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I. INTRODUCTORY NOTE

Main objective

1. Industrial development programming is a complex, multi-faceted field. It encompasses a wide variety of activities, including, among others: evaluation of shortcomings and potentials of existing industries and planned projects, preliminary assessment of new investment opportunities or project ideas, preparation of technical requirement, economic feasibility, locational and other pre-investment studies, evaluation of these studies in terms of implementation priorities and supporting policy measures, etc. The EXTRACTS OF INDUSTRIAL FEASIBILITY STUDIES are intended to assist those who are engaged in these activities, by retrieving certain key elements of general reference value from the material being generated and accumulated in the actual process of industrial project preparation in various developing countries.

2. A pilot set of EXTRACTS is attached to this Note to demonstrate one possibly profitable approach to this end. In contrast to the PROFILES OF MANUFACTURING ESTABLISHMENTS series[1/] which draws upon data obtained from actually operating industrial establishments and enterprises, the EXTRACTS attempt to establish a way in which it will be possible to tap the growing stock of techno-economic feasibility studies on various investment projects as available in industrial banks, development corporations, governmental planning agencies, international organizations, etc. Both the EXTRACTS and the PROFILES are designed to provide, in a capsule form, summaries of the techno-economic characteristics of a variety of industrial projects as tested against, or adapted to, differential regional economic conditions. Since there is a considerable degree of comparability between the PROFILES and the EXTRACTS series in terms of the particular items of information to be included, it is hoped that most of the purposes for which either series might prove useful would be even better served by a combined use of both.

1/ Volume I (ID/SER.E/4; Sales No. E.67.II.B.17) and Volume II (ID/SER.E/5; Sales No. E.68.II.B.13). Volume III (ID/SER.E/6) is now being printed.

Raw material of the EXTRACTS: "Good industrial feasibility studies"

3. Each Extract will be compiled in a Standard Form established for this purpose. Each of the techno-economic "feasibility studies" to be selected and digested into this Form should be a "good" study, in the sense:

(a) that it presents a well-designed investment project, properly adapted to the conditions prevailing in the given developing country or region; and

(b) that it is prepared so as to permit a comprehensive, balanced and thoroughly critical evaluation on the given project.

4. Qualification (a) above will assume importance particularly if the EXTRACTS are to be utilized as a source of information on "programming norms" at the "pre-feasibility" stage of project planning. However, if the EXTRACTS are to be useful as an instrument for practical training on industrial project evaluation, the qualification of candidate feasibility studies in terms of point (b) above should be considered as imperative. In other words, a balanced, critical evaluation presented on a poorly designed investment proposal would be even more acceptable than an incomplete evaluation on a well-designed project.

5. The individual "techno-economic feasibility studies", from which the EXTRACTS are to be compiled, should, in each case, be complete in terms of (a) technical specification of proposed industrial factories (that is, consideration regarding possible alternative model plants for each respective field of industry considered), (b) analysis of the potential cost-price behaviour of each such factory as anticipated under given local socio-economic conditions, and (c) consideration regarding the national and regional development policies and measures likely to influence the viability of the projects considered. Such feasibility studies are so distinguished from the so-called "opportunity" studies or "pre-feasibility" studies which refer to a less advanced stage of project preparation on the one hand, and on the other, from the "blueprint" studies which are rather part of the implementation phase of industrial projects.

Problems of commercial secrecy and technological obsolescence

6. In view of the commercial secrecy clause attached to most feasibility studies, great care must be exercised in "neutralizing" the information to be compiled into the EXTRACTS. Certainly, no mention may be made of any

particular countries and institutions involved in the preparation of the original feasibility studies. Even the continent wherein the projects under study were situated might not be mentioned. It is explicitly agreed that the EXTRACTS carry only information of theoretical interest and are not susceptible of any legal application whatsoever for or against the interest of any country or institution. By the same token, the selection of candidate feasibility studies for EXTRACTS may be made without questioning whether or not the project proposals under study were ever implemented.

7. Studies prepared some years ago, suffering a degree of technological obsolescence in some respects, might nonetheless be found to have a high reference value in other respects. The EXTRACTS are by no means meant for a fool-proof collection of "model plants". But, rather, they are meant to provide comparative reference points to help in the critical evaluation of specific project ideas as envisaged under given socio-economic conditions. Thus, some of the old material piled in the archives of industrial development institutions, studies which were once used and have since been practically consigned to oblivion, may be given a chance of better utilization through the EXTRACTS.

Types of industry to be covered

8. As regards the types of industry to be covered by the EXTRACTS series, some would argue in favour of pre-specifying only a limited number of specific industries or types of project on which the campaign should concentrate at least to start with. This approach would allow for the selection of two or more directly comparable studies on a similar type of project, as prepared under different regional constraints. However, the number of candidate industries that are of great interest for the developing countries would be quite large, if defined in reasonably specific terms. Since candidate feasibility studies for the EXTRACTS are all related to the industrial projects which at least once received serious attention on the part of development institutions in developing countries, it may be advisable not to overly stress the merits of a rigorous pre-selection of candidate industries, at least to start with. Rather, it should be emphatically pointed out that the EXTRACTS be established as a continuing, long-run project, drawing upon the widest possible range of sources, and guided by the expressed interests of the developing countries for its coverage of priority fields of industry.

9. Investment proposals for large-scale steel mills, petroleum refinery complexes, etc. are not to be included in the Series in instances where there is a fear of disclosing the identity of the projects, that is, when the data cannot be sufficiently "neutralized". Any such studies that unambiguously reflect some highly unusual circumstances or policies in a given region will not be recommended for inclusion in the Series for general dissemination. Leaving aside any such exceptional cases, the EXTRACTS will, as a rule, be open to contributions from all sources relating to any branches of manufacturing industry.

Standard form for compilation

10. The pilot set of EXTRACTS has been prepared with a view to demonstrating what exactly can be done to neutralize given sets of material. In doing so, an effort was made to retain as many specific features of the original studies as possible, allowing the resulting summary data to represent just about the least truncated version of the EXTRACTS possible. For a sustained extension of this approach, somewhat less detailed, or further truncated, presentations might also be acceptable.

11. The pro-forma compilation was undertaken on a large (17" x 15") six-page form, consisting of 12 sections. After early experiments with several different cases, a set of sub-headings and items for tabulation have been selected to be pre-printed on the form. These pre-printed headings and items would themselves serve as a checklist for the evaluation of the completeness of a given feasibility study.

12. By way of defining the precise scope of the proposed EXTRACT approach, Part II of this document gives the instructive notes for compilators. These notes are themselves aligned on the pre-printed six-page form for the sake of convenience. Part III, then, shows six sample EXTRACTS.

13. To avoid any mis-representation of the substance of candidate feasibility studies, it is indeed advisable to have each compiled EXTRACT scanned by a project planning expert. Also, such expert's own comments on the original studies may be included in the EXTRACT presentation - either Section XI (Data for evaluation) or Section XII (Supplement) on the Form can be used for this purpose. For the compilation of basic data, however, it is hoped that a lesser degree of skill and experience, say, at the trainee level, will suffi

The bulk of the work of compilation may thus be handled as part of the routine assignments of trainees gaining experience in industrial programming, project promotion and evaluation. An experiment, made in connexion with the preparation of the pilot set, has given a positive indication in this respect. Moreover, the same exercise has proved that the pro-forma summarization and transcription can be helpful in locating calculation errors and inconsistent assumptions as involved in the original (supposedly well-prepared) studies that would otherwise pass unnoticed.

Institutional requirements

14. It should be noted that the operational significance of the EXTRACT approach resides not only in the instrinsic value of the information compiled in summary form, but also in providing the opportunity for bringing together in a comparable form an ever-growing number of investment project studies. These studies which are currently piling up or being hoarded in a variety of institutions can be transformed into an on-going series of reference programming data for broad and practical uses. It is important, therefore, that the task of compiling the EXTRACTS receive appropriate institutional support and be actively participated in by as many of the development institutions as possible which have access to the relevant raw materials.

15. Given the existence of appropriate support from interested development institutions - which would in principle act both as the suppliers and as the users of the EXTRACTS - UNIDO would be willing to serve as a central clearing house, performing mainly the following functions:

(a) Seeking relevant kinds of EXTRACTS in response to specific requests from developing countries;

(b) Rendering assistance to those willing to contribute to the EXTRACTS by means of conducting training workshops on industrial project planning;

(c) Providing editorial and technical evaluation services as required in the process of assembling and disseminating EXTRACTS for registered users; and

(d) Publishing selected EXTRACTS for general uses.

Merits of the EXTRACT approach

16. Relative to other possible approaches to the complex task of improving the data base for industrial programming, the main merits of this EXTRACT project may be considered as follows:

(a) It would lead to a better and broader utilization of the scattered, but continually growing stock of industry studies; without the EXTRACTS, the specific use made of each such study would be extremely short-lived, despite the high cost of its preparation.

(b) Compared to the conventional technique of "cataloguing", which offers no more than an indexing of the materials of relatively unspecified reference value, the EXTRACTS offer a substantive reference material that has already been pre-digested for a specified, yet fairly broad, range of uses.

(c) Compared to the conventional "model plant" data which is concerned only with the "technological norms" for each specified industry, the EXTRACTS make use of the so-called techno-economic feasibility studies, each representing a synthesis of the data on engineering alternatives and the data on local markets and other economic factors.

(d) Compared to the PROFILES OF MANUFACTURING ESTABLISHMENTS, the EXTRACTS have the advantage of utilizing the cost-price information which is more explicitly structured for analytical purposes than the information normally available from the accounting records of operating enterprises; a relative disadvantage of the EXTRACTS is, however, that data, as available at the stage of the feasibility study, reflects at best the well-informed imaginations of those who prepared the studies, with a degree of uncertainty attached to their implementability in reality.

(e) While the compilation of the PROFILES can procedurally be linked to the effort of conducting a diagnostic study on existing industries, which is itself a pre-requisite for industrial development planning, the EXTRACTS may be developed as an integral part of the UNIDO programme for training on industrial project preparation and evaluation.

Main uses of the EXTRACTS

17. The EXTRACTS, compiled and assembled from a variety of sources related to the developing countries, can be used for a range of purposes connected with industrial development programming. Leaving aside their potential usefulness for general theoretical interest, it is anticipated that their primary field uses will occur in the following contexts:

(a) As a reference at the stage wherein "ideas" for new development projects are being sought, before resources are committed for intensive (and expensive) studies on selected ideas;

(b) As a comparative reference for evaluating industrial project studies or offers from potential suppliers, with due attention to the possibilities for variations arising with a given type of industrial plant under different market and other regional conditions; and

(c) As a comparative reference for evaluating the performances of existing factories and enterprises.

18. In addition to various adaptive uses of the substantive contents of each EXTRACT, the standardized framework of EXTRACTS may in itself serve as a sample terms of reference for the preparation of industrial feasibility studies. Also, when it is possible to follow up on a given industrial project to compare pre-investment estimates with post-investment realities, a combined reference to both the PROFILES-type and the EXTRACTS-type information may help provide an insight into factors crucial for realistic project programming, helping thereby to up-grade project preparation methodologies in general.

Proposal for action

19. As in the case of the PROFILES, the practical utility of this approach to reference programming data depends directly on the scale of collection achieved. And the latter depends on the co-operation of all agencies interested in this project, either as suppliers of its necessary inputs, or as users of its outputs, or both.

20. As suggested earlier, the problem of commercial secrecy or copyright might emerge as a main stumbling block to the viability of the EXTRACT proposal. It is as yet an open question whether such difficulty presents itself as a prohibitive clause or as a negotiable matter. This note, accompanied by the pilot set of EXTRACTS for demonstration, is intended to provide but the first step in drawing together the suggestions and contributions from all interested parties. For that matter, the particular format of EXTRACTS presented here may be regarded as only tentative. In the final version, it is possible that even a set of alternative (but mutually comparable) formats is allowed to evolve gradually through continued exercises and adjustments for various supply and demand characteristics.

21. The role that an international organization like UNIDO can play in fostering this project was already suggested in paragraph 1 above. Any institutions, private or governmental, that are interested in making contributions to the EXTRACTS project, may wish to contact UNIDO for establishing suitable arrangements. When an institution possessing good candidate studies in its archives lacks the necessary personnel for producing properly neutralized EXTRACTS thereof, copies of such studies may be made available to the UNIDO project staff for internal treatment; or alternatively, some

other form of UNIDO assistance may be arranged. Such UNIDO assistance may be combined, if so requested, with a training workshop for local personnel on the techniques and procedures of industrial project planning in general.

22. Communications concerning this project may be addressed directly to:

Industrial Programming Section
Industrial Policies and Programming Division
UNIDO
P.O. Box 707
Vienna, Austria

II. INSTRUCTIVE NOTES FOR COMPILATORS

PAGE [illegible]

PROJECT [illegible]

(Planning year)

I. ORIGIN OF THE STUDY

1. This study was prepared by [illegible] independent consultant, [illegible] consultant firm, [illegible] technical [illegible]

[illegible] indicate [illegible] the type of the consultant [illegible] enter the [illegible] study, [illegible] [illegible] investment made, etc.

[illegible]

II. GENERAL DESCRIPTION

1. Product

[illegible]

2. Major input materials

[illegible] important features [illegible] if any, important [illegible]

3. Alternative technologies available and technology adopted for the study

[illegible] Supplement [illegible]

4. Locational factors

4.1 Locational particularly important factor

[illegible] transport and transport [illegible] in terms of gross weights and/or volumes;

[illegible] location of other industries to which the project [illegible]

[illegible] recommended for the project [illegible]

4.2 The proposed locality

[illegible] in terms of [illegible]

III. MARKET

1. Tabulation of estimated demand on domestic and export markets

Product	Unit	Current annual consumption	Of which imported (%)	Projected demand in 19	Increase per year (%)

[illegible] separately for the domestic and the relevant export markets;

[illegible] special characteristics, possible margins of [illegible] the optimistic and the pessimistic), etc.

[illegible]

[illegible] given in Page [illegible] (Supplement) for the units of [illegible] demand to be stated.

2. Notes on methodology

[illegible] demand [illegible]

[illegible]

[illegible] market surveys conducted in the field.

3. Selection of product mix

Justification of the selected product-mix from both the market and the production technology standpoints. Indicate additional products to be potentially included in the future extension of the project.

IV. CAPACITY OF PROPOSED PLANT

1. Nominal maximum capacity according to major process

a) Give the time basis of calculation (operating time) and indicate [illegible] for groups of machines and equipment that determine the nominal maximum capacity of the major process [illegible].
[illegible]

2. Maximum feasible capacity of the plant

[illegible] tonnage, [illegible] etc.
[illegible]

3. Expected maximum output of the plant

[illegible] the maximum [illegible] labour, [illegible] raw materials [illegible], etc. [illegible]

V. INVESTMENT (000 US $)

	Total	Foreign currency component
A. INVESTMENT *		
1. Fixed assets		
1.1 Land site development [illegible]		
1.2 Buildings [illegible] in parentheses for each [illegible] item		
Factory		
Office		
Storage		
Others [illegible] utilities, electricity works, reservoirs, waste- [illegible] systems, housing for employees, etc., separately [illegible].		
1.3 Machinery & equipment (details see below) Total including installation		

	Total	Foreign currency component
2. Working capital [illegible] In [illegible] planning terms [illegible] the [illegible] operation expected after the [illegible] start-up.		
2.1 Inventories		
Production materials fuels & auxiliary materials		
Parts & supplies for repair & maintenance [illegible]		
Work in process		
Finished goods		
2.2 Accounts receivable — Indicate average period of deferred payment [illegible] in parentheses.		
2.3 Other liquid assets		
3. Other investments — Expenditures prior to the start of production which are to be capitalized.		
3.1 Pre-investment costs		
Preliminary expenditure		
Planning costs		
Engineering costs		
Interest during construction		
Training costs		
Others		
3.2 Start-up expenses		
Consultant fees		
Costs for test run		
Others		

Note:

* Indicate in the footnote here or in XII. Supplement any extraordinarily high or low estimates of particular items that might be associated with special road and housing development schemes, power supply, leasing of equipment, special properties of inputs and outputs, time-phasing of a potentially larger integrated project, etc.

Major machinery & equipment	f.o.b. supplier country's port	Transport cost (insurance freight)	Import duty	Landing, local installation cost	Total	Foreign currency component

[illegible] (i) production machinery and equipment, and (ii) auxiliary equipment (transport, laboratory, maintenance, power generation, office equipment, etc.) separately.

Production machinery should preferably be listed by departments or shops, rather than item by item; classification corresponding to the shop alignment as in VI. Manning Table would be the most desirable.

If space permits, indicate the capacity rating of the machinery and equipment by shop, or for predominantly important items. Use XII. Supplement if necessary.

VI. MANNING TABLE

Total number of persons: ____________

Shops	1st shift	2nd shift	3rd shift
1. Primary operative shops (including supervisory staff)			

a) The listing of shops should preferably be indicative of the main processing stages involved. A process flow chart supporting the given shop alignment may be shown in XII. Supplement.

b) Seasonal workers should be so specified.

Shops	1st shift	2nd shift	3rd shift
2. Auxiliary operative shops			
Repair & maintenance			
Utilities control			
Product & material storage			
Off site transport			
Guards, cleaners etc.			
3. Administration			
Production management			
Research & development			
Sales & purchase			
General administration			

VII ANNUAL PRODUCTION

1 Total annual expected maximum output

Product	Domestic sales: Unit	Domestic sales: Quantity	Domestic sales: Unit price ex factory (US $)	Domestic sales: Annual turnover (000 US $)	Foreign sales: Quantity	Foreign sales: Unit price ex factory (US $)	Foreign sales: Annual turnover (000 US $)

[illegible] by product and by destination. "Unit price ex factory" would include production and/or sales taxes, if any. Special subsidized export prices should be so indicated.

2 Expected sales and inventory build up:

[illegible] information on the expected growth of turnover and capacity utilization during the first few years of production, as tabulated in [illegible] cash flow tables.

3 Pricing policy

[illegible] derived from direct costing with current import prices; the latter should be clarified in terms of the [illegible] the port of import and the normal rates of surcharge including duties, sales taxes, trade and transport margins; [illegible] the proposed export prices; [illegible] results of any sensitivity tests [illegible] the desired level of profitability and the pricing of products; [illegible] governmental protective measures: the justification for such measures should be given in [illegible] Data for Evaluation.

4 Planned sales organization

[illegible]

VIII ANNUAL OPERATING COSTS AND PROFITS

Cost item	Unit	Unit price (US $)	Quantity	Annual costs (000 US $)	Foreign currency component (000 US $)
[illegible] costs					
1 Material costs					

[illegible] should correspond [illegible] expected maximum output" as shown in (1).

[illegible] separate [illegible] in detail, [illegible] raw materials [illegible] packaging materials, [illegible] supplies, (d) energy, and (e) water and other [illegible]

[illegible] advertisements, insurance fees, [illegible] staff travel and other business expenses [illegible] should be included in item 7 (Administrative expenses and sales costs). Item 2 should [illegible] wages and salaries for the enterprise's employees.

	Cost item	Annual costs (000 US $)	Foreign currency component (000 US $)
2	Personnel costs (*)		
2.1	Wages & salaries		
2.2	Contributions to social securities		
2.3	Fringe benefits		
3	Interests		
4	Rents		
5	Indirect taxes at company level		
6	Depreciation		
6.1	Buildings		
6.2	Machinery & equipment		
6.3	Office equipment		
6.4	Other fixed assets		
7	Administrative expenses & sales costs		
8	Other costs		
9	Profit before tax		
	of which: profit tax subsidies		

Interests: [illegible] included here.

Indirect taxes: [illegible] tax, [illegible] tax, [illegible] tax, franchise tax, [illegible] Profit tax is to be shown in item 9.

Depreciation: [illegible] method of depreciation should be [illegible] in XII. Supplement if necessary.

[illegible] see [illegible] on the left side.

Other costs: [illegible] outside firms on contract basis, [illegible] specified. Otherwise, [illegible] would normally fit in this item.

(*) Categories of persons employed	Domestic: No. of persons	Domestic: Annual wages & salaries & fringe benefits (000 US $)	Foreign: No. of persons	Foreign: Annual wages & salaries & fringe benefits (000 US $)	Foreign: Foreign currency component (000 US $)
Top managers					
Engineers					
Technicians					
Commercial staff					
Clerks and typists					
Foremen					
Skilled operatives					
Semi-skilled operatives					
Unskilled operatives					
Part time operatives					
Other special categories					

IX FINANCING PROPOSAL (in US $)

1 Equity capital (total)

2 Long term loans (total)
Rate of interest
Repayment
[illegible]

3 Other loans
[illegible]

4 Suppliers' credits
[illegible]

5 Remarks on the financing policy
[illegible]

X IMPLEMENTATION PLAN

Technical collaboration service
[illegible]

2 Project management
[illegible]

3 Recruitment and training of personnel
[illegible]

4 Other items
[illegible]

5 Time schedule
[illegible]

XI DATA FOR EVALUATION

1 Profitability evaluation
Check
( ) Break-even analysis
( ) Return on total capital
( ) Pay back
( ) Profitability return to equity capital

2 Further profitability analysis for given project life (Bankability test)
Check
( ) Internal rate of return
( ) Net present value
( ) Any other method used

3 National economic benefit cost analysis (National priority test)
Check
( ) Direct value added and employment effects
( ) Balance of payment effect
( ) Social marginal productivity of capital
( ) Backward and forward effects
( ) Synthetic benefit cost analysis
( ) Any other method used

Give a short outline of the methods used and major findings

Check in the above the type of analysis included in the original feasibility study and summarize the main findings. Any important inadequate treatments involved in the original study may be so pointed out and an alternative analysis may be undertaken and presented by those who prepare this Extract. The original feasibility study document used for this Extract compilation may or may not be complete in terms of project evaluation. Recommendations made in the original document may or may not be reasonable. A space in this section may well be reserved for an expert evaluation pinpointing any notable weak points of the original project study.

KII SUPPLEMENT

PAGE 6

XIII. CASH FLOW TABLE (000 US $)

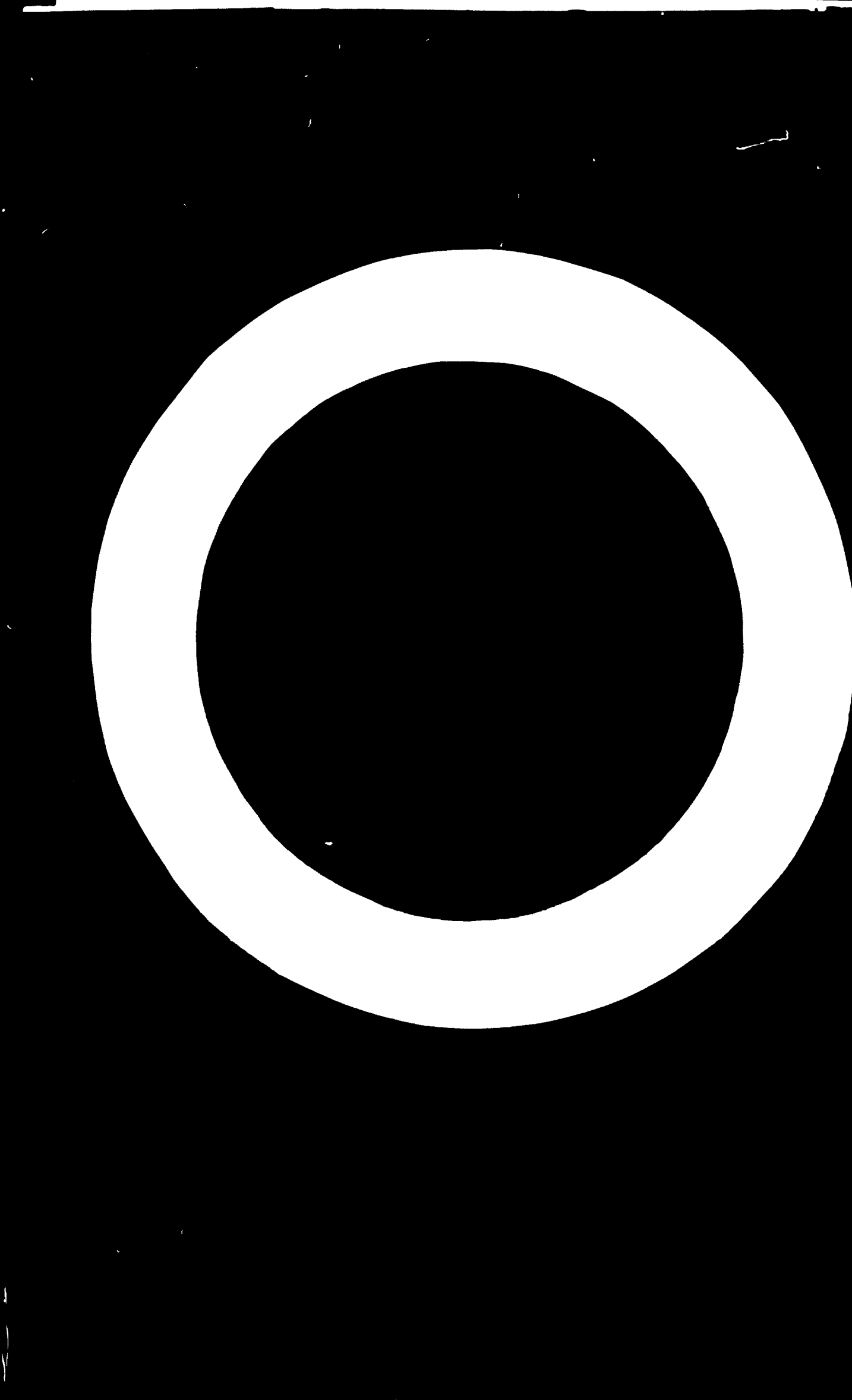
	Year	Terminal value of assets
A. Source of cash		
1. Financial resources total		
Loan		
Equity		
Suppliers' credit		
Subsidies		
2. Sales revenue[2]		
B. Uses of cash		
1. Fixed capital expenditure total		
1.1 Land, site improvements & buildings		
1.2 Machinery & equipment new installation		
1.3 Machinery & equipment replacement		
2. Net working capital total		
2.1 Stock of raw materials		
2.2 Work in process		
2.3 Stock of finished products		
3. Pre-investment & start-up expenses[4]		
4. Production expenditure total		
4.1 Personnel expenditure		
4.2 Material		
4.3 Administrative expenditure		
4.4 Indirect taxes & ...		
4.5 Other expenditure (rents, contingencies etc.)		
5. Credit service total		
5.1 Interest on loans		
5.2 Repayment of loans & credits		
6. Dividends & profit taxes paid[5]		
C. Surplus/Deficit (A – B)		
SURPLUS/DEFICIT ACCUMULATED		

To ensure comparability among different cases, this standard cash flow table is to be used. If more than one cash flow tables are available and/or a given cash flow table is of a special form that cannot be reorganized in this standard form, it should be presented in XIII. Supplement.

Note that, in this tabulation, 4. "Production expenditure" does not include interest on loans and depreciation, which are indicated in XII. ... and ..., respectively). Interests are entered in 5.1 "Interest on loans". Instead of depreciation allowances, the anticipated replacement expenditures are to be entered in 1.3 "Machinery and equipment (replacement)". This table is arranged in such a way that internally accumulated profits and depreciation funds are not ascertained, but are absorbed into C. "Surplus/deficit" after being allocated for yearly expenditures on the capital account, replacement expenditures and repayments of loans and credits.

1 Loans of different terms should be shown separately.
2 Annual value of production of finished goods minus annual accumulation of finished goods inventory.
3 Total production costs minus production costs of finished goods.
4 Excluding interest during construction.
5 Annual ... have ... annual accumulation of raw materials inventory.
6 This item stands for the part of profit which is to be paid out, namely profit tax, dividends, fees of the members of the executive board, managerial staff's share in profits, etc. Actually this sum will be established after allowances have been made for depreciation which are not included under item 4 (production expenditure). The cash flow balance should be programmed, therefore, in such a way that all necessary replacement (B.1.3) can be covered every year by the accumulated surplus.

Comments



III. SIX EXAMPLES

PROJECT

(Planning year

I ORIGIN OF THE STUDY

1 This study was prepared by

for

2 The study was intended to

3 Size of the economy considered

II GENERAL DESCRIPTION

1 Products

2 Major input materials

3 Alternative technologies available and technology adopted for the study

4 Locational factors

Indication of particularly important factors

III MARKET

1 Estimation of estimated demand on domestic and export markets

Product	Unit	Current annual consumption	Of which imported (%)	Projected demand in 19	Increase per year (%)

Imports of [illegible] yarn

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

The [illegible] requirement for internal market is estimated at about

[illegible] average

2 Notes on methodology

3 Selection of product mix

IV CAPACITY OF PROPOSED PLANT

1 Nominal maximum capacity according to major process [illegible]

2 Maximum feasible capacity of the plant [illegible]

3 Expected maximum output of the plant [illegible] capacity utilization of the plant is assumed.

V INVESTMENT (000 US $)

	Total	Foreign currency component
TOTAL INVESTMENT	[illegible]	[illegible]
1 Fixed assets	[illegible]	[illegible]
1.1 Land, site development	[illegible]	[illegible]
Buildings	[illegible]	[illegible]
Factory	[illegible]	
Office	[illegible]	
Storage		
Others	[illegible]	
Machinery & equipment	[illegible]	[illegible]

[illegible] assumed for completely self-supporting operation [illegible] community, equipped with its own maintenance, fire [illegible], water supply, management housing, and medical and [illegible] facilities.
[illegible] are included in this amount since industrial [illegible] [illegible] construction units for [illegible] housing [illegible] in this amount.
[illegible] management, as well as [illegible] [illegible] facilities.

	Total	Foreign currency component
2 Working capital *		
2.1 Inventories		
Production materials, tools & auxiliary materials		
Parts & supplies for repair & maintenance		
Work in process		
Finished goods		
2.2 Accounts receivable		0
2.3 Other liquid assets		
3 Other investments		
3.1 Pre-investment costs	[illegible]	
Preliminary expenditure		
Planning costs		
Engineering costs		
Interest during construction		
Training costs		
Others		
3.2 Start-up expenses	[illegible]	
Consultant fee		
Costs for test run		
Others		

* [illegible]

Major machinery & equipment	f.o.b. supplier country's port	Transport cost (insurance freight)	Import duty	Landing, local installation cost	Total	Foreign currency component
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]					
[illegible] starch	[illegible]					
[illegible] of starch	[illegible]					
[illegible] and dewatering of starch	[illegible]					
[illegible] drying and sifting of starch	[illegible]					
[illegible] service departments						
[illegible] plant	[illegible]			[illegible]		
[illegible] water supply and sewage disposal	[illegible]					
[illegible] repair shop	14					
[illegible] and others	10					
[illegible] equipment	[illegible]		[illegible]		[illegible]	
[illegible]	[illegible]					

VI MANNING TABLE

Total number of persons [illegible]

Shops	1st shift	2nd shift	3rd shift
1 Primary operative shops (including supervisory staff)	[illegible]	[illegible]	[illegible]
[illegible] receiving, root cleaning, extraction [illegible] starch, purification of starch, dewatering [illegible] starch, drying and sifting	[illegible]	[illegible]	[illegible]
[illegible], quality control, shipping and [illegible]	[illegible]		

Shops	1st shift	2nd shift	3rd shift
2 Auxiliary operative shops	[illegible]		
Repair & maintenance	[illegible]		
Utilities control	[illegible]		
Product & material storage	[illegible]		
Off site transport	[illegible]		
Guards, cleaners etc.	[illegible]		
3 Administration	[illegible]		
Production management	4		
Research & development	[illegible]		
Sales & purchase	[illegible]		
General administration	[illegible]		

PAGE 3

VII ANNUAL PRODUCTION

1 Total annual expected maximum output [illegible]

Product	Unit	Domestic sales: Quantity	Domestic sales: Unit price ex factory (US $)	Domestic sales: Annual turnover (000 US $)	Foreign sales: Quantity	Foreign sales: Unit price ex factory (US $)	Foreign sales: Annual turnover (000 US $)
[illegible]	[illegible]				[illegible]		

2 Expected sales and inventory build up: [illegible]

3 Pricing policy: [illegible]

4 Planned sales organization: [illegible]

VIII ANNUAL OPERATING COSTS AND PROFITS

Cost item	Unit	Unit price (US $)	Quantity	Annual costs (000 US $)	Foreign currency component (000 US $)
[illegible]				[illegible]	
1 Material costs					
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] of the total investment costs for machinery excluding contingencies and import duties.

Tax to be paid in the [illegible]th year. During the first [illegible] years no taxes are to be paid due to [illegible] years' tax holiday and high depreciation allowances.

Cost item		Annual costs (000 US $)	Foreign currency component (000 US $)
2 Personnel costs (*)		[illegible]	
2.1 Wages & salaries		[illegible]	
Contributions to social securities		[illegible]	
Fringe benefits		[illegible]	
3 Interests		[illegible]	
4 Rents		[illegible]	
5 Indirect taxes at company level		[illegible]	
6 Depreciation	[illegible] depreciation of [illegible] fixed assets and [illegible] investment [illegible]	[illegible]	[illegible]
6.1 Buildings		[illegible]	
6.2 Machinery & equipment		[illegible]	[illegible]
6.3 Office equipment			
6.4 Other fixed assets			
7 Administrative expenses & sales costs		[illegible]	
8 Other costs		[illegible]	
9 Profit before tax		[illegible]	
of which: profit tax [illegible] subsidies		[illegible]	

(*) Categories of persons employed	Domestic: No. of persons	Domestic: Annual wages & salaries & fringe benefits (000 US $)	Foreign: No. of persons	Foreign: Annual wages & salaries & fringe benefits (000 US $)	Foreign: Foreign currency component (000 US $)
Top managers					
Engineers			[illegible]	[illegible]	[illegible]
Technicians	[illegible]		[illegible]	[illegible]	[illegible]
Commercial staff				[illegible]	[illegible]
Clerks and typists	[illegible]				
Foremen		[illegible]			
Skilled operatives	[illegible]	[illegible]			
Semi-skilled operatives	[illegible]	[illegible]			
Unskilled operatives	[illegible]	[illegible]			
Part-time operatives					
Other special categories					

X. FINANCING PROPOSAL (in US $)

[illegible] capital (total)

[illegible]

4. Suppliers credits

5. Remarks on the financing policy [illegible]

IMPLEMENTATION PLAN

[illegible]

[illegible] training of personnel [illegible]

[illegible] Ltd. [illegible]

XI. DATA FOR EVALUATION

1. Profitability evaluation
   Check
   ( ) [illegible]
   ( ) Return on total capital
   ( ) [illegible]
   Rentability of [illegible] equity capital

2. Further profitability analysis for given project life (Bankability test)
   Check
   ( ) Internal rate of return
   ( ) Net present value
   ( ) Any other method used

3. National economic benefit cost analysis (National priority test)
   Check
   (x) Direct value added and employment effects
   ( ) Balance of payment effect
   ( ) Social marginal productivity of capital
   ( ) Backward and forward effects
   ( ) Synthetic benefit cost analysis
   ( ) Any other method used

[illegible] *the methods used and major findings*

[illegible] analysis: Break-even operating rates were defined in two different ways depending on their [illegible]. [illegible] Minimum operating rates [illegible] all costs including depreciation of plant facilities, would be used if low operating rates were expected to persist for [illegible] for short periods of restricted root supply or sales possibilities, depreciation can be deferred, and [illegible] break-even [illegible] which would cover all costs except depreciation, can be used.

[illegible] were split into variable costs, which would vary directly with production rate, and fixed costs, but would not change with operating rate [illegible] rates, it was assumed that the plant would operate at full [illegible] when [illegible] would be laid off. It was further assumed that at low operating rates, average root costs would probably be $[illegible] [illegible] greater percentage purchased from the plantation.

[illegible] operating rates not including depreciation would be [illegible] tons per year, i.e. about [illegible] of annual capacity. If depreciation [illegible] expense, the break-even operating rates at the same root costs are [illegible] tons, i.e. [illegible] of the annual capacity.

[illegible] capital: Assuming a root cost of $[illegible], return on capital investment including working capital was estimated to be [illegible] after [illegible] depreciation during the period with no tax liability (first 4 years of operation). See supplement for the data on return [illegible]

[illegible] The pay back period was calculated from the cumulative net profits and depreciation. Net profit in the first operating year is estimated [illegible] the following years at $[illegible]. Depreciation amounts to $[illegible] per annum. Thus capital investment is returned after eight years [illegible]

[illegible] value added and employment effects: The net value added amounts to approximately $[illegible] in factor cost terms, i.e. wages and salaries [illegible] fringe benefits and profit before taxes. The direct contribution to domestic income, however, is less since a part of the salaries [illegible] for expatriates. The manufacturing plant provides work for [illegible] domestic employees, [illegible] of which can be unskilled. If a plantation would [illegible] to the factory, at least another [illegible] men would be required.

[illegible]

[illegible] the estimate [illegible]

[illegible] during the period of operation [illegible]

[illegible]

[illegible] and operating costs [illegible]

[illegible] to ensure a dependable supply [illegible] world markets [illegible] it is expected that yields will probably [illegible]-hectare plantation [illegible] hectares [illegible] investment of approximately $[illegible], thereof

Preliminary expense, [illegible]	$ [illegible]
[illegible]	[illegible]
Furnished housing for executive and [illegible] personnel	[illegible]
Machinery and equipment	[illegible]
Land clearing [illegible]	[illegible]

[illegible] operating costs [illegible] first harvest of approximately $[illegible].

Annual operating costs average approximately: for planting and cultivating [illegible] $ [illegible]

for harvesting	[illegible]
for fertilizers	[illegible]
for supervision and overheads	[illegible]
for depreciation	[illegible]

i.e. $[illegible] per hectare harvested.

The rate of return at a selling price of $[illegible] per ton would thus average approximately [illegible] during the period of tax holiday. At yields of [illegible] tons per hectare or above, a [illegible]-hectare plantation would [illegible] an attractive return [illegible] as low as $[illegible] per ton.

An integrated plantation and starch manufacturing operation would result in annual savings of operating costs of approximately $[illegible] in overheads, maintenance, furnished housing, and vehicles.

Profitability evaluation (in [illegible] $ [illegible])

	Operating year [illegible]	1st 1/	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1. Plant investment	[illegible]										
2. Working capital 2/		187									
3. Total capital requirement	[illegible]	1,027 3/	1,027	[illegible]	1,027	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4. Depreciation reserve 4/	-	67	134	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5. Net assets [illegible]	[illegible]	960	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6. Cumulative net profits	-	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7. Net capital remaining in plant 5/	840	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8. Sales income		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9. Operating cost		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10. Gross profits [illegible]		11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11. Depreciation: [illegible] allowed 6/							[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
(b) included in operating costs							[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
(c) net for tax purposes (a-b)							[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12. Adjusted gross profits (10-11c)		11	78	78	78	78	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13. Cumulative losses carried forward							[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14. Taxable profit (12-13)		-	-	-	-	-		[illegible]	[illegible]	[illegible]	[illegible]
15. Income tax at [illegible] of taxable profit							[illegible]	-	-	-	[illegible]
16. Net profit		11	[illegible]	78	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	78	[illegible]
17. Return on plant investment plus working capital (%) 7/		[illegible]	7.6	[illegible]	[illegible]	7.6	[illegible]	[illegible]	[illegible]	7.6	[illegible]

1/ Production = [illegible] tons in 1st year of operation.

2/ Working capital = [illegible] months' operating cost plus [illegible] months' transportation expenses.

3/ Differences in some figures in comparison to other chapters are due to rounding.

4/ Depreciation = [illegible] initial plant investment. Reserve adjusted for replacement of passenger vehicles every [illegible] years, lorries every [illegible] years, [illegible] salvage value.

5/ Bracket [illegible] indicates negative number.

6/ Includes depreciation of replacement vehicles.

7/ After depreciation of [illegible] plant investment.

CASH FLOW TABLE (000 US $)

Year

Terminal value of assets

A Sources of cash

B Uses of cash

C Surplus/Deficit (A – B)

CUMULATED DEFICIT

Comments

PAGE 1

PROJECT [illegible]

(Planning year [illegible])

I. ORIGIN OF THE STUDY

1. This study was prepared by [illegible]
for [illegible]

2. The study was intended for [illegible]

3. Size of the economy considered [illegible]

II. GENERAL DESCRIPTION

1. Product [illegible]

2. Major input materials [illegible]

3. Alternative technologies available and technology adopted for the study [illegible]

4. Locational factors
Indication of particularly important factors [illegible]

5. Other characteristics [illegible]

III. MARKET

1. Tabulation of estimated demand on domestic and export markets

Product	Unit	Current annual consumption	Of which imported (%)	Projected demand in 19..	Increase per year (%)
[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]		not available	not available		

2. Notes on methodology [illegible] ... the demand was estimated ... new residential buildings ... The share of the different slab thicknesses in total demand was estimated according to the possible fields of application and in the light of the building structure. ... while the slabs of [illegible] and [illegible] will have a share of [illegible] each. For the export market it has been suggested to co-operate at first with a few large importers and dealers in building materials of the neighbouring countries.

3. Selection of product mix Although a standard size of [illegible] x 4' for slab-shaped wood materials such as veneer boards, joiner's boards, fibre boards, and chip boards has been established, for reasons connected with production engineering and raw material control, the manufacture of half the size, i.e. [illegible] in width, is recommended. By joining two slabs, the established standard of [illegible] x 4' can be reached.

IV. CAPACITY OF PROPOSED PLANT

1. Nominal maximum capacity according to major process [illegible]

2. Maximum feasible capacity of the plant [illegible]

3. Expected maximum output of the plant [illegible]

V. INVESTMENT (000 US $)

	Total	Foreign currency component
FIXED INVESTMENT	[illegible]	[illegible]
1. Fixed assets	[illegible]	[illegible]
Land site development	[illegible]	[illegible]
Buildings	[illegible]	[illegible]
Factory	[illegible]	[illegible]
Office	[illegible]	[illegible]
Storage	[illegible]	[illegible]
Others		
Machinery & equipment	[illegible]	[illegible]

	Total	Foreign currency component
2. Working capital	[illegible]	
2.1 Inventories	[illegible]	
Production materials, fuels & auxiliary materials	[illegible]	
Parts & supplies for repair & maintenance	[illegible]	
Work in process		
Finished goods		
2.2 Accounts receivable		
2.3 Other liquid assets	[illegible]	
3. Other investments		
3.1 Pre-investment cost	[illegible]	
Preliminary expenditure	[illegible]	
Planning costs	[illegible]	
Engineering costs	[illegible]	
Interest during construction	[illegible]	[illegible]
Training costs		
Others		
3.2 Start up expenses	[illegible]	
Consultant fees		
Costs for test run		
Others		

Major machinery & equipment	f.o.b. supplier country's port	Transport cost (insurance freight)	Import duty	Landing, local installation cost	Total	Foreign currency component
[illegible]	4	[illegible]	(exempted)	[illegible]	[illegible]	[illegible]
[illegible]	4	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	7	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	11	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	13	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	3	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	11	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	..	..		..	[illegible]	
[illegible] repair shop	..	..		..	[illegible]	
[illegible]	1	[illegible]		[illegible]	[illegible]	
[illegible]	20	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	..	..		..	[illegible]	
[illegible]	..	..		..	[illegible]	[illegible]
[illegible] assembly plant)	9	[illegible]		[illegible]	[illegible]	[illegible]
	-	-		-	[illegible]	

VI. MANNING TABLE

Total number of persons: [illegible]

Shops	1st shift	2nd shift	3rd shift
1. Primary operative shops (including supervisory staff)	[illegible]	-	-
[illegible] department	[illegible]		

Shops	1st shift	2nd shift	3rd shift
2. Auxiliary operative shops	[illegible]		
Repair & maintenance			
Utilities control			
Product & material storage			
Off site transport			
Guards, cleaners etc.	[illegible]		
3. Administration	4		
Production management	[illegible]		
Research & development			
Sales & purchase	[illegible]		
General administration	[illegible]		

PAGE [illegible]

VII ANNUAL PRODUCTION

1 Total annual expected maximum output: [illegible]

Product	Unit	Domestic sales: Quantity	Domestic sales: Unit price ex factory (US $)	Domestic sales: Annual turnover (000 US $)	Foreign sales: Quantity	Foreign sales: Unit price ex factory (US $)	Foreign sales: Annual turnover (000 US $)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

2 Expected sales and inventory build up: No information given

3 Pricing policy: Proposed domestic price ... on the average ... below the import ... [illegible]

4 Planned sales organization: [illegible]

VIII ANNUAL OPERATING COSTS AND PROFITS

Cost item	Unit	Unit price (US $)	Quantity	Annual costs (000 US $)	Foreign currency component (000 US $)
[illegible]					
1 Material costs	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Maintenance and repair costs are calculated as ... of the ... value of buildings and site development, ... machinery, tools and equipment, and ... of vehicles.

According to an investment promotion decree newly established industrial enterprises will be exempted from the ... income tax for ten years.

	Cost item	Annual costs (000 US $)	Foreign currency component (000 US $)
2	Personnel costs (*)	[illegible]	[illegible]
2.1	Wages & salaries	[illegible]	
2.2	Contributions to social securities	[illegible]	
2.3	Fringe benefits		
3	Interests	[illegible]	
4	Rents	[illegible]	
5	Indirect taxes at company level	[illegible]	
6	Depreciation	[illegible]	
6.1	Buildings	[illegible]	
6.2	Machinery & equipment	[illegible]	
6.3	Office equipment	[illegible]	
6.4	Other fixed assets	[illegible]	
7	Administrative expenses & sales costs	[illegible]	
8	Other costs	[illegible]	
9	Profit before tax	[illegible]	
	of which: profit tax	[illegible]	
	subsidies	[illegible]	

(*) Categories of persons employed	Domestic: No. of persons	Domestic: Annual wages & salaries & fringe benefits (000 US $)	Foreign: No. of persons	Foreign: Annual wages & salaries & fringe benefits (000 US $)	Foreign: Foreign currency component (000 US $)
Top managers	[illegible]	[illegible]			
Engineers	[illegible]	[illegible]			
Technicians	[illegible]	[illegible]			
Commercial staff	[illegible]	[illegible]			
Clerks and typists	[illegible]	[illegible]			
Foremen		[illegible]			
Skilled operatives		[illegible]			
Semiskilled operatives		[illegible]			
Unskilled operatives	[illegible]	[illegible]			
Part time operatives					
Other special categories					

IX. FINANCING PROPOSAL (in US $)

1. Equity capital (total) [illegible]

2. [illegible] loans (total) [illegible]

3. [illegible]

4. Suppliers' credits

5. Remarks on the financing policy [illegible]

X. IMPLEMENTATION PLAN

1. Technical collaboration service [illegible]

2. Project management [illegible]

3. Recruitment and training of personnel [illegible]

4. Other items

5. Time schedule [illegible]

[illegible]

XI. DATA FOR EVALUATION

1. Profitability evaluation
   Test
   - (x) Break-even analysis
   - (x) Return on total capital
   - ( ) Pay-back
   - Return on [illegible] capital

2. Further profitability analysis for given project life (Bankability test)
   Check
   - ( ) Internal rate of return
   - ( ) Net present value
   - ( ) Any other method used

3. National economic benefit cost analysis (National priority test)
   Check
   - (x) Direct value added and employment effects
   - (x) Balance of payment effect
   - ( ) Social marginal productivity of capital
   - (x) Backward and forward effects
   - ( ) Synthetic benefit cost analysis
   - ( ) Any other method used

4. Short outline of the methods used and major findings

Break-even point analysis: In the calculation the production volume is determined by the total weight of [illegible] between production costs and total weight of slabs produced. The total [illegible] costs ($[illegible]) contain costs of raw materials, general and operating supplies, electric power [illegible]. Fixed costs ($[illegible]) consist of costs for administration, depreciation, interest on borrowed capital [illegible] and repairs. The break-even point lies at an annual production of approximately [illegible] of the expected [illegible].

Return on total capital: Assuming a tax holiday of five years, gross profit (including depreciation) amounts to approximately $[illegible] [illegible] amounts to approximately [illegible]. The rate of return as percentage of profit after depreciation [illegible] amounts to approximately [illegible].

Value added and employment effects: The direct annual contribution of the [illegible] net of depreciation [illegible] $[illegible] wages and salaries [illegible], interest and rent (on average) [illegible], profit before taxes [illegible]. Due to the relatively simple [illegible] the [illegible] employed persons no prior training is required. [illegible] the number of employees [illegible] approximately [illegible].

Balance of payment effect: The effects on the balance of payments is determined by comparing foreign exchange [illegible] foreign exchange earnings from exports of slabs with foreign exchange expenditure for imports of raw materials, operating and general [illegible] and foreign exchange expenditure for the procurement of spare parts and replacement investments. [illegible] amount to approximately $[illegible] as against additional expenditure totalling an average of $[illegible] per year. The foreign exchange expenditure for the erection of the plant will be offset by foreign exchange savings in about [illegible] years from the start of production.

Backward and forward effects: Backward effects might not be felt as strongly, since cement and [illegible] the [illegible] applications and the relative inexpensiveness of [illegible] slabs might stimulate programmes for [illegible] development.

XII SUPPLEMENT

[illegible] CASH FLOW TABLE (000 US $)

	Year [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Terminal value of assets
A. Source of cash	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
1. Financial resources total	[illegible]	[illegible]									
[illegible]	[illegible]	[illegible]									
[illegible]	[illegible]	[illegible]									
[illegible]											
[illegible]											
Sales revenue[a]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
B. Uses of cash	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
1. Fixed capital expenditure total	[illegible]	[illegible]				[illegible]				[illegible]	
Civil works, improvements & buildings	[illegible]										
Machinery & equipment new installation											[illegible]
Machinery & equipment replacements						[illegible]				[illegible]	[illegible]
2. Net working capital total	[illegible]	[illegible]									
Raw materials	[illegible]										
Work in process		[illegible]									[illegible]
Stocks of finished goods		[illegible]									[illegible]
3. Pre-investment & start-up expenses[d]	[illegible]	[illegible]									[illegible]
4. Production expenditure total	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
4.1 Personnel expenditure		26,500	26,500	26,500	26,500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
4.2 Materials[c]		50,500	50,500	[illegible]	[illegible]	50,000	[illegible]	[illegible]	[illegible]	[illegible]	
4.3 Administrative expenditure		15,500	15,500	15,500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
4.4 Indirect taxes & royalties		-	-	-	-	-	-	-		-	
4.5 Other expenditure (rents, contingencies, etc.)		15,500	15,500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
5. Debt service total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
5.1 Interest on loans	2,300	[illegible]	11,500	11,500	11,500	4,200	[illegible]	4,600	[illegible]	[illegible]	
5.2 Repayment of loans & credits						27,000	[illegible]	[illegible]	[illegible]	[illegible]	
6. Dividends & profit taxes paid[f]		31,500	38,500	38,500	[illegible]	40,500	[illegible]	[illegible]	[illegible]	[illegible]	
7. Surplus/Deficit (A – B)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
SURPLUS/DEFICIT ACCUMULATED	[illegible]	[illegible]	[illegible]	[illegible]	153,000	144,500	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible] different terms should be shown separately

[illegible] value of production of [illegible] goods minus [illegible] accumulation of finished goods inventories

[illegible] costs minus production costs of finished goods

Not including interest during construction

Annual [illegible] minus annual accumulation of materials inventory

[illegible] item stands for the part of profit which is to be [illegible] namely profit tax, dividends, fees of the [illegible] of the executive board, managerial staff's [illegible] profits, etc. Actually this sum will be [illegible] after allowances have been made for [illegible] which are not included under item 4 ([illegible] expenditure). The cash flow balance [illegible] therefore in such a way [illegible] necessary replacement (B 1 3) can be covered [illegible] the accumulated surplus

Comments

PROJECT [illegible]

Planning year [illegible]

I ORIGIN OF THE STUDY

1 This study was prepared by [illegible]

2 The study was intended to [illegible]

3 Size of the economy considered

Population (19[illegible]) [illegible]

Per capita GDP (19[illegible]) [illegible]

Official [illegible]

II GENERAL DESCRIPTION

1 Products [illegible]

2 Major input materials [illegible]

3 Alternative technologies available and technology adopted for the study [illegible]

4 Locational factors

Indication of particularly important factors [illegible]

Locally produced inputs [illegible]

III MARKET

1 Calculation of estimated demand for domestic and export markets

Product	Unit	Current annual consumption	Of which imported (%)	Projected demand in 19[illegible]	Increase per year (%)
				[illegible]	
Sector [illegible]					
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	"	[illegible]	[illegible]	[illegible]	
[illegible]	"	[illegible]	[illegible]	[illegible]	
[illegible]	"	[illegible]	[illegible]	[illegible]	
Sector [illegible]					
[illegible]	"	[illegible]	[illegible]		
[illegible]	"	[illegible]	[illegible]	[illegible]	
[illegible]	"	[illegible]	[illegible]		
[illegible]	"	[illegible]	[illegible]	[illegible]	
[illegible]		-		[illegible]	
[illegible]				[illegible]	

[illegible]

- The market of explosives is the market for mixed acids (sulphuric acid [illegible] acid and ammonium nitrate).

- There will be possibilities for exporting to neighbouring countries the intermediate products for the production of approximately [illegible] tons of finished explosives.

[illegible] Estimate for 19[illegible].

2 [illegible]

3 Selection of product mix The task of the study was to plan a chemical [illegible] with products that can provide a basis for further development of the domestic chemical industry. The possibility of production of [illegible], caustic soda and chlorine was examined, but rejected because of the lack of relevant raw materials and excessive [illegible]. Fertilizer products are the most important of the envisaged [illegible] commodities since for these commodities potential selling [illegible] are excellent. Other products were selected mainly [illegible] a better utilization of production capacities.

IV CAPACITY OF PROPOSED PLANT

1. Nominal maximum capacity according to major process [illegible]

2. Maximum feasible capacity of the plant [illegible]

3. Expected maximum output of the plant [illegible]

V INVESTMENT (000 US $)

	Total	Foreign currency component
TOTAL INVESTMENT	[illegible]	[illegible]
1. Fixed assets	[illegible]	[illegible]
1.1 Land & site development	[illegible]	[illegible]
1.2 Buildings	[illegible]	
Factory	[illegible]	
Office	[illegible]	
Storage	[illegible]	
Others		
[illegible]	[illegible]	
[illegible]	[illegible]	
Machinery & equipment (total see below)	[illegible]	[illegible]

[illegible]

	Total	Foreign currency component
2. Working capital	[illegible]	
2.1 Inventories		
Production material, fuel & auxiliary materials	[illegible]	
Parts & supplies for repair & maintenance		
Work in process	[illegible]	
Finished goods	[illegible]	
2.2 Accounts receivable		
2.3 Other liquid assets		
3. Other investments	[illegible]	
3.1 Pre-investment costs	[illegible]	
Preliminary expenditure	[illegible]	
Planning costs	[illegible]	
Engineering costs	[illegible]	
Interest during construction	[illegible]	
Training costs	[illegible]	
Others	[illegible]	
3.2 Start-up expenses		
Consultant fees		
Costs for testing		
Others		

Major machinery & equipment	[illegible]	f.o.b. supplier country's port	Transport cost (insurance, freight)	Import duty	Landing, local installation cost	Total	Foreign currency component
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]

VI MANNING TABLE

Total number of persons: [illegible]

Shops	1st shift	2nd shift	3rd shift
1. Primary operative shops (including supervisory staff)	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Shops	1st shift	2nd shift	3rd shift
2. Auxiliary operative shops	[illegible]	[illegible]	[illegible]
Repair & maintenance	[illegible]		
Utilities control			
Product & material storage			
Off site transport			
Guards, cleaners etc.	[illegible]		
[illegible]	[illegible]	[illegible]	
3. Administration	[illegible]		
Production management			
Research & development	[illegible]		
Sales & purchase			
General administration	[illegible]		

[illegible] PAGE 3

VII ANNUAL PRODUCTION

1 Total annual expected maximum output [illegible]

Product	Unit	Domestic sales: Quantity	Domestic sales: Unit price ex factory (US $)	Domestic sales: Annual turnover (000 US $)	Foreign sales: Quantity	Foreign sales: Unit price ex factory (US $)	Foreign sales: Annual turnover (000 US $)
[illegible]				[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			

2 **Expected sales and inventory build up:** It is assumed that full production (expected maximum output) will be reached already in the first year of [illegible]

3 **Pricing policy:** [illegible] prices were calculated on the basis of the current c.i.f. prices for the imports [illegible] [illegible] levels about [illegible] lower than the c.i.f. [illegible]

4 **Planned sales organization:** [illegible]

VIII ANNUAL OPERATING COSTS AND PROFITS

Cost item	Unit	Unit price (US $)	Quantity	Annual costs (000 US $)	Foreign currency component (000 US $)
[illegible]				[illegible]	[illegible]
1 Material costs				[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible] was a waste product of the sulphuric acid production [illegible] available without cost.

[illegible] average for the [illegible] year period from the first year of [illegible] to the [illegible] year of production (assuming repayment [illegible] years, with a [illegible] year grace period).

[illegible] to an investment promotion decree newly established industrial enterprises can be exempted from income tax [illegible] years. The annual profit depends on interests [illegible] of each year. (See cash flow table.)

Cost item	Annual costs (000 US $)	Foreign currency component (000 US $)
2 Personnel costs (*)	[illegible]	[illegible]
2.1 Wages & salaries	[illegible]	
2.2 Contributions to social securities	[illegible]	
2.3 Fringe benefits	[illegible]	
3 Interests [illegible]	[illegible]	[illegible]
4 Rents [illegible]	[illegible]	[illegible]
5 Indirect taxes at company level	[illegible]	[illegible]
6 Depreciation [illegible]	[illegible]	[illegible]
6.1 Buildings [illegible]	[illegible]	[illegible]
6.2 Machinery & equipment [illegible]	[illegible]	[illegible]
6.3 Office equipment [illegible]	[illegible]	[illegible]
6.4 Other [illegible]	[illegible]	[illegible]
7 Administrative expenses & sales costs	[illegible]	[illegible]
8 Other costs	[illegible]	[illegible]
9 Profit before tax	[illegible]	[illegible]
of which: profit tax [illegible] subsidies	[illegible]	

(*) Categories of persons employed	Domestic: No. of persons	Domestic: Annual wages & salaries & fringe benefits (000 US $)	Foreign: No. of persons	Foreign: Annual wages & salaries & fringe benefits (000 US $)	Foreign: Foreign currency component (000 US $)
Top managers	[illegible]	[illegible]		[illegible]	
Engineers	[illegible]	[illegible]		[illegible]	[illegible]
Technicians					
Commercial staff		[illegible]			
Clerks and typists	[illegible]	[illegible]			
Foremen	[illegible]	[illegible]			
Skilled operatives	[illegible]	[illegible]			
Semi-skilled operatives	[illegible]	[illegible]			
Unskilled operatives	[illegible]	[illegible]			
Part-time operatives		[illegible]			
Other special categories		[illegible]			

FINANCING PROPOSAL (in US $)

Equity capital (total) [illegible]

Long-term loans (total) [illegible]

Interest [illegible]

Grace period [illegible]

Other loans

4 Suppliers' credits [illegible]

5 Remarks on the financing policy [illegible]

IMPLEMENTATION PLAN

Technical collaboration, advice [illegible]

Plant management [illegible]

Recruitment and training of personnel [illegible]

Other items

Schedule: [illegible]

DATA FOR EVALUATION

1 Profitability evaluations [illegible]

2 Further profitability analysis for given project life (Bankability test) Check
- [illegible] Internal rate of return
- [illegible] Net present value
- [illegible] Any other method used

3 National economic benefit/cost analysis (National priority test) Check
- (a) Direct value added and employment effects
- (b) Balance of payment effect
- (c) Social marginal productivity of capital
- (d) Backward and forward effect
- (e) Synthetic benefit cost analysis
- (f) Any other method used

Brief description of the methods used and major findings

[illegible] profitability [illegible] The [illegible] the continuity [illegible] the [illegible] of under-utilization of [illegible] was [illegible] [illegible] tax, payable [illegible] the equity capital [illegible] profit [illegible] rate of [illegible]. Assuming an under-utilization of capacity [illegible] maximum [illegible] profitability may fall to [illegible].

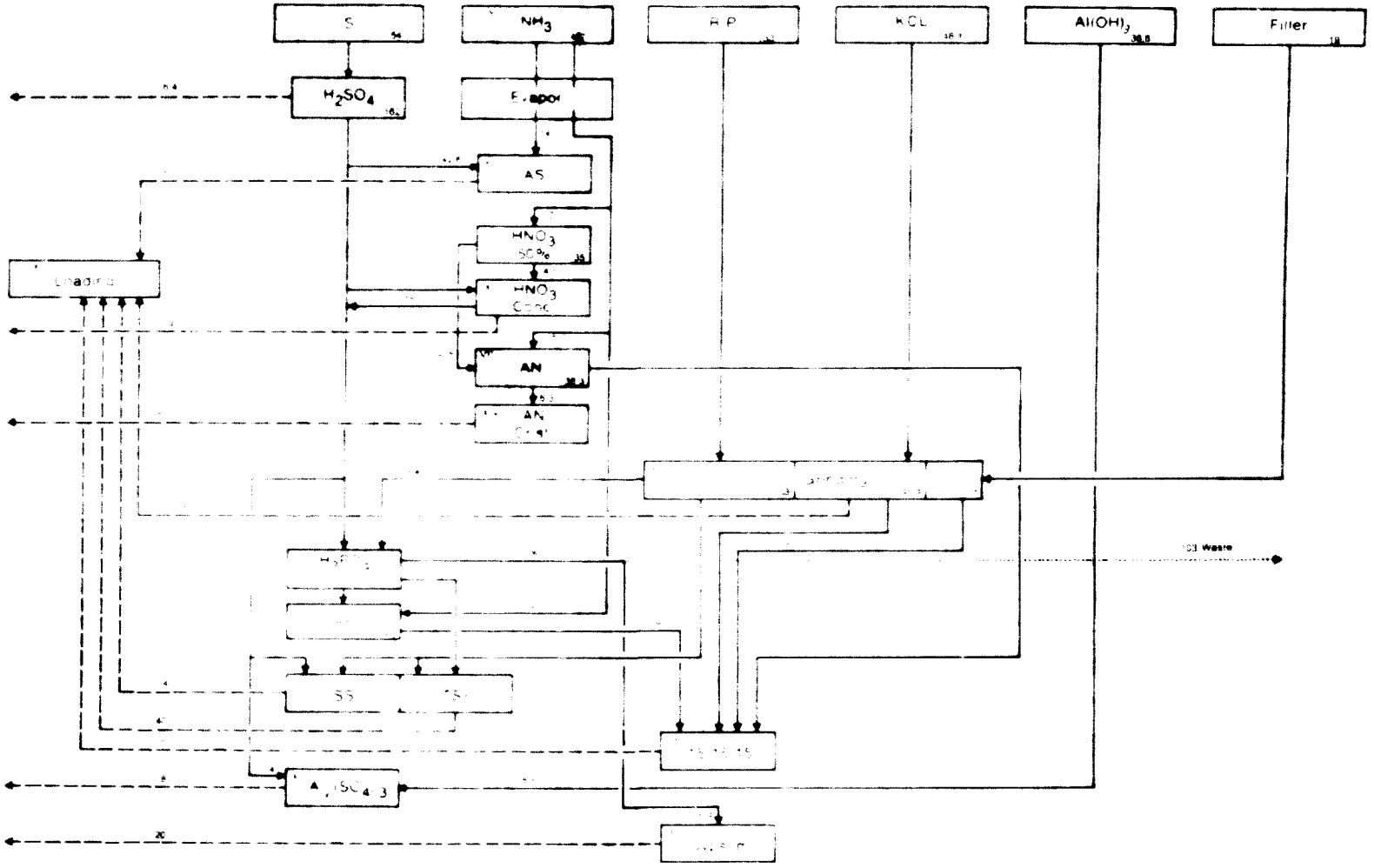
[illegible] added and employment effects: The direct net value added amounts to US $[illegible] [illegible] wages and salaries [illegible] and profit before tax [illegible]. The project provides [illegible] employment [illegible] students of chemistry and chemical engineering.

[illegible] payment effect: The annual foreign exchange expenditures will amount to US $[illegible] (including debt service [illegible] imports [illegible]), spare parts [illegible] and replacement investment [illegible], the salaries of the European management [illegible]. As imports of chemical products equivalent to the enterprise's proposed production would amount to some US $[illegible], there will be [illegible] of foreign currency of nearly US $1,100,000 per annum.

[illegible] marginal productivity of capital: Only the output-capital ratio of the envisaged chemical complex is calculated [illegible]

$$\frac{\text{value added}}{\text{capital}} = \frac{1,500,000}{11,785,000} = 0.3[illegible] \quad \text{(value added gross of depreciation allowances)}$$

Flow Sheet of the Entire Complex



XIII. CASH FLOW TABLE (000 US $)

											Terminal value of assets
A. Source of cash											
1. Financial resources											
a) Total											
b) Equity											
c) Supplier credits											
d) Advances											
2. Sales revenue[1]											
B. Uses of cash											
1. Fixed capital expenditure											
a) Total											
b) Land, site improvements & buildings											
c) Machinery & equipment (new installation)											
d) Machinery & equipment (replacement)											
2. Net working capital											
a) Total											
b) Stocks of materials											
c) Work in process[2]											
d) Stocks of finished products											
e) Accounts receivable											
3. Pre-investment & start-up expenses[3]											
4. Production expenditure											
a) Total											
b) Personnel expenditure											
c) Materials[4]											
d) Administrative expenditure											
e) Indirect taxes & royalties											
f) Other expenditure (rents, contingencies etc.)											
5. Debt service											
a) Total											
b) Interest on loans											
c) Repayment of loans & credits											
6. Dividends & profit[5] taxes paid											
C. Surplus/Deficit (A − B)											
SURPLUS DEFICIT ACCUMULATED											

[1] Sales of different items should be shown separately.

[2] Annual value of production of finished goods minus annual accumulation of finished goods inventory.

[3] Total production costs minus production costs of finished goods.

[4] Net including interest during construction.

[5] Annual purchase minus annual accumulation of materials inventory.

[6] This item stands for the part of profit which is to be paid out, namely profit tax, dividends, fees of the members of the executive board, managerial staff's share in profits, etc. Actually this sum will be established after allowances have been made for depreciation which are not included under item 4 (production expenditure). The cash flow balance should be programmed, therefore, in such a way that all necessary replacement (B 1.3) can be covered every year by the accumulated surplus.

Comments

PAGE

PROJECT

(Planning year

I. ORIGIN OF THE STUDY

1. This study was prepared by
for

II. GENERAL DESCRIPTION

Products

Main input materials

Alternative technologies available and technology adopted for the study

Locational factors

III. MARKET

1. Tabulation of estimated demand

Product	Unit	Current annual consumption	Of which imported (%)	Projected demand	Increase per year (%)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	40	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	68	100	[illegible]	[illegible]

2. Notes on methodology

3. Selection of product mix: Only the production of Portland cement has been considered. Packaging materials (sacks) are to be imported.

IV. CAPACITY OF PROPOSED PLANT

1. Nominal maximum capacity according to major process: The [illegible] of the plant [illegible] assume 300 working days per annum [illegible] that the [illegible] maximum [illegible] investment and production [illegible] figures for [illegible]

2. Maximum feasible capacity of the plant: Having due regard to normal [illegible] time [illegible] working [illegible] [illegible] tons.

3. Expected maximum output of the plant: [illegible] the extremely [illegible] 300 working days [illegible]

V. INVESTMENT (000 US $)

	Total	Foreign currency component
Total investment	[illegible]	[illegible]
1. Fixed assets	[illegible]	[illegible]
Land and development		[illegible]
Buildings		[illegible]
Factory	[illegible]	[illegible]
Office	[illegible]	
Other	–	
Others	[illegible]	
	–	
[illegible]	[illegible]	
Machinery & equipment (details below)	[illegible]	[illegible]

[illegible] (Balance of payment effect)

[illegible] the proposal assumed that all the machines and equipment would be imported. The landing, local transport and a part of the installation cost may be the only local currency component (some $[illegible]).

	Total	Foreign currency component
2. Working capital		
2.1 Inventories	[illegible]	
Production materials (incl. & auxiliary materials)		
Parts & supplies for repair & maintenance		
Work in process		
Finished goods [illegible]		
2.2 Accounts receivable [illegible]	[illegible]	
2.3 Other liquid assets	[illegible]	
3. Other investments		
3.1 Pre-investment costs	[illegible]	
Preliminary expenditure	–	
Planning costs		
Engineering costs		
Interest during construction		
Training costs		
Others [illegible] of raw materials	[illegible]	
3.2 Start-up expenses	–	
Consultant fees		
Costs for test runs		
Others		

Major machinery & equipment	f.o.b. supplier country's port	Transport cost (insurance freight)	Import duty	Landing, local installation cost	Total	Foreign currency component
Cement machines and quarry equipment:						
Quarry machines	[illegible]	[illegible]				
[illegible] heavy lorries for quarry	[illegible]	[illegible]		33	[illegible]	[illegible]
Crushing plant	6[illegible]	[illegible]		24	[illegible]	
[illegible] for raw materials	23	[illegible]		37	[illegible]	
[illegible] for rough [illegible]	120	[illegible]		35	[illegible]	
[illegible] for rough [illegible] material	67	[illegible]		22	[illegible]	
[illegible]	500	[illegible]		[illegible]	[illegible]	
Cement mill	150	[illegible]		[illegible]	[illegible]	[illegible]
Cement silos	48	[illegible]		47	[illegible]	[illegible]
Packing machines	48	[illegible]		4	[illegible]	[illegible]
Miscellaneous	86	[illegible]		4	[illegible]	[illegible]
Spare parts	120	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]ries: Repair shop	31	[illegible]		[illegible]	[illegible]	[illegible]
- Laboratory	30	[illegible]		[illegible]	[illegible]	[illegible]
- Water supply	20	[illegible]		[illegible]	[illegible]	[illegible]
[illegible] equipment	275	[illegible]		[illegible]		
Diesel power plant	300	[illegible]		[illegible]	[illegible]	[illegible]
[illegible] - [illegible] x [illegible]-ton lorries without trailers	88	[illegible]		[illegible]	[illegible]	[illegible]
- [illegible] x [illegible]-ton lorries with 5-ton trailers	60	[illegible]			[illegible]	[illegible]
- [illegible] tank lorry	[illegible]	[illegible]			[illegible]	[illegible]
Passenger cars	[illegible]				[illegible]	[illegible]
	[illegible]	[illegible]			34	

VI. MANNING TABLE

Total number of persons [illegible]

Shops	1st shift	2nd shift	3rd shift
1. Primary operative shops (including supervisory staff)	55	1[illegible]	16
[illegible]	38	–	–
[illegible] operation and auxiliaries	17	16	16

[illegible] Including transport crew.

Shops	1st shift	2nd shift	3rd shift
2. Auxiliary operative shops	[illegible]		
Repair & maintenance			
Utilities control			
Product & material storage			
Off site transport			
Guards, cleaners etc.			
3. Administration	[illegible]		
Production management	[illegible]		
Research & development	[illegible]		
Sales & purchase	[illegible]		
General administration	[illegible]		

VII ANNUAL PRODUCTION

1 Total annual expected maximum output [illegible]

Product	Unit	Domestic sales: Quantity	Domestic sales: Unit price ex factory (US $)	Domestic sales: Annual turnover (000 US $)	Foreign sales: Quantity	Foreign sales: Unit price ex factory (US $)	Foreign sales: Annual turnover (000 US $)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] programme was [illegible] market only		

2 **Expected sales and inventory build up** No time schedule was explicitly mentioned.

3 **Pricing policy** [illegible] investors would content themselves with a retained profit [illegible] to repay the loans with [illegible] years. This net profit has to remain after deduction of income tax. Therefore, income tax, which amounts to [illegible] exemption until the [illegible] year, has to be added. Thus, sales prices are calculated [illegible] repayment of loans. But the price for cement cannot be too much above the existing import prices. There[illegible] The present import price [illegible] customs duty [illegible] $ [illegible] delivery [illegible] $ [illegible] $ [illegible] the envisaged ex-factory price [illegible] $ [illegible]

4 **Planned sales organization** [illegible]

VIII ANNUAL OPERATING COSTS AND PROFITS

Cost item	Unit	Unit price (US $)	Quantity	Annual costs (000 US $)	Foreign currency component (000 US $)
[illegible]				[illegible]	
1 Material costs				[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–
[illegible] power about [illegible] kcal/kg; [illegible] capacity about [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–
Packing material (sacks [illegible] kg)	pieces	0,075	1,120,000	[illegible]	[illegible]
Lubricants and other supplies	tons	[illegible]	56,000	[illegible]	[illegible]

[1] Limestone, clay and gypsum are internally supplied; the quarrying costs are included in respective cost items.

[2] The first [illegible] years are free of taxation, thereafter income tax amounts to [illegible] of profit.

Cost item		Annual costs (000 US $)	Foreign currency component (000 US $)
2	Personnel costs (*)	[illegible]	
	Wages & salaries	[illegible]	
	Contributions to social securities [illegible]		
	Fringe benefits [illegible]		
3	Interests	[illegible]	
4	Rents	–	
5	Indirect taxes at company level [illegible]	[illegible]	
6	Depreciation [illegible] depreciation method	[illegible]	
6.1	Buildings [illegible]	[illegible]	
6.2	Machinery & equipment [illegible]	[illegible]	
6.3	Office equipment	–	
6.4	Other fixed assets [illegible]	40	
7	Administrative expenses & sales costs	35	
8	Other costs [illegible] repairs [illegible] of deprec.	100	
9	Profit before tax	[illegible]	
	of which profit tax		
	subsidies		

(*) Categories of persons employed	Domestic: No of persons	Domestic: Annual wages & salaries & fringe benefits (000 US $)	Foreign: No of persons	Foreign: Annual wages & salaries & fringe benefits (000 US $)	Foreign: Foreign currency component (000 US $)
Top managers		–	[illegible]	[illegible]	[illegible]
Engineers	–	–		[illegible]	[illegible]
Technicians	–		[illegible]	[illegible]	[illegible]
Commercial staff	[illegible]	[illegible]	–	–	–
Clerks and typists	[illegible]	[illegible]	–	–	–
Foremen	–	–	–	–	–
Skilled operatives	[illegible]	[illegible]	–	–	–
Semi skilled operatives	–	–	–	–	–
Unskilled operatives	[illegible]	[illegible]	–	–	–
Part time operatives	–	–	–	–	–
Other special categories	–	–	–		–

PAGE 4

IX. FINANCING PROPOSAL (in US $)

1. Equity capital (total): [illegible]

2. Credits/loans (total): [illegible]
   Rate of interest: [illegible]
   Repayment: [illegible]

3. Other loans: [illegible]

4. Suppliers credits: Interest-free [illegible] foreign investor [illegible]

5. Remarks on the financing policy: [illegible]

X. IMPLEMENTATION PLAN

1. Technical collaboration/service: [illegible]

2. Project management: [illegible]

3. Recruitment and training of personnel: After an initiating period of about [illegible] months, the proportion of the [illegible] and foreign staff [illegible] should be sufficient. Further requirement of foreign staff [illegible] personnel should be done [illegible]. No further information is given.

4. Other items: –

5. Time schedule: No information is given.

XI. DATA FOR EVALUATION

1. Profitability evaluation
   Check
   ( ) Break-even point analysis
   ( ) Return on total capital
   ( ) Pay-back
   ( ) Profitability (return) on equity capital

2. Further profitability analysis for given project life (Bankability test)
   Check
   ( ) Internal rate of return
   ( ) Net present value
   ( ) Any other method used

3. National economic benefit-cost analysis (National priority test)
   Check
   ( ) Direct value added and employment effects
   ( ) Balance of payment effects
   ( ) Social marginal productivity of capital
   ( ) Backward and forward effects
   ( ) Cost benefit cost analysis
   ( ) Any other method used

Short outline of the method used and major findings

[illegible] costs are [illegible] fixed costs and variable costs. [illegible] return at these levels, [illegible] tons production per [illegible] annually [illegible] tons annually.

[illegible] return on equity capital: Taking into account the [illegible] net profit after taxes and depreciation [illegible]

[illegible] value added and employment effects: The cement industry is one of the most capital-intensive industries [illegible] with very high skill [illegible] unskilled, [illegible] local workers would [illegible] More than $[illegible] invested for each [illegible] created. Thus, the direct employment effect must be [illegible]. A positive indirect effect [illegible] settlement of sub-contractors or processing industries is limited [illegible].

Balance of payment effect: Effects on the balance of payments in two ways: positively by saving [illegible] foreign currency [illegible] cement; negatively by import of fuel, supplies, payment of salaries for foreigners, [illegible]. The effect on the balance of payment may be quantified roughly as follows: savings of foreign currency $[illegible]. Salaries of foreign employees ($[illegible]), fuel ($[illegible]), packing material ($[illegible]), supplies ($[illegible]), interest ($[illegible]), redemption of loans ($[illegible]). Thus, net savings of foreign [illegible] $[illegible]. The [illegible] shipment would have to be paid in foreign currency, this would further reduce the [illegible] and the substitution of foreign employees and imported supplies, additional savings of [illegible] $ [illegible] expected.

[illegible]:

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Al_2O_3	[illegible]	[illegible]	[illegible]	[illegible]
Fe_2O_3	[illegible]	[illegible]	[illegible]	[illegible]
SiO_2	[illegible]	[illegible]	[illegible]	[illegible]
CaO	[illegible]	[illegible]	[illegible]	[illegible]
MgO	[illegible]	[illegible]	[illegible]	[illegible]
SO_3	[illegible]	[illegible]	[illegible]	[illegible]
K_2O	[illegible]	[illegible]	[illegible]	[illegible]
Na_2O	[illegible]	[illegible]	[illegible]	[illegible]
Cl	[illegible]	[illegible]	[illegible]	[illegible]
Alkali Ratio	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] for a cement plant with a capacity of [illegible] tons per annum

The study gives estimates for investments, as well as earnings forecast for a factory producing [illegible] tons of cement annually. For [illegible] investment would be:

	'000 US $
Real estates	[illegible]
Costs of [illegible] of raw materials	[illegible]
Cement machines and plants equipment	[illegible]
Auxiliaries	[illegible]
Electrical equipment	[illegible]
Diesel power station	[illegible]
Assemblage	[illegible]
Constructions	[illegible]
Fuel tanks	[illegible]
Road connexions	[illegible]
Vehicles	[illegible]
Working capital	[illegible]

The investment thus amounts to approximately $[illegible] million. Production costs are estimated as follows:

	'000 US $	
Wages	[illegible]	(of skilled and [illegible] unskilled workers)
Salaries	[illegible]	
Fuel	[illegible]	
Packing material	[illegible]	
Supplies	[illegible]	
Depreciation	[illegible]	
Spare parts and repairs	[illegible]	
Interest [illegible]	[illegible]	
Administration and marketing costs	[illegible]	

The [illegible] cost thus amount to approximately $[illegible] million. At this capacity it is assumed that [illegible] tons can be sold on the home market and [illegible] tons be exported at a price of $[illegible] per ton. This export price is so low due to considerable competition. Under these assumptions, sales [illegible] would be approximately $[illegible] million. Thus, return to total capital would be [illegible]% on the average.

XIII CASH FLOW TABLE (000 US $)

	Year	Terminal value of assets
A Source of cash		
1 Financial resources *total*		
1.1 [illegible]		
1.2 Equity		
1.3 [illegible]		
1.4 Subsidies		
2 Sales revenue[2]		
B Uses of cash		
1 Fixed capital expenditure *total*		
1.1 Land, site improvements & buildings		
1.2 Machinery & equipment (new installation)		
1.3 Machinery & equipment (replacement)		
2 Net working capital *total*		
2.1 Stocks of materials		
2.2 Work in process[3]		
2.3 Stocks of finished products		
3 Pre-investment & start-up expenses[4]		
4 Production expenditure *total*		
4.1 Personnel expenditure		
4.2 Materials[5]		
4.3 Administrative expenditure		
4.4 Indirect taxes & royalties		
4.5 Other expenditure (rents, contingencies, etc.)		
5 Debt service *total*		
5.1 Interest on loans		
5.2 Repayment of loans & credits		
6 Dividends & profit taxes paid[6]		
C Surplus/Deficit (A – B)		
SURPLUS/DEFICIT ACCUMULATED		

[1] Loans of different terms should be shown separately.

[2] Annual value of production of finished goods minus annual accumulation of finished goods inventories.

[3] Total production costs minus production cost of finished goods.

[4] Not including interest during construction.

[5] Annual purchase minus annual accumulation of materials inventory.

[6] This item stands for the part of profit which is to be paid out, namely profit tax, dividends, fees of the members of the executive board, managerial staff's share in profits, etc. Actually this sum will be established after allowances have been made for depreciation which are not included under item 4 (production expenditure). The cash flow balance should be programmed, therefore, in such a way that all necessary replacement (B 1.3) can be covered in any year by the accumulated surplus.

Comments

[illegible]

PROJECT

(Planning year)

I ORIGIN OF THE STUDY

The study was prepared by

II GENERAL DESCRIPTION

III MARKET

1 Analysis of estimated demand in domestic and export markets

Product	Unit	Current annual consumption	Of which imported (%)	Projected demand in 19..	Increase per year (%)

2 Notes on methodology

3 Selection of product mix. The main field of application for Aluminium will be: roofing sheets and sidings, household utensils, construction and building sections, packagings like tubes and cans, foils, conduction wires. Flat intermediates form the majority of all Aluminium products imported now. The minimum capacity of an extrusion plant, about 1,000 tons per year, does not allow a profitable production of rolling sections and intermediates for packagings and wire during the next decade. Therefore, the project is designed to produce Aluminium coils with a thickness of 0.5 mm to 1.0 mm. Sheets and circles are produced from these coils on separate finishing lines.

IV CAPACITY OF PROPOSED PLANT

1. Nominal maximum capacity according to major process [illegible]

2. Maximum feasible capacity of the plant [illegible]

3. Expected maximum output of the plant [illegible]

V INVESTMENT (000 US $)

	Total	Foreign currency component
TOTAL INVESTMENT	[illegible]	[illegible]
1. Fixed assets –		
1.1 Land, site development	[illegible]	[illegible]
1.2 Buildings		
Factory	[illegible]	[illegible]
Office	[illegible]	[illegible]
Storage		
Others		
[illegible]	[illegible]	[illegible]
1.3 Machinery & equipment (details see below)	[illegible]	[illegible]

[illegible]

	Total	Foreign currency component
2. Working capital		
2.1 Inventories	[illegible]	
Production materials, fuels & auxiliary materials	[illegible]	
Parts & supplies for repair & maintenance	[illegible]	
Work in process	[illegible]	
Finished goods	[illegible]	
2.2 Accounts receivable	[illegible]	
2.3 Other liquid assets	[illegible]	
3. Other investments		
3.1 Pre-investment costs		
Preliminary expenditure		
Planning costs	[illegible]	
Engineering costs	[illegible]	
Interest during construction	[illegible]	
Training costs	[illegible]	
Others	[illegible]	
3.2 Start-up expenses	[illegible]	
Consultant fees		
Costs for testing		
Others		

Major machinery & equipment	[illegible]	f.o.b. supplier country's port	Transport cost (insurance, freight)	Import duty	Landing, local installation cost	Total	Foreign currency component
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]

VI MANNING TABLE

Total number of persons [illegible]

Shops	1st shift	2nd shift	3rd shift
1. Primary operative shops (including supervisory staff)	[illegible]	[illegible]	[illegible]
[illegible] department	[illegible]	[illegible]	[illegible]
[illegible] and heat treatment	[illegible]	[illegible]	[illegible]
[illegible] department	[illegible]	[illegible]	[illegible]

Shops	1st shift	2nd shift	3rd shift
2. Auxiliary operative shops	[illegible]		
Repair & maintenance	[illegible]		
Utilities control			
Product & material storage			
Off-site transport	[illegible]		
Guards, cleaners, etc.	[illegible]		
3. Administration	[illegible]		
Production management	[illegible]		
Research & development	[illegible]		
Sales & purchase	[illegible]		
General administration	[illegible]		

[illegible] PAGE 3

VII ANNUAL PRODUCTION

1 Total annual expected maximum output: $[illegible],640,[illegible]

Product	Domestic sales: Unit	Quantity	Unit price ex factory (US $)	Annual turnover (000 US $)	Foreign sales: Quantity	Unit price ex factory (US $)	Annual turnover (000 US $)
[illegible]	tons	[illegible]	[illegible] per ton	[illegible]	No export foreseen		
[illegible]	tons	1,[illegible]	[illegible] – [illegible] per ton	1,[illegible]			

[illegible] the production of 1,[illegible] tons of circles, 1,500 tons of circle sheets are necessary.

2 Expected sales and inventory build up ([illegible] US $)

	Year of operation: 1st	2nd	3rd	following years
– Production	[illegible]	[illegible]	[illegible],640	6,640
– Net inventory accumulation (finished products)	[illegible]	[illegible]	40	–

3 Pricing policy [illegible] prices of imported products are taken as the basis, in which [illegible] landing and handling charges and [illegible] customs duty are [illegible] prices plus landing costs, excluding customs duty, were taken as the basis, the annual turnover would fall to $5,564,000.

4 Planned sales organization [illegible] therefore, the sales organization [illegible] simple matter.

VIII ANNUAL OPERATING COSTS AND PROFITS

Cost item	Unit	Unit price (US $)	Quantity	Annual costs (000 US $)	Foreign currency component (000 US $)
[illegible]				[illegible]	[illegible]
1 Material costs				[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]				[illegible]	
[illegible]	[illegible]	[illegible]	[illegible],444,[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	atm.		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible] there are [illegible] tons [illegible] material [illegible] of 1,500 tons end product.

[illegible] are recalculated.

[illegible] to be raised from a development [illegible]

[illegible] apply to industrial intermediates.

[illegible] generally [illegible] for buildings and site [illegible] for machinery and equipment and other investments [illegible] and office equipment and of vehicles.

[illegible] costs; [illegible] of investment costs [illegible]

	Cost item	Annual costs (000 US $)	Foreign currency component (000 US $)
2	Personnel costs (*)	[illegible]	[illegible]
2.1	Wages & salaries	[illegible]	[illegible]
2.2	Contributions to social securities	[illegible]	
2.3	Fringe benefits	[illegible]	
3	Interests [illegible]	[illegible]	
4	Rents [illegible]	[illegible]	
5	Indirect taxes at company level [illegible]	[illegible]	
6	Depreciation		
6.1	Buildings	[illegible]	
6.2	Machinery & equipment [illegible]	[illegible]	
6.3	Office equipment	[illegible]	
6.4	Other [illegible]	[illegible]	
7	Administrative expenses & sales costs	[illegible]	
8	Other costs [illegible]	[illegible]	
9	Profit before tax	[illegible]	
	of which: profit tax	[illegible]	
	subsidies	[illegible]	

(*) Categories of persons employed	Domestic: No. of persons	Annual wages & salaries & fringe benefits (000 US $)	Foreign: No. of persons	Annual wages & salaries & fringe benefits (000 US $)	Foreign currency component (000 US $)
Top managers		[illegible]	1	[illegible]	[illegible]
Engineers				[illegible]	26
Technicians	1	[illegible]			
Commercial staff	[illegible]	[illegible]			
Clerks and typists	[illegible]	[illegible]			
Foremen	[illegible]	[illegible]			
Skilled operatives	11	[illegible]			
Semi skilled operatives	[illegible]	[illegible]			
Unskilled operatives	[illegible]	2[illegible]			
Part time operatives					
Other special categories					

IX. FINANCING PROPOSAL (in US $)

1 Equity capital (total) [illegible] of which [illegible] foreign currency component: [illegible]

2 Long-term loans (total) [illegible]
Rate of interest [illegible]
Repayment [illegible] years, starting in the third year [illegible]

3 Other loans

4 Suppliers' credits [illegible]
Assumes [illegible] production [illegible] down when [illegible] operation.

5 Remarks on the financing policy [illegible]

X. IMPLEMENTATION PLAN

1 Technical collaboration service [illegible] with the patent owner, the [illegible] Engineering [illegible] estimated at $6[illegible],000.

2 Project management [illegible] project management is envisaged. The technical supervision and control of the construction are to be [illegible] the foreign corporation.

3 Recruitment and training of personnel Three expatriates will run the company [illegible] half year period. The costs of this programme are estimated at $[illegible]. [illegible] supervisor and three foremen will be trained [illegible] expatriates should not be replaced by domestic staff in the first years of production, [illegible] due to the sophisticated production technique.

4 Other items

5 Time schedule For the realization of the project a total period of [illegible] months will be necessary: [illegible]

Planning and awarding of contract [illegible]
Construction period, buildings, simultaneous delivery and shipping of machines [illegible] months
Assembly of machines and test runs [illegible] months
[illegible] months

[illegible] An extension [illegible] capacity is possible without disturbing the production flow [illegible] the extension [illegible] depends on the growth of demand.

XI. DATA FOR EVALUATION

1 Profitability evaluation
Check
(x) Break-even point analysis
( ) Return to total capital
( ) Pay back
(x) Rentability (return to equity capital)

2 Further profitability analysis for given project life (Bankability test)
Check
( ) Internal rate of return
( ) Net present value
( ) Any other method used

3 National economic benefit-cost analysis (National priority test)
Check
(x) Direct value added and employment effects
(x) Balance of payment effect
(x) Social marginal productivity of capital
(x) Backward and forward effects
( ) Synthetic weight cost analysis
( ) Any other method used

Give a short outline of the methods used and major findings

Break-even point analysis: The fixed costs of $[illegible] consist of indirect labour, [illegible] repair, depreciation and interest. The variable costs at full production [illegible] tons [illegible] $[illegible] [illegible] An allowance for contingencies of [illegible]% is added. The prices for [illegible] finished products are $[illegible] [illegible] A [illegible] output of sheets and circles is assumed [illegible] degrees [illegible] [illegible] tons of roofing coils and [illegible] tons of circles, i.e. [illegible]% of maximum [illegible] [illegible] Aluminium is not taken into consideration in this calculation.

Rentability (return on equity capital): Assuming a tax holiday of five years, the [illegible] second year [illegible] in the third year [illegible] in the long run [illegible] on an average.

Direct value added and employment effects: The net value added at factor costs amounts to $[illegible] $[illegible] [illegible] The project provides work for [illegible] (at least) [illegible] [illegible] $[illegible]

Balance of payment effect: The savings per annum from the substitution of imports [illegible] value [illegible] after deduction of the exchange expenses for the import of [illegible] $[illegible] The net savings will be reduced by some $[illegible] of the transfer of [illegible] $[illegible] into account.

Social marginal productivity of capital: Each $[illegible] of capital investment creates $[illegible] salaries, excluding the salary of the European management staff.

Backward and forward effects: The Aluminium semi-processing plant closes the gap between [illegible] finished goods.

[illegible]

XIII CASH FLOW TABLE (000 US $)

	Construction year 1st	2nd	3rd(half)	Production year 1st	2nd	3rd	4th	5th	6th	7th	8th	Terminal value of assets
A. Source of cash	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
1 Financial resources *total*	[illegible]	–	[illegible]	–								
1.1 Loans[1]					–	–	–	–	–	–	–	
1.2 Equity			[illegible]									
1.3 Suppliers credits	[illegible]											
1.4 Subsidies			[illegible]									
2 Sales revenue[2]			–	[illegible]	[illegible]	6,640	6,640	6,640	6,640	6,640	[illegible]	
B Uses of cash	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
1 Fixed capital expenditure *total*	[illegible]	1,401	[illegible]									
1.1 Land, site preparation & buildings	[illegible]	[illegible]			–	–	–	76	–	–	[illegible]	[illegible]
1.2 Machinery & equipment (new installation)												[illegible]
1.3 Machinery & equipment (replacement)												[illegible]
2 Net working capital *total*								76			[illegible]	[illegible]
2.1 Stocks of materials			41	[illegible]	[illegible]	176	–	–	–	–	–	
2.2 Work in process[3]			[illegible]	5	73	36						[illegible]
2.3 Stocks of finished products				[illegible]	[illegible]	40						[illegible]
3 Pre-investment & start up expenses[4]	[illegible]	176	[illegible]	–	196	100	–	–	–	–	–	[illegible]
4 Production expenditure *total*												[illegible]
4.1 Personnel expenditure				3,090	4,21[illegible]	4,787	4,787	4,787	4,787	4,787	4,787	
4.2 Materials[5]				214	214	214	214	214	214	214	214	
4.3 Administrative expenditure				2,463	3,56[illegible]	4,096	4,096	4,096	4,096	4,096	4,096	
4.4 Indirect taxes & royalties				107	[illegible]	107	[illegible]	105	[illegible]	105	[illegible]	
4.5 Other expenditure ([illegible])				112	112	112	112	112	112	112	112	
([illegible])				180	23[illegible]	260	260	260	260	260	260	
5 Debt service *total*	–	–	159	317	1,029	1,235	1,235	326	326	[illegible]	307	
5.1 Interest on loans			159	317	317	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
5.2 Repayment of loans & credits					712	979	1,06[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
6 Dividends & profit taxes paid[6]	–	–	–	–	166	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
C Surplus/Deficit (A – B)	2,524	-1,640	-418	34	-116	110	[illegible]	1,11[illegible]	[illegible]	[illegible]	[illegible]	
SURPLUS DEFICIT ACCUMULATED	2,524	884	466	500	384	434	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[1] Loans of different terms should be shown separately

[2] Annual value of production of finished goods minus annual accumulation of finished goods inventory

[3] Total production costs minus production costs of finished goods

[4] Not including interest during construction

[5] Annual purchase minus annual accumulation of materials inventory

[6] This item stands for the part of profit which is to be paid out, namely profit tax, dividends, fees of the members of the executive board, managerial staff's share in profits, etc. Actually this sum will be established after allowances have been made for depreciation which are not included under item 4 (production expenditure). The cash flow balance should be programmed, therefore, in such a way that all necessary replacement (B.1.3.) can be covered in any year by the accumulated surplus

Comments

PROJECT [illegible]

(Planning year [illegible])

I ORIGIN OF THE STUDY

1. This study was prepared by [illegible] independent consulting firm, for [illegible] investment bank in an [illegible] country.

2. The study was intended to [illegible] by way of [illegible] completing the import [illegible] forms, envelopes, account [illegible] [illegible] considered after a separate study.

Size of the economy considered:

[illegible] [illegible]

[illegible] [illegible]

[illegible]

II GENERAL DESCRIPTION

1. [illegible] coloured [illegible] pencils, wooden penholders, wooden rulers, ink, carton paper, [illegible], erasers, stamp pads, chalk, pencil-sharpeners, colour-boxes.

2. Major input materials [illegible] the chemical materials will have to be imported. The wood to be obtained from local [illegible] should be branchless, [illegible] Experiments with tropical soft wood [illegible] were encouraging. For fuel, [illegible] department will be used exclusively. Existing local enterprises are able to supply [illegible], [illegible] the aggregate for chalk production, and packaging material, such as cardboard, folding boxes and ink pots.

3. Alternative technologies available and technology adopted for the study [illegible] production programme are manufactured by [illegible] conventional [illegible] typewriter ribbons consists of spooling of dyed cotton ribbon on reels; [illegible] erasers, cutting and [illegible] for pencil sharpeners, die-casting of plastic casings and fixing of cutters. [illegible] cut-to-length saw, [illegible] machine, [illegible] grinding machine, dip varnishing apparatus, semi-automatic foil [illegible] machine, [illegible] multi-cornered flash trimmer drum, can be used in several production lines. In this sense, the [illegible] can be to a certain degree flexible.

4. Locational factors

[illegible] Because of the relatively high value/ton ratio of the products, transport costs are relatively unimportant. [illegible] water requirements and the use of own wood waste for steam production would further free the project from [illegible] On the other hand, the project can profit from so-called "contact advantages", i.e. good communication possibilities [illegible], public service utilities of all kinds, banks, commercial and industrial firms, universities and schools. [illegible] likely to [illegible] smell, smoke, soot, dust, noise. A distance of about [illegible] between the factory and the [illegible] would be sufficient.

[illegible] In selecting the locality, priority has been given to the so-called "contact advantages". The proposed locality lies in [illegible] industrial, commercial and administrative centre of the country.

III MARKET

Tabulation of estimated demand on domestic and export markets

Product	Unit	Current annual consumption	Of which imported (%)	Projected demand in 19[illegible]	Increase per year (%)
[illegible]	pcs	[illegible]	[illegible]	[illegible]	
[illegible]	" "	[illegible]	[illegible]	[illegible]	
[illegible]	" "	[illegible]		[illegible]	
[illegible]	" "	[illegible]	[illegible]	441	
[illegible]	" "	[illegible]	1[illegible]	[illegible]	
[illegible]	" "	1,5[illegible]	1[illegible]	1,74[illegible]	
[illegible]	" "	1,[illegible]	10	1,369	
[illegible]	" boxes	[illegible]	[illegible]	[illegible]	
[illegible]	" "	6	100	[illegible]	
[illegible]	" "	3[illegible]	100	[illegible]	
Typewriter ribbons	" pcs	1[illegible]	[illegible]	116	
[illegible] bottles	" "	[illegible]	100	45	
[illegible] bottles	" "	[illegible]	[illegible]	[illegible]	
[illegible]	" "	2,[illegible]	1[illegible]	3,[illegible]	
[illegible]	" "	15	100	[illegible]	
[illegible]	" gross	480	[illegible]	[illegible]	
[illegible]	" pcs	[illegible]	[illegible]	[illegible]	
[illegible]		–	1[illegible]	–	
[illegible]	" tin 1.2 lbs	[illegible]	1[illegible]		
[illegible]	" pcs	2,[illegible]	[illegible]	[illegible]	

2. **Notes on methodology** The market structure for stationery items required an assessment of the private and public (schools and authorities) demand separately. It was assumed that the demand from schools develops in proportion to the increase in the number of pupils [illegible] in [illegible] years. For other types of demand the following factors were taken into consideration: growth of population and income, evolution of consumer buying habits, and increasing share of literates in total population. The demand from other consumers than schools was on the whole projected to increase at the rate of [illegible] per annum.
A field study was conducted including the major importers of stationery goods and the Ministry of Education.

3. **Selection of product mix** From the point of view of turnover, pencils, ink, carton paper, chalk, and colour boxes are the important items. To complete the programme and for better utilization of the capacity of the plastics department, penholders and wooden rulers manufactured jointly with pencils, erasers, glue, pencil sharpeners with plastic case are also to be manufactured. Typewriter ribbons, stamp pads, and glue in plastic bottles complete the supply programme for office supplies. In the future powdered artist colours will be substituted by colour boxes for schools. The [illegible] colour factory does not expect any profit from the production of colour powder, therefore, this item was excluded and the production of colour boxes recommended. For the production of ball-point pens a separate plant is already under construction.

IV. CAPACITY OF PROPOSED PLANT

1 Nominal maximum capacity according to major process: The maximum capacity for the main products [illegible]:

pencils	[illegible] million per year [illegible]
ink	[illegible] million [illegible]
carbon paper	[illegible] ft min. [illegible]
chalk	[illegible]

2 Maximum feasible capacity of the plant: [illegible] machines can be used in several production lines; e.g. wood working machines [illegible] machines in minor departments are only partially used. Their excess capacity can be [illegible] the maximum feasible capacities of the main departments differ [illegible] of the carbon paper manufacturing department is [illegible] ft min. [illegible] full production of this department the labelling machine must work [illegible]

3 Expected [illegible] output of the plant: [illegible] determined by the expected market [illegible] chalk [illegible] manufacturing, relating [illegible]

V. INVESTMENT (000 US $)

	Total	Foreign currency component
TOTAL INVESTMENT	[illegible]	[illegible]
1 Fixed assets	[illegible]	[illegible]
Land, site development [illegible]	[illegible]	–
Buildings		
Factory [illegible] m2)	[illegible]	[illegible]
Office [illegible] m2)	[illegible]	[illegible]
Storage [illegible]	[illegible]	[illegible]
Others [illegible] departments [illegible]	[illegible]	[illegible]
Machinery & equipment (details see below)	667	[illegible]

[illegible] It is assumed that the project is granted exemption from import duty under an investment promotion decree.

[illegible] costs for land; industrial sites can be rented.

[illegible] The plastic department is equipped with 2 die-casting machines and 1 bottle-blowing machine for the manufacture of screw caps for ink pots, bottles for glue, casings for stamp pads, pencil sharpeners and casings for colour boxes.

	Total	Foreign currency component
2 Working capital	[illegible]	[illegible]
2.1 Inventories		
Production materials, fuels & auxiliary materials [illegible]	[illegible]	[illegible]
Parts & supplies for repair & maintenance	[illegible]	
Work in process [illegible] material inventories)	–	
Finished goods [illegible]	–	
2.2 Accounts receivable [illegible]	[illegible]	
2.3 Other liquid assets	[illegible]	[illegible]
	–	–
3 Other investments		
3.1 Pre-investment costs	209	[illegible]
Preliminary expenditure	209	[illegible]
Planning costs	–	
Engineering costs	[illegible]	
Interest during construction	[illegible]	
Training costs	[illegible]	
Others	[illegible]	
3.2 Start up expenses	–	
Consultant fees	–	
Costs for test run		
Others		

Major machinery & equipment	Capacity power kW	f.o.b. supplier country's port	Transport cost (insurance freight)	Import duty	Landing, local installation cost	Total	Foreign currency component
				(Value in US $ 000)			
Manufacture of ordinary, coloured and blue pencils	132						
- Pencil slat manufacture		45	3.5		[illegible]	[illegible]	[illegible]
- Pencil finishing		[illegible]	[illegible]		24	[illegible]	[illegible]
Manufacture of penholders	14	23	1.65		[illegible]	[illegible]	[illegible]
Manufacture of rulers	12	2[illegible].7	1.5		[illegible]	[illegible]	[illegible]
Manufacture of ink	6	16.3	1.1		[illegible]	[illegible]	[illegible]
Manufacture of carbon paper	40				2.6	[illegible]	[illegible]
- Colour manufacture		13.7	1		2.1	16.8	[illegible]
- Carbon paper manufacture		40	3		6.5	49.[illegible]	47
Manufacture of typewriter ribbons	7	4.8	0.3	1[illegible]	0.5	5.6	[illegible]
Manufacture of glue	2	9.6	0.7		1.5	11.8	11
Manufacture of erasers	14	4.4	0.3		0.8	5.5	[illegible]
Manufacture of stamp pads	10	8.5	0.6		1.3	10.4	[illegible]
Manufacture of chalk	35	40.2	2.8		6.4	49.4	[illegible]
Manufacture of pencil sharpeners	–	4.1	0.3		0.6	[illegible]	[illegible]
Manufacture of colour boxes	22	16.2	1.2		2.6	[illegible]	[illegible]
Auxiliary and service departments							
- Plastic department 3/	25	17.3	1.2		2.8	[illegible]	[illegible]
- Power, steam and water supply	500 kVA	52	4		[illegible]	65	[illegible]
- Repair shop	10	21.4	1.5		3.4	26.3	[illegible]
- Factory and office equipment	35	..	..		..	36	[illegible]
- Vehicles	–	..	..		..	[illegible]	[illegible]

VI. MANNING TABLE

Total number of persons: 232

Shops	1st shift	2nd shift	3rd shift
1 Primary operative shops (including supervisory staff)	189	–	–
- Pencil production	85		
- Penholder production	9		
- Ruler production	12		
- Ink production	12		
- Carbon paper production	18		
- Typewriter ribbons production	4		
- Glue production	3		
- Eraser production	5		
- Stamp pads production	3		
- Chalk production	11		
- Pencil sharpener production	4		
- Colour boxes production	12		
- Plastics department			

Shops	1st shift	2nd shift	3rd shift
2. Auxiliary operative shops	[illegible]		
Repair & maintenance	14		
Utilities control	[illegible]		
Product & material storage	–		
Off-site transport	[illegible]		
Guards, cleaners, etc.	[illegible]		
3. Administration	[illegible]		
Production management	[illegible]		
Research & development	–		
Sales & purchase	3		
General administration	[illegible]		

PAGE 3

VII ANNUAL PRODUCTION

1 Total annual expected maximum output [illegible]

		Domestic sales			Foreign sales		
Product	Unit	Quantity	Unit price ex factory (US $)	Annual turnover (000 US $)	Quantity	Unit price ex factory (US $)	Annual turnover (000 US $)
[illegible]	pcs	[illegible]	11	[illegible]			
[illegible]	"	[illegible]	[illegible]	[illegible]			
[illegible]	"	[illegible]	[illegible]	[illegible]			
[illegible]	"	[illegible]	[illegible]	[illegible]			
[illegible]	"	[illegible]	[illegible]	[illegible]			
[illegible]	"	[illegible]	[illegible]	[illegible]			
[illegible]	"	[illegible]	[illegible]	[illegible]			
[illegible]	"	[illegible]	[illegible]	[illegible]	No exports foreseen.		
[illegible]	boxes	[illegible]	[illegible]	[illegible]			
[illegible]	"	[illegible]	[illegible]	[illegible]			
[illegible]	"	[illegible]	[illegible]	[illegible]			
[illegible]	pcs	[illegible]	[illegible]	[illegible]			
[illegible]	"	[illegible]	[illegible]	[illegible]			
[illegible]	"	[illegible]	[illegible]	[illegible]			
[illegible]	"	1,025	[illegible]	[illegible]			
[illegible]	"	17	[illegible]	[illegible]			
[illegible]	"	[illegible]	[illegible]	[illegible]			
[illegible] sharpeners	"	[illegible]	41	41			
[illegible]	"	[illegible]	[illegible]	126			

2 **Expected sales and inventory build up** The average utilization of capacity by all departments will be: [illegible] in the 1st year; [illegible] in the 2nd, and [illegible] in the 3rd and subsequent years of expected maximum output. No further details are given.

3 **Pricing policy** Prices are fixed somewhat below the import substitution prices; that is, at [illegible] prices not including any import duty, for the products [illegible] mainly sold [illegible]; for the products mainly sold to the public, [illegible] prices including a [illegible] import duty and a [illegible] importer margin were taken as a basis.

4 **Planned sales organization** [illegible] location of the complex in the vicinity of the main consumers and the limited need for [illegible] [illegible] sales manager and [illegible] staff [illegible] with the market. Also, it is expected that approximately [illegible] of the annual [illegible]

VIII ANNUAL OPERATING COSTS AND PROFITS

Cost item	Unit	Unit price (US $)	Quantity	Annual costs (000 US $)	Foreign currency component (000 US $)
[illegible]				[illegible]	[illegible]
1 Material costs				[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	pcs	[illegible]	[illegible]	[illegible]	[illegible]
Plastic granulate	t	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] material	kg	[illegible]	[illegible]	[illegible]	[illegible]
Raw paper in rolls [illegible]	kg	1.01	[illegible]	[illegible]	[illegible]
Waxes, colours and various chemicals	[illegible]		[illegible]	[illegible]	[illegible]
Vulcanized rubber [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	–		–	[illegible]	[illegible]
Gypsum	t		450	[illegible]	[illegible]
Bricks	t	[illegible]	125	[illegible]	[illegible]
Brushes	pcs	[illegible]	[illegible]	[illegible]	–
Letters with screws	pcs	4.8	1,000	[illegible]	[illegible]
Dyed cotton ribbon	m	[illegible]	6,000	[illegible]	[illegible]
[illegible]	pcs	[illegible]	[illegible]	[illegible]	[illegible]
Kaolin pigments binding agent	kg	[illegible]	[illegible]	12	[illegible]
Dextrine	kg	[illegible]	[illegible]	[illegible]	[illegible]
Rubber [illegible]	pcs	[illegible]	[illegible]	[illegible]	[illegible]
Other material				[illegible]	–
Insurance [illegible]					
Packing costs				[illegible]	[illegible]
Cardboard [illegible] and boxes	pcs		[illegible]	[illegible]	–
Paper [illegible] pencils	pcs	[illegible]	[illegible]	[illegible]	–
Ink bottles [illegible]	pcs	[illegible]	[illegible]	[illegible]	–
Ink bottles [illegible]	pcs	[illegible]	[illegible]	[illegible]	–
Labels	pcs	[illegible]	[illegible]	[illegible]	–
Water	[illegible]	[illegible]	[illegible]	[illegible]	–
Electric power	kWh	[illegible]	[illegible]	[illegible]	–
[illegible]	t		[illegible]	[illegible]	–
[illegible] material				[illegible]	–

Cost item	Annual costs (000 US $)	Foreign currency component (000 US $)
2 Personnel costs (*)	[illegible]	[illegible]
2.1 Wages & salaries	[illegible]	[illegible]
2.2 Contributions to social securities	[illegible]	
2.3 Fringe benefits	[illegible]	
3 Interests [illegible]	[illegible]	–
4 Rents [illegible]	[illegible]	–
5 Indirect taxes at company level ([illegible] import duty on imported material for non-government demand)	[illegible]	–
6 Depreciation (linear depreciation)	[illegible]	–
6.1 Buildings [illegible]	[illegible]	
6.2 Machinery & equipment [illegible] for transp. equipment)	[illegible]	
6.3 Office equipment [illegible]	[illegible]	
6.4 Other fixed assets [illegible]	[illegible]	
7 Administrative expenses & sales costs	67	–
8 Other costs [illegible]	[illegible]	–
9 Profit before tax	430	–
of which: profit tax [illegible]	([illegible])	
subsidies	–	

(*) Categories of persons employed	Domestic: No. of persons	Domestic: Annual wages & salaries & fringe benefits (000 US $)	Foreign: No. of persons	Foreign: Annual wages & salaries & fringe benefits (000 US $)	Foreign: Foreign currency component (000 US $)
Top managers	[illegible]	[illegible]	2	42	18.5
Engineers			2	25	7.5
Technicians	[illegible]	[illegible]			
Commercial staff	[illegible]	[illegible]			
Clerks and typists	12	14			
Foremen	[illegible]	33			
Skilled operatives	[illegible]	27			
Semi skilled operatives	[illegible]	39			
Unskilled operative	31	23			
Part time operatives	–	–			
Other special categories (women)	[illegible]	78			

IX FINANCING PROPOSAL (in US $)

1. Equity capital (total) [illegible]

2. Long-term loans (total) [illegible]
   Rate of interest [illegible]
   Repayment [illegible] of the [illegible] need not exceed [illegible] [illegible] loan be granted with [illegible] [illegible] that [illegible]

3. Other loans [illegible] repayment of suppliers' credits [illegible]

4. **Suppliers' credits** [illegible] rate of interest [illegible] financing cost; conditions of payment [illegible] upon delivery; [illegible] when [illegible] payment within [illegible] instalments. [illegible] term of repayment [illegible]

5. Remarks on the financing policy [illegible]

X IMPLEMENTATION PLAN

1. Technical collaboration service [illegible] know-how [illegible] necessary for the manufacture of the [illegible] of the [illegible]

2. Project management [illegible] production.

3. Recruitment and training of personnel: The 136 unskilled and [illegible] semi-skilled workers will be trained on the job during the first year of production. [illegible] shift-supervisors and four foremen of the production departments will get a one and a half to two years' training abroad. [illegible] training programme in Europe will include both schooling and in-plant learning.

4. Other items –

5. Time schedule: Since some special machines require a longer delivery time, two parallel implementation phases are envisaged.

	Phase I (months)	Phase II (months)
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

It takes a total of 21 months for the completion of phase I and [illegible] months for the realization of phase II. In phase I the following departments are to be set up: ink, typewriter ribbons, glue, erasers, stamp pads, pencil sharpeners, [illegible] service departments. In phase II the departments for ordinary pencils, coloured pencils, glue pencils, wooden penholders, wooden rulers, carbon paper [illegible]. No extension phase is planned, since the second production shift can be introduced when demand growth calls for it.

XI DATA FOR EVALUATION

1. Profitability evaluation
   Check
   ( ) Break-even point analysis
   ( ) Return to total capital
   ( ) Pay back
   ( ) Rentability: return to equity capital

2. Further profitability analysis for given project life (Bankability test)
   Check
   ( ) Internal rate of return
   ( ) Net present value
   ( ) Any other method used

3. National economic benefit cost analysis (National priority test)
   Check
   (x) Direct value added and employment effects
   (x) Balance of payment effect
   ( ) Social marginal productivity of capital
   (x) Backward and forward effects
   ( ) Synthetic benefit cost analysis
   ( ) Any other method used

Give a short outline of the methods used and major findings

Rentability: return to equity capital: Total costs and sales revenue of the first two years of production and of a "normal" operating year were taken as the basis of calculation. Total costs include depreciation and an average amount of interest payments for loans and credits. [illegible] tax holiday for the early years of production, was also assumed. There will be a loss in the first year of production. In the second year, the return on equity capital amounts to 16 [illegible]. In the long run, the return on equity capital after [illegible] income taxation is approximately [illegible].

Direct value added and employment effects: Net value added at factor cost amounts to some US $ [illegible], [illegible] wages and salaries [illegible], interest [illegible] the average [illegible], and profit before taxes [illegible]. The project provides work for [illegible] domestic employees, 136 of which can be unskilled. [illegible] members of the technical staff will be trained in Europe.

Balance of payment effect: The average annual foreign exchange expenditures amount to US $ [illegible] for import of materials and transfer of salaries; [illegible] for debt service (only during [illegible] years); US $ 44,[illegible] for transfer of profit of a foreign partner holding [illegible] of equity capital; [illegible] for replacement of machinery. Thus average net savings amount to [illegible] annually, as compared with the non-recurring foreign exchange expenditure (investment) of US $ [illegible].

Backward and forward effects: The project will give an impulse to the wood and packaging industries.

[illegible] ANNUAL OPERATING [illegible]

[illegible] down of total costs according to departments [illegible] in supplement.

[illegible] will be [illegible], [illegible] and straight grained. The wood generally used is cedar and alder wood. Experiments with tropical soft [illegible] were [illegible].

For the manufacture of [illegible].

No fuel cost [illegible] in this item, [illegible] waste from the pencil production [illegible].

The sales tax of [illegible] is not included in ex-factory prices, [illegible] the basis for the calculation of the sales revenue. [illegible]

[illegible] investment [illegible] newly established industrial enterprises can be exempted from income tax up to ten years. The profit after dividend will be internally accumulated to finance replacement investment, working capital, and [illegible].

Break down of operating [illegible] departments

[illegible]

Operating costs of individual departments (approx)

Manufacture of pencils	328
Manufacture of penholders	23
Manufacture of rulers	26
Manufacture of ink	286
Manufacture of carbon paper	150
Manufacture of typewriter ribbon	38
Manufacture of glue	25
Manufacture of erasers	35
Manufacture of stamp pads	8
Manufacture of chalk	87
Manufacture of pencil sharpeners	15
Manufacture of colour boxes	67
Commercial and technical administration	236
	1,323

XIII CASH FLOW TABLE (000 US $) PAGE 6

Year	(construction)			(production)								Terminal value of assets
	1st	2nd	3rd	1st	2nd	3rd	4th	5th	6th	7th	8th	
A. Source of cash	[illegible]	[illegible]	30	725	1,2[illegible]	1,755	1,755	1,755	1,755	[illegible]	[illegible]	
1 Financial resources *total*	[illegible]	[illegible]	30	-	-	-	-	-	-	-	-	
1.1 Loan[1]		[illegible]										
1.2 Equity	[illegible]											
1.3 Suppliers' credits												
1.4 Subsidies			30									
2 Sales revenue[2]	-	-	-	725	1,2[illegible]	1,755	1,755	1,755	1,755	1,755	1,7[illegible]	
B Uses of cash	[illegible]	[illegible]	136	733	1,247	1,639	1,744	1,664	1,751	1,751	1,63[illegible]	
1 Fixed capital expenditure *total*	328	483	373	-	-	-	6	-	-	-	66	
1.1 Land, site improvements & buildings	256	267										
1.2 Machinery & equipment (new installation)	72	222	373									([illegible])
1.3 Machinery & equipment (replacement)							65				66	([illegible])
2 Net working capital *total*	-	42	53	20	75	125	50	50	-	-	-	([illegible])
2.1 Stocks of materials		42	53		45	48						
2.2 Work in process[3]												([illegible])
2.3 Stocks of finished products				20	30	77	50	50				( )
3 Pre investment & start up expenses[4]	166	77	22	-	-	-	-	-	-	-	-	([illegible])
4 Production expenditure *total*	-	-	-	712	988	1,171	1,171	1,171	1,171	1,171	1,171	( )
4.1 Personnel expenditure				280	310	317	317	317	317	317	317	
4.2 Materials[5]				252	470	666	666	666	666	666	666	
4.3 Administrative expenditure				67	67	67	67	67	67	67	67	
4.4 Indirect taxes & royalties				30	45	60	60	60	60	60	60	
4.5 Other expenditure (rents, contingencies, etc.)				83	96	61	61	61	61	61	61	
5 Debt service *total*	-	20	18	61	124	118	233	218	140	140	-	
5.1 Interest on loans		20	18	61	61	55	50	35	20	10		
5.2 Repayment of loans & credits					63	63	183	183	120	130		
6 Dividends & profit taxes paid[6]	-	-	-	-	60	225	225	225	140	440	450	
C. Surplus/Deficit (A - B)	546	- 138	- 126	- 68	33	116	12	92	[illegible]	4	70	
SURPLUS/DEFICIT ACCUMULATED	546	408	282	214	247	363	375	467	471	475	545	

[1] Loans of different terms should be shown separately

[2] Annual value of production of finished goods minus annual accumulation of finished goods inventory

[3] Total production costs minus production costs of finished goods.

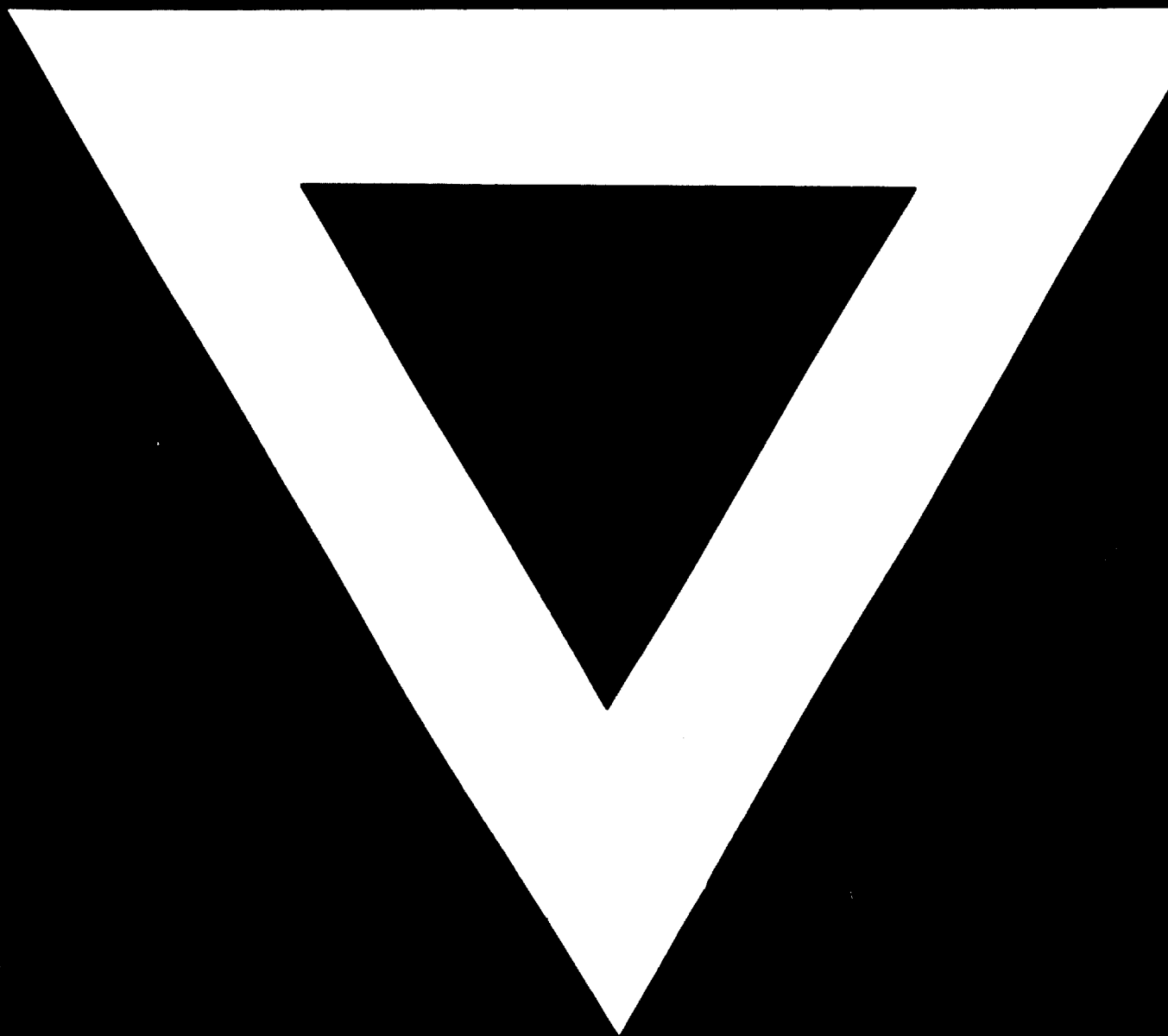
[4] Not including interest during construction

[5] Annual purchase minus annual accumulation of materials inventory

[6] This item stands for the part of profit which is to be paid out, namely profit tax, dividends, fees of the members of the executive board, managerial staff's share in profits, etc. Actually this sum will be established after allowances have been made for depreciation which are not included under item 4 (production expenditure). The cash flow balance should be programmed, therefore, in such a way that all necessary replacement (B.1.3.) can be covered in any year by the accumulated surplus.

Comments

"Net working capital" under Uses of cash excludes accounts receivable and other liquid assets, the latter being absorbed in "Accumulated surplus", together with the depreciation fund.



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