF I.5 (No.)</b>								
a. Balancing machine (1)		32.0	1	A 15	34.0			
b. Moulding machine (1)		9.3	1	A 10	11.0			
c. Sand mill (1)		11.8	1	A 10	12.0			
d. Turret lathes (2)		114.2	146	A 10	116.5			
e. Cylinder grinder (1)		64.3	6	A 12	65.0			
f. Vertical boring machine (1)		77.0	5	A 10	78.0			
g. Centre lathe (1)		22.2	4	B 10	22.5			
h. Tool grinder (1)		5.3	4	A 10	6.0			
i. Radial drilling machine (1)		15.8	6	A 10	16.4			
j. Surface grinder (1)		14.6	5	A 12	15.5			
Subtotal		366.5			376.9			

Capacity of electr. motors: 94 KW  
 " " " furnaces: 5 KW  
 Total load, capacity of trucks: 1 t

With the exception of b), c), and g) which were produced domestically, the machines were all imported. Average age of machinery (69% of total) is 4 years.

The firm is yet to attain a balance in the overall capacity; a large scale expansion to more than quadruple the present capacity is being envisaged for the next 5 years (see VIII).

**GENERAL CONDITIONS:**  
 Transportation, water and community facilities, fair. Electricity and gas, poor.

III. LABOUR (1964 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of males)			
TOTAL EMPLOYED		142	18	-	Univ. or higher		Sr. High sch. or	
1. Direct production (m. 100 f. 10)		95	15	-	Mgt. staff		Other	
Annual total manhours (000)		(237)	(38)	( )	TOTAL		TOTAL	
a. Machine shop		30	10		3	30	49	78
b. Winding section		20	5		3	5	-	-
c. Foundry		13	-		<b>Direct Production</b>			
d. Grinding		5	-		Skilled			
e. Assembly		11	-		Semi-skilled			
f. Painting		6	-		Unskilled			
g. Testing		5	-		<b>Auxiliary Activities</b>			
h. Packing		5	-		Skilled			
					Semi-skilled			
					Unskilled			
2. Auxiliary activities (m. 47 f. 3)		47	3		TOTAL			
Management, supervision and auxiliary activities		47	3		TOTAL			

- Actual hours worked per annum per direct production worker : 2,500 hours.

- Proportion of productive facilities occupied : For motors 9% on 1st. shift and 2% on 2nd. shift. For furnaces, 100% on 1st. shift and 50% on 2nd. shift.

- **Technological features:**  
 a): Machining operations.  
 b): Winding of motor coil.  
 c): Casting of motor components.  
 d): Smoothing of outer surfaces and edges.  
 e): Assembling motor components.  
 g): Testing of motor performance.

- Degree of mechanisation is fair in a), b), and g), poor in d) and e), and outdated in c). Automation is fair in b) and g), poor in a), d) and e), and outdated in c).

- **Skilled workers** in direct production are those engaged in tool room working, tool setting, machine operating, testing and assembling. Those in auxiliary activities are engaged in sales, purchase, stores, labour welfare, accounts and administration.

**IV. ANNUAL PRODUCTION (1964)**TOTAL VALUE OF PRODUCTION (Rs. 000 ) 2,009

Product	Unit	Quantity	Unit Price (Rs.)	Value (Rs.)
Electric motors	No.	5,511	364.5*	

\* Average prices for motors of various specifications.

**CAPACITY OUTPUT:** 150% higher than the 1964 actual

production level with an investment of Rs. 0.2 million in tool room facilities. Additional manhour requirements are 70,000 on the 1st. shift and 20,000 on the 2nd shift. The underutilisation is due to insufficient supply of production materials. Various types of motors can be produced with the present facilities.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market prices c.i.f.

- V 2 d) is domestically produced with a significant amount of import content. The other production materials including energy and packing materials are of domestic origins. Freight rates are: 20% for coal; 10% for petroleum and other liquid fuels, 5% for V 2 d), f) and g), 3% for other items in V 2, and 2% for wooden packing material.

**V. INTERMEDIATE INPUTS (1964)**TOTAL VALUE OF CONSUMPTION (Rs. 000 ) 1,376

Item	Unit	Quantity	Unit Value (Rs.)	Total Value (Rs.)
<b>1. Energy &amp; water: total (including 1,335 l. petroleum at Rs. 0.85/l. and 1,135 l. other fuel oil at Rs. 0.6/l.)</b>				
- Electricity	000 kWh	81.4	210	
- Coal	ton	89	70	
- Oxygen	ou. m.	903	2.9	
- Acetylene	ou. m.	716	8.4	
<b>2. Direct production materials: total</b> <u>1,224</u>				
a. Shafting	ton	35	785	
b. Special steel stampings	ton	93	4,100	
c. Copper wire	ton	25	12,500	
d. Bearings	No.	12,500	12	
e. Cables	000 m	14.6	690	
f. Castings	ton	150	1,200	
g. Aluminium	ton	3	4,600	
h. Copper ingots and strips	ton	27	3,350	
<b>3. Packaging materials: total</b> <u>41</u>				
3,816 units wooden material (Rs. 10 each); 4,034 polythene bags (Rs. 0.6 / bag).				
<b>4. Work performed by sub-contractors ( )</b> <u>-</u>				
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b> <u>14</u>				
<b>6. Material inputs for auxiliary activities</b> <u>43</u>				
Administration, welfare and transportation				
<b>7. Non-factor service inputs: total</b> <u>24</u>				
Of which transportation, insurance and storage services (purchased separately) Rs. 15,000				

**VI. VALUE ADDED TOTAL 1964 (Rs. 000 ) 633**

1. Wages & salaries (before income tax)	277
- Employees in direct production	(..)
- Other employees	(..)
2. Other expenditures for employees	63
3. Annual depreciation allowance	61
4. Annual installment for the hire-purchase of land.	23
5. Sales & other indirect taxes (less subsidies) (not included in total)	[ 10 ]
6. Other gross business income (before income tax)	209

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 6,705
- Value added per employee: Rs. 3,956
- Annual wage per employee Rs. 1,731 1/2
- Variable input costs/gross production ratio: 73.7 % 2/
- Gross profit/gross production ratio: 10.4 %
- (at full capacity : 19.9 %)
- Level of production at break-even point is approximately 61 % of the 1964 actual level.

**VII. EXPANSION: HISTORY & PLAN**

Item	Gross acquisition	% of repair
<b>1. Recent Expansion</b>		
From 1961 to 1964		
a. Total Investment (Rs. 000 )	322	
- Land	-	-
- Land improvements	-	-
- Buildings	53	3
- Other construction work	-	-
- Machinery & equipment	138	25
- Tools & instruments	18	-
- Vehicles	38	15
- Office furniture & fixtures	75	15
b. Corresponding increase:	From 1961 to 1964	
In no. of employees	90	160
In annual gross production (Rs. million)	.76	2.01

**2. Future Plan**

- a. Investment proposed for the period 1965 to 1970
- Total value (Rs. million) 8
- Of which: - Mach. & equipment 40 %
- Land improv. & bldg. 15
- Land -
- Others (product development, working capital, etc.) 45
- b. Net increase in no. of employees envisaged for the same period: - Direct production: - Auxiliary:
- c. Purposes: Introduction of higher capacity motors and dial casting, improved machining and winding processes; largely balanced expansion of existing capacity in the same location and in a new locality; and improvement of a tool room and testing laboratory.

**VIII. SUPPLEMENT****Structure of liquid assets and current liabilities (end of 1964; Rs. 000.)**

Cash on hand and in bank	39	Accounts payables <sup>a</sup>	233
Marketable securities and bonds	40	Short-term borrowings from commercial banks	548
Accounts receivable	334	Other short-term loans	330
Loans and advances	62		

(\* Owing to the initial losses, no provision of income tax was made in 1964 as well as in 1963.)

1/ Wages and salaries divided by total number of employees.

2/ Two thirds of wages and salaries are regarded as variable cost.

India : 370 - ( 4 )

**MAJOR PRODUCTS:** P.V.C. and paper insulated cables (up to 33 KV). Annual installed capacity is about 2,200 kilometres of insulated cables amounting to about Re. 45 million on a three-shift operation.

**REPORTING UNIT:** A one-establishment enterprise with total assets Re. 33 million (net worth Re. 17 million) and 620 employees as of 1965. Founded in 1945.

I. FIXED CAPITAL ASSETS		On 31.3.1964 After deprec.	On 31.3.1965 After deprec.	II. INVENTORIES (end of 1965)			
TOTAL BOOK VALUE (Rs. 000)		20,894	15,700	TOTAL VALUE (Rs. 000)	9,141 + 10 %		
1. Land		108	108	1. Direct production materials	} 5,008 + 20		
2. Land improvements		-	-	2. Other input materials			
3. Buildings		5,550	4,631	3. Work in process		1,676 - 14	
4. Other construction works		257	200	4. Finished products		2,457 + 2	
5. Machinery & equipment		14,608	10,458	- Normal inventories of finished products 6.1 % of annual gross production			
6. Tools & instruments		-	-	- Seasonal variations:			
7. Vehicles		130	76	No seasonal variations.			
8. Office furniture & fixtures		241	227	Capacity of electr. motors: 470 KW			
		Total Bk. value	Avg. Age	Depr. rate	1965 replace value	Total load, capacity of trucks: 7 t	
<b>DETAIL OF I, 5 (No.)</b>		Rs. 14.61 million	2	A	10%	Rs. 16.32 million	Length of railway tracks: 0.5 Km.
a. Wire drawing machines (3)	}						- All machinery was imported except (e) and (h), which were partly domestically produced.
b. Stranding machines (4)							
c. Paper insulating machines (9)							
d. Laying-up machines (4)							
e. Impregnating machines (4)							
f. Lead presses (2)							
g. Armouring machines (4)							
h. PVC extruders (3)							
i. Testing equipment (2)							
						<b>EXTERNAL CONDITIONS:</b>	
						All external conditions are excellent.	

III. LABOUR (1965 average)		1st shift	2nd shift	3rd shift	EDUCATIONAL BACKGROUND (No. of employees)				- Actual hours worked per annum per direct production worker: 2,190 hours.
TOTAL EMPLOYED	620	333	159	128	Univ. or higher		Sr. High sch. or equiv.		
1. Direct production (all male)		180	159	128	Manag.	Other	Unskilled		
Annual total manhours (000)		(502)	(502)	(199)	TOTAL		TOTAL		- Mechanisation and automation is fair in all shops.
a. Wire drawing section		25	23	20	4	13	73	530	
b. Stranding section		27	25	20	Direct Production		Semi-skilled		- Skilled workers in direct production perform wire drawing, stranding, paper lapping, cable laying, drying and impregnation, lead sheathing, armouring and servicing, etc.
c. Paper lapping section		17	14	10	Semi-skilled		Unskilled		
d. Laying section		26	24	21	Unskilled		223		In auxiliary activities they are maintenance crew, stenotypists, accountants, stores and purchase assistants.
e. Impregnating section		37	32	28	Auxiliary Activities		Semi-skilled		
f. Lead extrusion section		20	15	10	Semi-skilled		Unskilled		
g. Armouring section		18	16	12	Unskilled		80		
h. Testing laboratory		10	10	7					
2. Auxiliary activities (all male)		153	-	-					
a. Maintenance		30							
b. Technical and managerial control		123							

**IV. ANNUAL PRODUCTION (1965)**TOTAL VALUE OF PRODUCTION ( Rs. 000 ) 41,385

Product	Unit	Quantity Produced	Unit Value (Rs.)
a. P.V.C. insulated cables (up to 33,000 V)	Km.	970	7,090 *
b. Paper insulated cables (up to 33,000 V)	Km.	971	34,890 *
c. Scrap	Rs. 000	680	..

\* Average price: The prices of each type vary from Re. 3/m. to Re. 80/m.

**CAPACITY OUTPUT:**

10% higher than the actual 1965 production level with sufficient supply of raw and intermediate materials and additional 12,000 man-hours on the 1st shift.

Size of cables up to 33 KV can be changed.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

Direct production materials (a), (c), (d), (e), (f) and (p) are directly imported; (b), (g) and (k) contain significant amounts of imported goods; all others are domestically made.

Freight rates vary between 1½ and 3½ %.

**V. INTERMEDIATE INPUTS (1965)**TOTAL VALUE OF CONSUMPTION ( Rs. 000 ) 29,039

1. Energy & water: total	Quantity	Unit value	Total
	Unit	(Rs.)	
- Water	000 Kl.	24.8	570
- Electricity	000 KWH	3,541	105
- Petroleum	Kl.	47	816
- Other fuel oils	Kl.	1,436	259
- Lubricating oil	Kl.	876	104
<b>2. Direct production materials: total</b>			<b>25,720</b>
a. Electrolytic copper wire	ton	358	5,146
b. Aluminium rods	"	1,142	4,472
c. Enamelled copper wire	"	0.42	19,036
d. Tin	"	4.2	17,894
e. Lead ingots	"	2,562	3,324
f. Steel wire	"	759	1,844
g. Steel tape	"	1,149	1,716
h. Brass and rods	"	1.2	11,299
i. Wire nails	"	30	1,435
j. Hoop iron	"	9	1,792
k. P.V.C. compound	"	325	7,591
l. Paper	"	297	3,288
m. Jute	"	38	1,670
n. Heesian cloth	Km.	1,800	225
o. Cotton cloth	m	150	1,096
p. Impregnated compound	ton	240	2,957
q. Paints and varnishes	kl	7	6,440
r. Others	Rs. 000	1,896	729
<b>3. Packaging materials: total (wooden drums)</b>			<b>729</b>
<b>4. Work performed by sub-contractors ( )</b>			<b>—</b>
<b>5. Repairs &amp; maintenance (materials &amp; services purchased)</b>			<b>633</b>
<b>6. Material inputs for auxiliary activities</b>			<b>826</b>
- Stationery and printing		81	
- General administrative charges		745	
<b>7. Non-factor service inputs: total</b>			<b>243</b>
- Transportation, insurance and storage		124	
- Communications, advertising, etc.		119	

**VI. VALUE ADDED TOTAL 1965 (Rs. 000 ) 12,346**

1. Wages & salaries (before income tax)	
- Employees in direct production	631
- Other employees	657
2. Other expenditures for employees	1,492
3. Annual depreciation allowance	2,972
4. Rental paid (for buildings)	13
5. Sales & other indirect taxes (less subsidies) (not included in total)	16
6. Other gross business income (before income tax)	6,581

**SELECTED COEFFICIENTS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 81,200
- Value added per employee Rs. 19,500
- Annual wage per employee in direct production: Rs. 1,351
- Variable input costs/gross production ratio: 67.7%
- Gross profit/gross production ratio: 15.9% (at full capacity : 17.4%)
- Level of production at break-even point is approximately 51 % of the 1965 actual level.

**VII. EXPANSION: HISTORY & PLAN**

1. Recent Expansion	Gross acquisition	% of repair
From 1963 to 1965		
a. Total Investment ( Rs. 000 )	22,486	
- Land	3	-
- Land improvements	-	-
- Buildings	5,190	2
- Other construction work	-	-
- Machinery & equipment	16,974	5
- Tools & instruments	-	-
- Vehicles	89	1
- Office furniture & fixtures	230	-
b. Corresponding increase:	From 1963 to 1965	
In no. of employees	472	620
In annual gross production (Rs. million)	32.25	41.39

**2. Future Plan**

- a. Investment proposed for the period 1967 to 1969  
Total value (Rs. million) 10  
Of which: - Mach. & equipment 85 %  
- Land improv. & bldg. 15  
- Land -  
- Others -
- b. Net increase in no. of employees envisaged for the same period: - Direct production: 300  
- Auxiliary: 100
- c. Purposes: Introduction of new products, such as opacitors, trailing cables, etc.; and largely balanced expansion of the existing capacity in the same location.

**VIII. SUPPLEMENT**

Structure of liquid assets and current liabilities (end of 1965; Rs. 000).

Cash on hand and in bank	134	Taxes payable	1,944
Accounts receivable	8,057	Accounts payable	3,159



India : 370 - ( 5 )

**MAJOR PRODUCTS:** Paper-insulated electrical cables; annual capacity about 1,000 kilometres on partial 3 - shift operation.

**REPORTING UNIT:** A new one-establishment enterprise with total assets Rs. 38 million, (net worth Rs. 10 million) and 351 employees as of 1965. The establishment was founded in 1962 and started commercial prod. in 1963.

**I. FIXED CAPITAL ASSETS** (end of 1965)

	Before deprec.	After deprec.
<b>TOTAL BOOK VALUE</b> (Rs. million)	21.68	17.24
1. Land	0.04	0.04
2. Land improvements	-	-
3. Buildings	4.52	4.13
4. Other construction works	-	-
5. Machinery & equipment	16.34	12.47
6. Tools & instruments	0.44	0.35
7. Vehicles	0.03	0.03
8. Office furniture & fixtures	0.31	0.22

**DETAIL OF I.5 (No.)**

	Total Bk. value	Avg. Age	Oper. Cond.	Depr. rate (%)	1965 replace value
a. Wire drawing machines (3)	Rs. 11.44 million	3	A	10%	Rs. 12.5 million
b. 7 wire stranding machine (1)		3	A		
c. 19 wire stranding machines (1)		2	A		
d. 61 wire stranding machine (1)		2	A		
e. Paper lapping machine (1)		3	A		
f. Laying-up machines (2)		2	A		
g. Impregnation banks (5)		2	A		
h. Head press (2)		3	A		
i. Armouring machines (2)		3	A		

**II. INVENTORIES**

	Actual	Normal
<b>TOTAL VALUE</b> (Rs. million) (end of 1965)	14.73	-28 %
1. Direct production materials	8.35	-28
2. Other input materials		
3. Work in process	1.40	+10
4. Finished products	4.98	-30

- Normal inventories of finished products 26 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 588 KW

Total load, capacity of trucks: - t  
Nominal installed capacity of electricity generation: 550 KW. Actual production in 1965: 105,400 KWH.

-All machinery was imported.  
-Average age of machinery: 2.5 years.  
-In 1965, the establishment was still at the stage of initial installation and operating some 25% below the break-even point, which will be surpassed by the next year.

**EXTERNAL CONDITIONS:**

Local area transport is excellent; long distances transport and residential facilities are sufficient; all others are inadequate

**III. LABOUR** (1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b> 351	219	112	20
1. Direct production ( all male )	183	102	20
Annual total manhours (000)	( 460 )	( 256 )	( 50 )
a. Bars wire section	40	20	-
b. Paper lapping section	30	20	-
c. Impregnation section	38	22	10
d. Lead sheathing section	30	17	8
e. Armouring section	25	15	-
f. Repair and maintenance	20	8	2
2. Auxiliary activities ( all male )	36	10	-
Managerial, technical and other activities	36	10	-

**EDUCATIONAL BACKGROUND** (No. of employees)

Univ. or higher	Sr. High sch. or equiv.	Other		
		Engl- mstrs	Other	
TOTAL	4	13	20	314
Management	4	6	2	-
Direct Production	-	-	-	160
Skilled	-	-	-	80
Semi-skilled	-	-	-	65
Unskilled	-	-	-	-
Auxiliary Activities	-	7	18	-
Skilled	-	-	-	-
Semi-skilled	-	-	-	-
Unskilled	-	-	-	9

- Actual hours worked per direct production worker: 2,510 hours.

- Proportion of motors occupied: 80% in 1st., shift 50% in 2nd., and 20% in 3rd.

- Mechanisation and automation: moderate in all shops.

- Skilled workers in direct production engage in wire drawing, stranding, paper

lapping, cable laying, drying, impregnating, lead sheathing, armouring, etc.

In auxiliary activities they are administrative assistants, sales and purchase assistants, accountants, etc.

**IX. ANNUAL PRODUCTION (1965)**TOTAL VALUE OF PRODUCTION ( Rs. million ) 12.94

Product	Unit	Quantity Pro- duced	Unit Value ( Rs. )
Paper insulated cables (low tension and high tension cables up to 33 KV. )	Km.	523	24,750 *

\* Weighted average price.

**CAPACITY OUTPUT:**

100% higher than the actual 1965 production level with sufficient supply of labour and raw materials and training facilities of workers. Cables of varying sizes can be made with the present production facilities.

Unit value of product: Market value f.o.b. before sales tax  
Unit value of material: Market price c.i.f.

Production materials (a), (b), (e), (h), and (k) contain significant amounts of imports and transported by sea with a freight rate of 8 to 9%. The others are domestically made and transported by railroad and road with a freight rate of 3 to 4%.

**V. INTERMEDIATE INPUTS (1965)**TOTAL VALUE OF CONSUMPTION ( Rs. million ) 10.01

1. Energy & water: total	Quantity	Unit	Value (Rs.)
• Of which 105,000 KWH internally generated and not counted in total.			
- Water	000 lit.	16,200	0.22
- Electricity	000 KWH	1,512	3.08
- Petroleum	000 lit.	742	2.00
- Other fuel oils	000 lit.	10.75	1.50
- Lubricating oils	000 lit.		
2. Direct production materials: total			8.51
a. Copper rods	ton	90	4,800
b. Aluminium rods	ton	461	4,440
c. Lead	ton	1,262	2,440
d. Steel wire	ton	27	2,148
e. Steel tapes	metre	703	1,980
f. Bars and rods	ton	46	826
g. PVC compound	ton	2	8,000
h. Insulating paper	ton	185	3,021
i. Jute yarn	ton	15	1,733
j. Hessian cloth	000 m.	287	812
k. Impregnating compound	ton	152	3,039
l. Others	Rs. million	0.18	..
3. Packaging materials: total			0.85
Wooden materials	Rs. 000	594	
Others	Rs. 000	261	
4. Work performed by sub-contractors ( )			-
5. Repairs & maintenance (materials & services purchased)			0.05
6. Material inputs for auxiliary activities			0.04
Stationery and printing			
7. Non-factor service inputs: total			0.15

**VI. VALUE ADDED TOTAL 1965 ( Rs. million ) 2.91**

1. Wages & salaries (before income tax)	0.93
- Employees in direct production	(..)
- Other employees	(..)
2. Other expenditures for employees	0.35
3. Annual depreciation allowance	2.46
4. Rental paid	-
5. Sales & other indirect taxes (less subsidies) (not included in total)	[ 0.27 ]
6. Other gross business income <sup>1/</sup> (before income tax)	- 0.81

**SELECTED CONCLUSIONS**

- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 100,000
- Value added per employee: Rs. 8,350
- Annual wage per employee Rs. 2,650 <sup>2/</sup>
- Variable input costs/gross production ratio: 81%
- Gross profit/gross production ratio: - 5.8%
- (at full capacity : 6.4% )
- Level of production at break-even point is approximately 133 % of the 1965 actual level.

**VII. EXPANSION: HISTORY & PLAN****1. Recent Expansion**

From 1963 to 1965

	Gross equi- pment	% of simple repair & maintenance work.
a. Total Investment ( Rs. million )	21.42	
- Land	-	-
- Land improvements	-	-
- Buildings	4.52	8%
- Other construction work	-	-
- Machinery & equipment	16.53	15%
- Tools & instruments		
- Vehicles	0.07	8%
- Office furniture & fixtures	0.30	10%
b. Corresponding increase:	From 1963	to 19 65
In no. of employees	252	351
In annual gross production (Rs. million)	4.32	12.94

**2. Future Plan**

- a. Investment proposed for the period 1965 to 19 68  
Total value ( Rs. million ) 3  
Of which: - Mach. & equipment 85 %  
- Land improv. & bldg. 10  
- Land  
- Others 5
- b. Net increase in no. of employees envisaged for the same period: - Direct production: 6  
- Auxiliary: 2
- c. Purpose: Completion and expansion of manufacturing line.

**VIII. SUPPLEMENT**

Structure of liquid assets and current liabilities as of 1965; Rs. million.

Cash on hand and in bank	0.11	Accounts payable	1.39
Accounts receivable	2.76	Borrowing from commercial banks	4.28
Loans and advances	3.43		

- <sup>1/</sup> The establishment is judged to be very efficient. The negative gross business income is due to the fact that the plant is a new one and yet to attain full capacity operation. The output in 1964 was 260 Km.
- <sup>2/</sup> Total wages and salaries divided by total number of employees.
- <sup>3/</sup> Three fourths of the 1965 wages and salaries are regarded as variable cost.

**MAJOR PRODUCTS** Paper insulated electrical cables ( 1.1 to 33 KV). Annual capacity output is about 430 kilometres of cable on a two-shift basis.

**REPORTING UNIT** A new one-establishment enterprise with total assets Rs. 22 million (net worth Rs. 5 million) and 320 employees as of 1965. Founded in 1962.

**I. FIXED CAPITAL ASSETS**

	End of 1964 Before deprec.	End of 1965 After deprec.
<b>TOTAL BOOK VALUE</b> ( Rs. 000 )	8,805	6,464
1. Land	430	430
2. Land improvements	-	-
3. Buildings	1,891	1,710
4. Other construction works	48	32
5. Machinery & equipment	5,978	3,842
6. Tools & instruments	209	162
7. Vehicles	125	66
8. Office furniture & fixtures	62	170
9. Plant and machinery under installation	62	62

**DETAIL OF I.5 (No.)**

- a. Wire drawing and wire winding machine
- b. Bobbin stranding machine
- c. Tangential paper lapping machine
- d. 6 core laying-up machine
- e. 3 & 4 core laying-up machines
- f. Impregnating plant
- g. Lead sheathing press
- h. Steel tape armouring machine
- i. Paper slitting machine
- j. Portable steel tape welding set
- k. E.O.T. crane
- l. Testing equipment
- m. Machine shop equipment.

Total Bk. value bef. deprec.	Avg. Age (Yr.)	Oper. rate (%)	Depr. rate (%)	1965 replaced value
Rs. 6.0 million	2.5	A	20% (for 2 shifts)	Rs. 6.2 million

**II. INVENTORIES**

	Actual (end of 1965)	Normal
<b>TOTAL VALUE</b> (Rs. 000 )	11,337	-34
1. Direct production materials	4,938	-42.5
2. Other input materials	343	-4
3. Work in process	914	-
4. Finished products	3,525	-48
5. Goods in transit	1,617	-

- Normal inventories of finished products 13 % of annual gross production

- Seasonal variations: ..

Capacity of electr. motors: 180 KW

Total load, capacity of trucks: 5 t

- (a), (k) and (m) were produced domestically; all others were directly imported.

**GENERAL CONDITIONS:**

Local area transportation and water are excellent; all others are good.

**III. LABOUR**

(1965 average)

	1st shift	2nd shift	3rd shift
<b>TOTAL EMPLOYED</b>	320	237	83
1. Direct production ( all male )	149	72	-
Annual total manhours (000)	(380)	(175)	( )
a. Wire drawing section	25	10	-
b. Stranding section	12	8	-
c. Paper lapping section	20	10	-
d. Cable laying section	15	8	-
e. Impregnating plant	25	15	-
f. Lead sheathing section	20	10	-
g. Armouring section	18	7	-
h. Testing laboratory	4	2	-
i. Machine shop and maintenance	10	2	-
2. Auxiliary activities ( all male )	88	11	-
Technical and managerial control	88	11	-

**EDUCATIONAL BACKGROUND**  
(No. of employees)

Univ. or higher	Sr. High sch or equiv.	Other	Other
Engi- ners			
<b>TOTAL</b>	3	21	56
<b>Management</b>	3	3	6
<b>Direct Production</b>			
Skilled	-	-	22
Semi-skilled	-	-	-
Unskilled	-	-	88
<b>Auxiliary Activities</b>			
Skilled	-	18	-
Semi-skilled	-	-	28
Unskilled	-	-	-
<b>TOTAL</b>	-	-	41

- Average working hours per annum per direct production worker: 2,510 hours.

- Proportion of motors occupied: 9% on first shift, 4% on second.

- Degree of mechanisation is fair in all shops except for the poorly mechanized lead sheathing and armouring sections. Degree of automation is poor, except for the

wire drawing section, which involves moderate automation.

- Skilled workers in direct production are engaged in wire drawing, stranding, paper lapping, cable laying, lead sheathing, armouring, etc. In auxiliary activities they are administrators, accountants, purchase assistants, etc.

IV. ANNUAL PRODUCTION (1965)				V. INTERMEDIATE INPUTS (1965)			
TOTAL VALUE OF PRODUCTION (Re. million)		14.12		TOTAL VALUE OF CONSUMPTION (Re. million)		10.84	
Product	Unit	Quantity Pro- duced	Unit Value (Rs.)		Quantity con- sumed	Unit value (Rs.)	
Impregnated paper insulated cables with lead sheathing and double steel tape armouring (1.1 to 33 KV)	Km.	388	36,390*	1. Energy & water: total (The use of water is negligible)			.17
				- Electricity	000 KWH	707	80
				- Petroleum	000 lit.	15	800
				- Other fuel oils	000 lit.	478	188
				- Lubricating oil	000 lit.	10	1,295
				2. Direct production materials: total			8.82
				a. Aluminium bare	ton	438	4,862
				b. Lead	"	1,210	3,528
				c. Antimony	"	0.5	7,600
				d. Steel tape	"	549	1,600
				e. Tin sheets	"	1	18,534
				f. Insulating paper	"	138	3,300
				g. Rooin	"	5	1,434
				h. Cotton tape	Km.	11	1,044
				i. Heeslan cloth strips	ton	69	3,500
				j. Impregnating compound	"	136	3,700
				k. Juts	"	28	1,838
				l. Others	Rs. 000	250	..
				3. Packaging materials: total			.15
				U.S. flaps	ton	8	846
				Paper and paper products	sq. m.	1,260	2,471
				4. Repairs & maintenance (materials & services purchased)			.21
				Plant and machinery, .099; buildings, .052;			
				Furniture, air conditioners etc., .003;			
				Vehicles, .052			
				6. Material inputs for auxiliary activities			.99
				Stationery and printing, .052 Stores consumed, .052;			
				Laboratory expenses, .017; Administration, .90.			
				7. Non-factor service inputs: total			.11
				Transportation, insurance, storage		.261	
				Other business services		.053	
CAPACITY OUTPUT:				SELECTED COEFFICIENTS (in 1965 replacement value.)			
1% higher than the actual 1965 level with sufficient supply of raw materials. The present labour force would be sufficient for the full capacity operation. The product - mix is flexible.				- Mach., equip., instruments & tools per employee in direct production on 1st shift: Rs. 42,800			
Unit value of product: Market value f.o.b. before sales tax				- Value added per employee: Re. 10,300			
Unit value of material: Market price o.i.f.				- Annual wage per employee Rs. 2,278 1/2			
Production materials (a), (b), (d), and (j) are directly imported and transported by sea, with a freight rate of 10%. The others are domestically produced and transported by railroads with a freight rate of 4%.				- Variable input costs/gross production ratio: 69% 2/			
				- Gross profit/gross production ratio: 8%			
				- (at full capacity : 11%)			
				- Level of production at break-even point is approximately 73% of the 1965 actual level. 1/2			
VI. VALUE ADDED TOTAL 1965 (Re. million) 3.29							
1. Wages & salaries (before income tax) .73							
- Employees in direct production ..							
- Other employees ..							
2. Other expenditures for employees .15							
3. Annual depreciation allowance 1.11							
4. Rental paid (incl. royalties paid .07) .12							
5. Sales & other indirect taxes [ .28 ]							
6. Other gross business income (before income tax) 1.19							
VII. EXPANSION: HISTORY & PLAN				2. Future Plan			
1. Recent Expansion				a. Investment proposed for the period 1966 to 1968			
From 1963 to 1965				Total value Rs. 870,000			
a. Total Investment (Re. 000)				Of which: - Mach. & equipment 92 %			
- Land 270				- Land improv. & bldg. 8			
- Land improvements -				- Land -			
- Buildings 2,028				- Others -			
- Other construction work -				b. Net increase in no. of employees envisaged for the same period:			
- Machinery & equipment 5,978				- Direct production: -			
- Tools & instruments 97				- Auxiliary: -			
- Vehicles 56				c. Purposes: Introduction of P.V.C. cables and high-voltage cables up to 66 KV; doubling of production in terms of kilometres; largely balanced expansion of existing capacity in the same location.			
- Office furniture & fixtures 98							
b. Corresponding increase: From 1963 to 1965							
In no. of employees 195 320							
In annual gross production (Re. million) 6.43 14.12							
VIII. SUPPLEMENT				Structure of liquid assets and current liabilities, as at end of 1965 (Re. 000)			
Cash on hand and in bank 143				Taxes payable 20			
Accounts receivable 2,381				Accounts payable 1,165			
Loans and advances 266				Short-term borrowing from commercial banks 100			
Miscellaneous expenditure 1,164				Borrowing from directors and others 3,404			
1/ Total wages and salaries divided by total number of employees.							
2/ One half of the 1965 wages and salaries are regarded as variable cost							
3/ The production in 1964 was 230 km (a little less than 60% of the 1965 level). But the enterprise had a positive profit due to considerably low expenditures in repairs, and service inputs.							



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