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REHABILITATION AND IMPROVEMENT OF PRODUCTION OPERATIONS
UNDER THE CONTROL OF THE PROVINCIAL GOVERNMENT
OF EAST JAVA

DP/INS/88/009

INDONESIA

Technical report: Preliminary report on Aneka Jasa*

Prepared for the Government of Indonesia
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

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TABLE OF CONTENTS

	<u>Pages</u>
Executive Summary	1
Introduction	2
A. General situation in the printing industry in Syrabaya	3
B. Aneka Jasa related to printing plants	3
C. Printing plants presently integrated	5
1. Printing plant PURI	5
2. Printing plant SETAIL	9
3. Panca Pujibangun	12
4. Continuous form printing	13
D. Resume	14
1. Aneka Jasa	14
2. Puri	15
3. SETAIL	15
E. Conclusion	15
CHAPTER II	
Introduction	17
1. Proposed new administration structure	17
2. Coordination Office	18
3. Financing programme for a new plant	21
4. Construction of the new plant	22
5. Management and costing system	24
6. Technical equipment	26
ANNEX I	28
General directions for a new printing plant	29
ANNEX II	34
Calculation of costs per work place	35
ANNEX III	46
Selection and transfer of technical equipment	47
Proposed extensions and replacement of present machinery	52
PHOTOS PURI	54
PHOTOS SETAIL	61

Executive summary

This report is divided in two chapters. Chapter I "Factfinding" and Chapter II "Proposal for new revised Government printing plant". In accordance with the job-description, prepared by UNIDO, the evaluation and analysis has been concentrated on Aneka Jasa and their attached printing units PURI and SETAIL. In conjunction with the revealed facts and revised activities, the research work had to be extended to two other printing plants - PANCA PUJIBANGUN and CONTINUOUS FORM. Those two plants are very important for the strategies of the proposed new consolidated printing plant.

After thorough studies of all involved institutions the situation can be summarized as follows: The present administration system of Aneka Jasa is unsuitable for printing plants. The main factors are: Too rigid and inflexible for immediate reaction to printing requirements; no basic knowledge of modern applied printing techniques; inadequate management as a steering committee for the units. Another major obstacle is the applied calculation and costing system, which is in no way adequate for the printing industry.

This situation certainly reflects upon the attached work-shops (units). The centralized management with partly non professional directors has led to the downturn in the fortune, as qualified unit managers are only functionaries. The equipment of the units is outdated and/or in very poor condition and no financial reserves were created for replacements or upgradings.

The management in PURI does not really fulfil professional requirements and seems to be paralysed and inactive by the situation. All technical installations show the lack of caretaking, and, even though all investment during the last 40 years was directed at PURI, the newer machines are in poor conditions. The management of SETAIL reacts differently, are more optimistic and efficient as is proven by an efficiency 4 times greater than PURI's. At least 80% of SETAIL's equipment must be classified as museum pieces, the latest attached machine dates back to 1953.

Considering all evaluated facts, only the following conclusion can be recommended:

1. Abandon the present administration system from Aneka Jasa or
2. Removing the printing units from Aneka Jasa.
3. Closing the printing units in step-by-step procedure.
4. Assuring all assets for a new consolidated plant.
5. Construction of a new printing plant together with the
6. creation of a new co-ordination office for all government printed matters.

This means also to close the present very efficient printing plant PANCA PUJIBANGUN. This necessity is based on following reasons: a.) The plant and all equipment is government property, b.) The already selected premises for the new printing plant is presently occupied by this plant, c.) The personnel and equipment has to be the back-bone for the new plant. The whole project can be realized by the sale of the real estate from PURI and the selected equipment from all three plants. The estimated achieved profit is sufficient for the construction, implementation and financial support for at least 2 years.

A new co-ordination office must be created as a replacement for Aneka Jasa to administer all printing affairs related to all governmental

departments, and the creation of the new printing plant must start from a complete new approach. Special attention must be given in selecting the right management with an adjusted administration system. To assure all procedures, the attachment of 2 to 3 printing experts for a period of 2 to 3 years is necessary. Failure to do this in an appropriated way may result in this situation repeating itself.

Introduction

According to the prepared project documents based on the evaluation from consultants from UNIDO, a team of 3 printing experts were recommended to undertake a thorough study of the government owned printing shops from East Java. Their tasks are specified in the project document under sub-project 5 "Printing shops", detailed in sections and job-descriptions 11-63 "Marketing of printing services", 11-64 "Production management for printing shops" and 11-65 "Maintenance and service for printing equipment". Their main activities can be summarized as follows:

1. To evaluate and propose a market strategy for the increasing needs of printing products for any possible private or government clients and institutions.
2. To make general survey and a detailed lay-out for a new consolidated government printing plant including new procedures for management and staff.
3. To survey and analyse in the market in Indonesia available modern printing equipment for this printing project in connection with designed new market strategies.
4. To propose possible measures for up-grading present machinery or selections as replacement for worn-out equipment.

The first expert and team-leader arrived in Surabaya on the 8th of February 1990. His assignment and activities are described in job description 11-64. Unfortunately, the Expert for assignment 11-63 arrived in Surabaya 6 weeks later, on the 14th of March 1990. It should have been considered and organized well in advance for either a combined arrival of all printing Experts in Surabaya or the assignment of the expert for marketing at least 1 month ahead. This would have been the best solution to assure far-reaching and overlapping results in conjunction with the existing situation. According to the project document, the teamwork should depend upon a correlated research work and combined efforts would have avoided split concentrations and unnecessary double-activities within the same province.

As for the third expert, section 11-65 "Maintenance and service for printing shops". All involved parties agreed, that at present an assignment is not necessary due to the situation and the present condition of all equipment. Based upon findings from the first 2 reports, the assignment could be re-arranged with possible new job-descriptions.

Taking-up their duty stations in Surabaya, the 2 Experts received a thorough briefing from the Indonesian counterpart. Studies and analysis of all available data revealed new and very important facts. Those additional findings made it necessary to transfer old and select new priorities and in consequence, the job-descriptions had to be re-adjusted.

Those findings revealed two main factors, the printing shops "CONTINUOUS FORM" and "PANCA PUJIBANGUN". Those existing plants are very important in considering the planning and construction of the new consolidated printing plant. Other activities in the designed job-description had to be delayed such as on-the-job training due to deficient of work capacities.

A. General situation in the printing industry in Surabaya

Before analyzing the present governmental printing shops, it has to be understood that part of the private industry in Indonesia has reached a high technical standard. Out of the 200 existing private printing plants and shops, 10 can be classified as large with more than 100 employees and the applied technical printing systems, work procedures and produced goods can be compared with standards from overseas. Close to those 10 market leaders, there are 40 medium sized private printing plants with different standards, ranging from modern to old fashioned. Their production lines vary from orders like business cards up to 4-colour process work of an average quality. 150 printing shops are operating on a more-or-less small scale with 5 to 20 employees - including management. The technical equipment in those plants is mostly limited to letterpress and the professional knowledge is restricted to the system used.

But nevertheless, these small printing shops serve a great part of the private sector. Those customers can be classified either as passers-by or customers with little concern for quality, mainly to limited budgets. In addition to those 200 printing shops and plants there are an uncountable number of one-man shops which are ready for instant printing of name-cards and similar orders plus supplying any kind of stationery.

As a result of discussions with managers from the private sector, it can be assumed that the printing industry has a promising future with an increasing tendency of 5 to 8 % yearly. But only those shops will benefit from any up-ward trends where present financial back-ups or other financial sources will allow them to extend or to modernize their plants within the next 5 years. This will certainly have a decreasing trend upon the existing numbers of private shops, as most printing shop owners have no money to re-invest.

B. Aneka Jasa related to printing plants

In 1985 the Government of East Java decided that all 35 work-shops, which were nationalized in 1957/8, had to be consolidated under a centralized administration, and split up and selected into 5 Anekas. To Aneka Jasa 7 units were attached, belonging to different industrial sectors such as Metalwork, Foundry, Service Stations for cars, General Contractors and Printing.

The two printing shops are "PURI" and "SETAIL". For internal reasons, other government owned printing shops had not been included, mainly the printing plant "P. T. PANCA PUJIBANGUN", which would have been a very valuable asset to Aneka Jasa, considering that printing equipment, which was delivered in 1964 as a donation from the Government of East Germany to the Provincial Government of East Java.

The current management system applies for all Anekas, one President Director with overall responsibility direct to the Governor, assisted by an Administration Director - responsible for finance and administration and a Technical Director - responsible for marketing and production.

The administration of Aneka Jasa consists of 41 personnel, classified as officers and office staff. Including the personnel from the general department, such as drivers, cleaners, caretakers watchman, etc., the total number is 75. All salaries, expenses and costs from Aneka Jasa are generated through their attached work shops and financed by adding 62 % "Directions costs" to all performed jobs in the units, calculated on direct used work hours for labour and equipment.

The adopted management system is very rigid and does not allow any flexibility towards necessary spontaneous decisions. The principles and rules are laid down from the Government and based upon economic targets planned 5 years in advance.

At the foundation of Aneka Jasa in 1985, neutral professional appraisers had been called in to re-evaluate the assets from all attached work shops. Those final reports are incomplete, as basic equipment had not been considered as assets, shown figures are underestimated and/or necessary balance sheet figures are not included. Nevertheless, based upon this report, new management systems and work procedures had been implemented. Those operating instructions are valid for all units, despite their different trades, sizes, target of plants, production lines and installed equipment. Enquiries whether this inventory report had been revised, could not be answered. Even after eight weeks, no documents were made available and therefore all figures mentioned in this report are based on the assumed fact that this inventory report has not been revised since 1985. These figures will be important when considering the available assets from PURI and SETAIL in regard to the planning for the new consolidated plant.

The present standardized costing system for all workshops was introduced in 1985, and replaced the previous much more specified and individual system. The presently used system is mainly concentrated on recovering management costs for supporting Aneka Jasa through added over-head costs. Based on jobs with equal work hours and used quantities of raw material with same specifications, the new calculation method shows an increase of 20 %.

All decisions, even at the lowest level are taken by the President Director. Only the immediate caretaking is within decision range of the unit manager with a monthly allocation of 100.000 R. for this purpose only. All personnel matters like recruiting, placings, salaries, promotions etc. correspond to government rules and regulations and depend mainly upon achieved school, college or university degrees. Technical training and experience is considered as important only at the lower level of the production sections.

Aneka Jasa uses one debit ledger for book keeping systems for all units. Therefore, no clear distinction between the units in regard of paid invoices is made and no control can be obtained for the validity and profit margins of each unit. This also explains the absence of financial balance sheets for each unit, as only roughly estimated turn-over figures are important. The utilized mode for book-keeping and accounting distinguishes between costs for raw material and labour expenses. All other additional amounts are profits and costs for covering side line expenses. Indicators show that this confusion started by reorganizing the units under Aneka Jasa.

C. Printing plants presently integrated

1. Printing plant PURI

The printing plant "PURI" is located in the centre of Surabaya which demands the highest price for real estate in East Java. Accommodated in a building, which was constructed around 1860, the printing plant was established in 1926 and therefore the construction is not even appropriate to the old fashioned letterpress system. The whole complex has not been up-graded since then and is unsuitable to serve modern printing technology. Estimations for the costs for reconstruction and/or renovation are beyond discussions. The main shortcomings are: Ground floors are not solid enough to accommodate heavy printing machines and not sealed to prevent dust rising, ceilings/roofs in the production area are of poor construction, walls/doors/windows are damaged and inadequate. Those poor conditions allow rain and dirt to have an immediate effect upon the production.

The success of the production line is very often affected by the interruption of the main power supply and the very old generator is not powerful enough to serve as an adequate stand-by unit. The location of the plant is in an very narrow street, hidden, with limited parking space, and denies the customers access to the premises.

The building houses the entire administration for Aneka Jasa and PURI. This is an another obstacle, as there are no clear separations of both administration sections, which are necessary to co-ordinate all individual business affairs.

PURI, as all other work shops is conducted by unit manager, assisted by two managers for marketing and production. Their responsibility is the fulfillment of profit targets which are prepared by the planning commission from Aneka Jasa. The position of the marketing manager is most important, as his activities have to assure the order flow for a stable production. PURI, as the unit with the best equipment and production capabilities, has to support other units with less profit making capacities or possibilities.

The total number of the permanent employees including management is 48, but when printing orders are not available, most employees are absent during normal working hours. The absence of employees displays the lack of maintenance and cleaning of all equipment. In case of incoming orders the workers are called and in case of orders with extensive work loads, stand-by workers on contract basis are hired. This applies especially to the finishing section. The received training of all employees is confined to operations procedures only. The lack of solid apprenticeship and further training restricts the production to poor

quality an out-put of 35 % of the machine capacity. The part-time employees in the binding section are only trained to perform simple work procedures.

According to the inventory from 1985 and presently undertaken studies, the plant PURI is the biggest asset (roughly 60 %) to Aneka Jasa with a book value of 630 Million R. These figures have to be revised as thorough investigations have revealed new figures. Those are classified in the attached list of the inventory with actual market prices.

a.) Capacity and production

According to the order book from 1989, 220 order requests had been pre-calculated and from those 220 requests 134 orders are invoiced with a total value of

1,554,464,000 R.

This low number of performed jobs is one of the results of government owned work shops having to compete with the private sector. As for PURI, pre-calculation for private customers are too high, and this is related to the aspect that government-owned work shops have to support the Aneka and can therefore not compete with quotations from the private printing shops. To support Aneka Jasa, the invoiced over-head costs vary between 25 % for orders up to 200,000 R. and 45 % for orders above this amount. Analyzing the applied percentage, no regular system could be traced and the applied percentage seems to be arbitrary and fixed upon negotiations.

The invoices have to be classified as it is important to analyze the real productive out-put and can be distinguished in

1. Jobs printed in 1988 and invoiced in 1989
2. Jobs printed in the letterpress system
3. Jobs printed in the offset system
4. Supplies of raw material for other printing shops
5. Multiple invoices for same orders.

Amounts of invoices specified according to this classification

1.	28,507,000 R.
2.	5,746,000 R.
3.	553,030,000 R.
4.	7,142,000 R.
5.	960,039,000 R.

Total	1,554,464,000 R.

To 1.: From the previous year 9 orders have been invoiced and paid in 1989.

To 2.: Letterpress system - 72 orders have been executed in 446 total work hours, with a value of 79,806 R. per order generating 12,883 R. per hour.

To 3.: Offset system - 24 jobs have been completed in 6,669 total work hours with a value 23,042,917 R. per order, generating 82,925 R. per hour.

To 4.: 10 invoices are for supplied raw materials like ink and paper.

To 5.: 19 jobs have double invoices and no explanations were obtainable why those invoices had been re-calculated.

According to printing procedures all production times for both printing systems include the steps before and after printing, like composing, camera and repro work, finishing etc. But the calculation sheets do not indicate those specific work steps. The real printing time (including productive and non-productive hours) can therefore only be estimated with an average of 38 %.

Only the produced printed matters in letterpress and offset are to be specified as production out-put from the plant. The utilized total work force from PURI summarizes to a total turn over

with 558,776,000 R. only

Those production figures have to be related with the present market value of the printing equipment, divided into offset and letterpress. Due to the age of the machinery, the former purchasing value is not relevant any more. This has to be considered in selecting the equipment for the new consolidated plant and in regard of purchasing additional equipment.

The order book shows a clear concentration on seasonal government orders. The turn over for offset is based on 1 job with a value of 529,201,000 R. or 95,7 % of the total offset production. This job had been executed in 3-shift work and therefore all following figures are calculated on this work-schedule. The basic equipment of a printing plant are the presses with their estimated production capacities, and therefore the profitableness depends upon the possible out-put from those presses. All other equipment/machines are of secondary importance.

The offset section from PURI consists of 5 presses, equal in size and production capacity and all machines show a similar percentage of used production time. Therefore, the total possible capacity of 31,000 work hours can be calculated on 5 machines, multiplied with 2,080 work hours per year in 3 shifts. The used time for executing all orders with appr. 40 % for all machines show a degree of utilization of

8.6 % per machine

For the letterpress section, with 5 small machines and a possible production capacity in 1-shift with 10,400 hours the real printing time of 192 hours show a degree of utilization of only

1.85 % per machine

All other machines and auxiliary equipment are either for serving the printing presses or depend on their out-put and can be regarded as secondary by estimating the degree of utilization per printing machine. The different calculation for offset and letterpress has to be seen under the present market value.

b.) Technical equipment

Puri does not depend on outside suppliers to execute printing in letterpress and offset. The attached system "Block making" for letterpress allows an additional service for all customers. The age of the whole equipment varies between 5 and 70 years which is generally in poor condition; even the relatively new machines are not sufficiently maintained.

The offset section consists of 5 machines in working conditions and 2 large unserviceable pre-war machines. The machines are not grouped together which is preferable for on-line working. Removing the discarded machines would allow a much better work efficiency. All machines are acquired on basic specifications only. Spare parts are not available and all machines show signs of inadequate handling.

The auxiliary equipment for the sections Repro and Photo composing is either out-dated, minimized in specifications or improvised in technical applications. In regard of possible production capacities from the presses, those 2 sections are underequipped. Only the printing-down frame for plate making is of sufficient standard. The out-dated photo composing unit belongs to the first generations (1955). A small camera is fitted in the dark-room; the timer-device is wrongly connected to the printing down unit. The available air conditioning for those 2 sections is insufficient.

The letterpress printing section consists of 4 small machines in working condition and 3 unserviceable machines. All machines show signs of inappropriate maintenance. The age of this equipment varies between 35 and 70 years, and only a few spare parts of poor quality are available. The lay-out in this section is very unpractical, removing the obsolete machinery would improve and allow better work procedures.

The composing section is divided in two; hand and machine composing. 80 % of all type faces for hand composing are worn-out and the type cases are scattered over the whole printing plant. The machine composing unit is equipped with the 25 years out-dated system "Monotype", which is very fragile, complicated and slow in production. The casting matrixes are very worn, temperature and other devices are failing and the composition of the casting metal is not in proportion.

It must be noted that the installations of the various production section, were not well organized as later purchased equipment was placed wherever space was available. Therefore, work stations designed for on-line work are scattered and mixed, which makes it nearly impossible to execute efficient supervision and to co-ordinate production in process lines. The work tables in the finishing section are placed in 5 different locations. The condition of the 4 single cutters is very poor, operation manuals are not available and access to the machines is very limited. The 3-knife trimmer is in average condition, but needs a complete over-hauling. Observed handling procedures are carried out in a very dangerous method as machine capacities and security installations are not observed and built-in devices are blocked. Production capacities of folding and stitching machines are not fully used due to applied limited operating procedures. Those machines are 4 to 5 years old and many complaints of inutility due to the poor construction are justified.

All technical installations are suffering from a continuous 95 % humidity throughout the year. Inadequate covers must serve as protection for the equipment. The actual caretaking is carried out by polishing the machine outside, but real maintenance of the fundamental and basic mechanisms is restricted to repairs only. PURI has a maintenance section with qualified technicians for all machines, but the lack of funds and the absence of employees for most of the time are mainly responsible for the present condition.

The equipment purchased after 1984 was selected solely under the aspect of the price or due to unknown conditions or negotiations. As the President Director signs responsible for all decisions, technical advice from the unit manager is not considered as important and therefore the purchased equipment does not correspond with the production lines and expected standards. The lack of necessary instructions from suppliers is also one of the main reason for inadequate handling.

c.) Management systems

The management from PURI is totally subject to directions from the management of Aneka Jasa. The unit manager is a graduate of general business administration with a restricted knowledge of the printing industry. The production manager and his assistant are qualified in letterpress with limited knowledge in offset. The marketing manager is a graduate in business administration with little experience in acquiring printing jobs. All 3 managers have had during their assignment with PURI very little opportunity to receive additional training in modern printing or to acquire added experience to fulfil the necessary specification in offset printing.

The method of collecting data or production figures from PURI is done in a very improvised way and is mostly guess-work. Only the production times from the printing presses are calculated as costs, the used times of the auxiliary equipment is neglected. No distinction is made between productive and non-productive hours and a real calculation method for the costs per work place is unknown. Daily work sheets are abandoned since 1986 and attendance records are incomplete and seldom controlled by the management. Supervising and quality control is only applied when directly asked for or ordered from higher authorities. Planning and job preparing is mostly improvised and order instructions are given verbally.

All professional placements are decided from the management of Aneka Jasa without consulting the management from PURI. The employees are not usually employed according to their qualifications and selection procedures depend very often upon private relations.

2. Printing plant SETAIL

The printing plant SETAIL is also located in the centre of Surabaya and consists of two different shops, which were founded in the middle of the last century as private enterprises. Combined under the administration of Aneka Jasa in 1985 the shops still produce independently within their original designed technical lay-out. The production line in both shops is restricted to letterpress only with no auxiliary equipment for additional service.

The buildings, which house both plants, had originally been constructed as family houses. The whole lay-out is inadequate for the purpose of printing

and since their construction no alterations had been undertaken. The distance between the 2 shops is roughly 600 meters and is a great hinderance for the unit administration.

Both shops are under one unit management, but due to the confined space, divided. The unit and production manager are accommodated in the bigger and the marketing manager with the accounting section in the smaller work shop. Whereas the location of the bigger shop is hidden in a narrow street with limited parking space the smaller shop is situated at a main road with very heavy traffic and no parking possibilities. Access to both shops is therefore limited and makes deliveries problematic.

Before the situation in SETAIL will be analyzed, it has to be considered and all following statements must be seen under this aspect - SETAIL is more-or-less a museum - where old techniques in printing are applied to serve customers for the 20th century.

It is significant, that the oldest machine dates back to around 1885 and the newest equipment is from 1955. Classification of the equipment showed a surprising result - 2 machines are most likely unique and even more astonishing, they are in working conditions. This fact reveals the craftsmanship, which has been and is still available in SETAIL. This allows a comparison between PURI's operators in offset with an average standard and SETAIL's tradesmen, which are skilled letterpress printers. The observed working procedures in both plants are to be taken as proof that profound teaching is absolute necessary.

But this available skilled work force had not been considered as important by the management of Aneka Jasa. All technical assistance during the last 5 years were granted to PURI. Today's production figures from both plants should not be compared as the figures from PURI are only superficial. If the capabilities from SETAIL would have been evaluated some years ago, today's production out-put and profit would be totally different. The reasons for this negligence, according to the statement from the management of Aneka Jasa, has to been seen in the figures of the "net profit".

a.) Capacity and production

The records for the first 6 months were available and analyzed in regard to turn-overs. 150 Jobs had been pre-calculated with a value of 51,833,000 R. As Setail has to compete under a much stronger pressure than PURI with the private sector, 117 orders had been invoiced with a total of

47,822,000 R.

Subdivision of those orders show

19 government orders with 31,435,000 R.
98 private orders with 16,387,000 R.

This classification is necessary to differentiate between the added overhead costs. The percentage for government orders show 26.5 % and for private orders 46.5 %. The total amount of those added values for supporting Aneka Jasa arrives at

15,950,000 R. or 33 %

Most of the whole turnover (95%) is produced with 2 medium and 4 small size machines and for the purposes of cost estimation can be considered as one class. The degree of machine utilization (6 months, 1 shift) is given by the following:

Total working time = 1040 hours/machine
Total time used - 1747 hours (6 mcs)
Utilization = $(1747 \times 100)/(1040 \times 6) = 28\%$

The hand composing section shows a used capacity of 30 %. But this degree and the used hours in the finishing section is of minor importance. Again it must be mentioned, that the production capacities from the presses are the basic input for the profitability of a printing plant.

b.) Technical equipment

As mentioned before, the whole equipment is between 100 and 35 years old and does not correspond with modern printing demands anymore. Nevertheless, printing is performed in average quality on machines, which either belong to a museum or should have been scrapped long ago! For whatever reasons the plant has been kept in such conditions, it certainly has had an improving effect for the qualification of all workers. As most of the equipment is out-dated spare parts are not available anymore. Repairs and maintenance are carried out under supervision from the production manager, with the assistance of local entrepreneurs.

Both shops have to depend on the main power supply only, which is very often interrupted. The old pre-war transmission drive is improvised and dangerously installed. Old dismantled and broken machinery litters the floors and can by order not be removed or be reconstructed. Other equipment needs urgently to be adjusted and/or overhauled from manufacturers. All requests in this regard have been refused by the President Director of Aneka Jasa, with the statement, that any further investment is wasted money.

Due to the inappropriate lay-out of the building, the access to machines and the auxiliary equipment is limited, and does not correspond with normal security obligations. In the composing section the type faces are to 90 % worn-out and the equipment in the finishing section is to 50 % beyond repair. Store rooms for unfinished and finished products are not available and goods are placed wherever space can be made.

c.) Management systems

The system of conducting the plant is the same as in PURI, but the management seems to be more efficient. The unit manager is an experienced tradesman in letterpress and the production manager has a diploma in general

machinery, which is just adequate for this collection of old machinery. The marketing manager has a business degree and seems to be very active which is proved by the amount of in-coming orders. The overall impression is that the management functions as a real team. Personnel problems are mostly settled without interference from Aneka Jasa.

3. PANCA PUJIBANGUN

This printing plant is included and analyzed under two aspects: 1. The whole plant with all assets belongs to the Government of East Java and therefore 2. All those assets have to be considered as a major contribution for the planned new consolidated plant.

This printing plant was founded in 1972 as a government work shop, based on market studies from the 4 old private Dutch plants PURI, SETAIL, BRANTAS and SELAGIRI, which were nationalized in 1957. Those plants had been re-grouped in 1964 under the administration of GRAFICA KARJA, a similar administration system as Aneka Jasa. However after a successful start, the later costs of maintaining the plant were out of proportion to the profits from the turn over. Analyzing this weak situation, the government then declared this plant to be registered as a private work shop. This new status enabled the management to obtain financial support through private bank loans. The rendered assistance, together with a change in certain management levels, reassured the success in the following years. In contrast to the pure government work-shops, this difference, government owned property under a private management and conducting a plant according to the principles and needs of the market, has to be observed by comparing PANCA PUJIBANGUN with PURI and SETAIL.

This constellation, government owned but declared as a private company, made it impossible to integrate this plant in 1985 under the management of Aneka Jasa. To assure a governmental control, the nominated President Director from Aneka Jasa had to combine his commission with his second position - General Manager from PANCA PUJIBANGUN. The selected Vice General Manager, a very efficient and experienced tradesman led this plant to a thorough success and should be recommended as a possible candidate for any required General Manager of a printing plant.

The plant is located in the old town of Surabaya, hidden in a very narrow street, which makes access for clients and deliveries very difficult with no parking space. The building itself has been constructed in 1970 and is not very appropriate for printing; the administration section is over-dimensioned and the production section is rather crowded with an insufficient technical layout.

The applied printing system is offset only, with additional equipment for punching. The production in very good quality is produced with 5 medium presses and ranges from simple black and white up to 4-colour process work. The formation of the employees is sufficient as they are trained under qualified supervision and the middle management consists of qualified and experienced co-operators. To highlight the professional standard, it has been agreed, that employees from PURI are accepted for further and/or additional training. At present, 3 printers from PURI are already receiving additional training in printing. The present standard of the printing machines is just sufficient and due to the 20 to 35 years in service should be renewed within the next 3 to 6 years. The equipment in the finishing section is relatively new but should soon be overhauled.

The sales figures are similar to PURI, but in regard of the investment, the used capacity balance is 5 times better. In regard of the planned new printing plant, the total assets are registered and classified with today's market value, which have to be divided in:

1. Land	1.990.947.000 R.
2. Buildings	302.000.000 R.
3. Technical equipment	937.658.000 R.
4. Office and other inventory	47.500.000 R.

Total	3.278.098.000 R.

Of importance for the implementation of the new plant are item 1.: The present premises will cover to 100 % the necessary size for the piece of land which is required for the new plant; item 3.: From the present technical equipment the selected machinery with an estimated value of 770.000.000 R. will form the technical back bone of the new plant.

4. Continuous from printing.

There is a twofold reason why this print shop is included. 1. Aneka Jasa benefits from this shop by taking order commissions. 2. This printing system has a very high rate of growth in the future. This carefully considered forecast is recommended to be included in the proposal for a new consolidated printing plant. At present there are only 4 such shops in Surabaya and these cannot fulfil the demand, since technical alternatives for this system can not be found. The growth rate can be estimated of 15% yearly, especially for goods to be used in computerized systems.

The work shop is located in the premises of PURI, but owned by private entrepreneurs. Based upon an agreement, signed in 1985, the whole equipment becomes in 10 years the property of the Government. 40 % of the present orders are Government orders which are invoiced through Aneka Jasa. The rest of the capacity is used by the owner on his own account.

The technical set-up can be presently estimated to have a value of around 800.000.000 R. Working in 2-shifts the machine capacity is used to 70 % and the total-turn over can only be estimated by multiplying the invoiced amounts from Aneka Jasa by 2,5. The total invoiced turn-over from the year 1989 for Aneka Jasa shows an amount of

920.831.000 R.

The 10 % commission generates surplus of roughly 92.000.000 R. for Aneka Jasa and is far above the official presented net profit from PURI and SETAIL together. Comparing relations between investment and out-put, this plant has an efficiency 14 times greater than PURI.

The calculated period of 10 years proves the applied depreciation system in the private sector. After 10 years of service with a high percentage of used machine time, the quality of printing has decreased and it has to be questioned if such simply constructed machinery can then meet necessary requirements.

D. RESUME**1. Aneka Jasa**

Transferring the responsibilities from the National Government to the Provincial Government, the introduction of a general administration system had been installed to administer all attached work shops. Corresponding to the economic situation in Indonesia this is an approved method; and with necessary attention paid to special features, production lines, delegated competence and reduced impact from general administration, this system would have proved its validity.

However, the first underestimation was made by selecting work shops belonging to different industries. It would have been prudent, if those units would have been selected according to their trades or, if not possible, to install approved and experienced technicians for an appropriate management. Issued administration guide lines should have only be used as general directives. The biggest obstacles for the work shops are the very limited decision range of unit managers, inadequate and insufficient handling of personnel affairs, not specialized but to narrow book-keeping and accounting procedures, no financial support for necessary re-investments, and the excessive high support of the greatly over-staffed Anekas.

The added 62 % for administration costs on each job makes a comparison with the private sector problematic. With the presently used inadequate system, the 62 % is not a real hindrance. Revising the costs per work place to real figures, those added 62 % will make it impossible to compete with the private sector. The added 5 % for covering marketing expenses are also not justified as they are already included in the administration costs.

The system used for book-keeping and accounting is based on figures from 1984, which have not been revised or re-calculated. Possible production times and labour capacities had been grossly underestimated and calculated market prices, compared with other printing shops, are 30 to 40 % too low. Nevertheless, it is significant for the used system, that plants with a 10 to 15 % used machine capacity are showing a profit margin. Those profit margins are purely fictional. As a sample: the rate of one machine/hour is fixed at 3,800 R. compared with an average demand of 31,000 R. The explanation is that all machines are written off and correct calculations are not necessary. This turns out to be the deadly boomerang for nearly all the work shops. The necessity to replace more than 80 % of the printing equipment with no funds being available shows the total lack in this regard for building up reserves. Aneka Jasa therefore can not realistically show a profit margin with reference to both printing plants.

Another reason for the inefficiency in the Anekas is the appointment of personnel. Despite their inadequate knowledge and experience, only graduates with a university diploma or equal degrees are accepted as managers. Qualified tradesmen with the necessary experience, which would be the best solution to conduct work shops, are not supported. The present system is in accordance with the structure of the government hierarchy and is responsible for selection procedures. Qualifications according to the trades or industry are not considered and this negligence is also responsible for the observed serious effects.

Important proposals from unit managers, like observed market trends and technical improvements are not taken into consideration and their skill and

expertise as a steering instrument is not requested. The purchase of new equipment is taken in an arbitrary way or due to unspecified negotiations. Technical advice from unit managers is ignored.

The available vocational and training schools are not sufficiently geared for professional training. Only a very few have participated in such courses, which are guaranteed and free of charge. Advanced studies for Graphic Arts can be followed in Malang and applied techniques in modern offset printing as well as lessons in operating auxiliary equipment can be obtained at two schools in Jakarta.

2. PURI

Obtaining all data and information from PURI was very difficult, and it has to be understood that the report may not include all data of secondary importance.

In general, Aneka Jasa must be made responsible for the present situation. Nevertheless, with more initiative from the unit management, a greater efficiency could have been achieved. The impression was transmitted, that there is no interest in generating efforts for improvements, as the present situation serves as an excuse for all shortcomings. The situation is known to be hopeless and the frustration is carried along the line down to the last employee.

All evaluation in PURI had to be made with the assistance of a very good and competent translator. In separate meetings with the unit manager only general statements could be obtained. The marketing manager avoided all statements and meetings with the production manager failed 5 times. His assistant made several wrong quotations and other personnel had no permission to be questioned. Observed were: lack of supervising; no real machine maintenance, only verbal work instructions, no control of attendance records, improvised control of work records, pre-calculation are done provisionally and personnel affairs not in control.

3. SETAIL

The management of this shop was very cooperative in obtaining all data and seemed to be much more competent in conducting a plant. Despite the fact that SETAIL also is controlled by Aneka Jasa, the qualification of the management is proved by the efficiency, and contrarily to PURI, is also a result of separation between the management of Aneka Jasa and SETAIL. But those specifications are suppressed because the eligibility for any support of a plant is measured by the figure of "net-profit".

If the management from Aneka Jasa would have used the available skilled competence in printing by supporting the plant with modern equipment, the results in turn-over and shown real profit would have been surprisingly high. As an indicator is the fact that the production is achieved on a collection of museum pieces. The management and workers should be considered as potential staff for any new plants.

E. CONCLUSION

It is obvious, that the present system of supervising the work shops through Aneka Jasa has to be abandoned. The costs for supporting are far too high in regard to the desolate situation in most units. As for the attached printing

units, new systems, measured on the principles from the printing industry, have to be implemented.

Analyzing all available data has led to only one acceptable solution - the creation of a new government printing plant, as alterations in the existing units will not improve the situation. The plants should be closed, the assets secured and the administration system abandoned.

The question, if a new government owned consolidated printing plant should be placed under private management, which is advisable, has to be decided by the Government of East Java. The enormous amount of printing work for the Government with an annual budget of 70,000,000,000 R. makes it necessary that the plant operation be only orientated on the principles of the market economy.

Considering the responsibility for the tax revenue, a new plant should be placed under government responsibility. Another reason for this advice is in the very nature of the printed products. As the present procedures are very inadequate, new system have to be developed in regard of security and necessities, which must be classified as

1. Confidential
2. Classified
3. Personal records

This new set-up would certainly need a new integration within the government structure. As the structure of Aneka Jasa had not proven to be the appropriate instrument for overall administration, an autonomous co-ordination office has to be created. This office has to act as a liaison office to and for all governmental departments and be responsible for all printing affairs. This office should also function as a steering instrument as the total amount for needed printed matters from the government is far to big for one plant alone.

The execution of this project has to be well defined and organized in a step by step procedure. The following headings should serve as indicators for this proposal.

1. Issuing a new governmental decree for handling the needs of printed products for all government departments.
2. Creation of a new co-ordination office as a steering instrument for all requests for governmental printed matters.
3. Implementing a new management committee which conducts as liaison officers all affairs concerning all governmental departments and the printing industry.
4. Separating the present management system as executed in the Anekas physically and psychologically.
5. Combining the facilities and technical production capacities by creating a totally new printing plant.
6. Implementing a new management system based upon private initiative, observing the necessary qualifications for the printing trade.
7. Reducing the technical and professional constraints to an absolute minimum.

By observing all proposed steps in conjunction with new revised time schedules for any implementation, a successful and profit making printing plant can be taken for granted. Further evaluations, discussion and decisions should

be co-ordinated through the Government under control and responsibility from printing experts with the participation of all departments concerned. The present situation should not be changed or altered, until final decisions are made.

CHAPTER I I

Introduction

Before analyzing the following proposals, it has to be considered, that two technical reports will be presented since the Expert for Marketing arrived 6 weeks after the Expert for Management had started his work and it was impossible to consolidate the facts into one report. Deliberately, this report deals mainly with the possible construction of a new consolidated printing plant. Details for possible up-gradings of the present plants should be considered and recommended by the Expert for Marketing. This might also be necessary since conclusions for further revised or added activities are to be taken from this report. In preparing two reports with this time interval, it will be understood, that certain facts may look different, as some developments are already based on activities from the Expert for Management.

In agreement with the job-designation for the Expert for Marketing, this chapter analyses in general the possible construction and creation of a new plant and refers to an appropriated new management. Only when absolutely necessary, references to possible marketing structures are given. Nevertheless, under the present circumstances and for the possible establishment of a printing plant, the aspects of marketing are of prior importance. The creation of a sales force for acquiring sufficient printing orders must have a key position in any recommendation.

1. Proposed new administration structure

As summarized under Chapter I, the whole organization scheme of the present government printing plants, but especially the administration system needs to be changed and re-organized. In whichever way discussions for alterations are intended to go, the responsibility for a solution lies with the government authorities. 3 major factors are of significant importance for any decisions and should be considered as headings for all further discussions:

1. The proposed new zone regulations to determine and divide the industrial areas in Surabaya.
2. In regard to tax revenues it should be in the interest of any government, that, if work shops are under government control, revenues are used to support those work shops by allocating government orders to those units.
3. Implementing administration systems, which are based on standards and principles of the private industry, so that they can be in competition with the profit orientated private business.

It should be well understood, that only practical decisions will solve on-going problems, superficial solutions will aggravate the situation in the long-run. As the overall decision lies at the Governors level, the precondition for a new printing plant is the determination of how the plant is integrated within the government structure.

Considering the present situation with all available data, a decision

should be made in favour of a government supervised plant, especially under the aspect, that all budgets for printed matters are of great national interest. A decree from the Governor should be the first initiative to place the future responsibility for the creation of any new institutions under a Board of Directors, which have to be nominated and directed by the Governor. Such a decree will give the green light for all following actions and, to assure a successful continuation, should be executed under supervision of printing experts.

Decisions concerning the present situation in regard of political necessities should only be made after a clear statement from the Governor, because it will affect a great number of high ranking officials. Any ad-hoc decisions or short-term placements concerning personal matters at present would be a negative interstep. This applies especially if decisions are made in favour of the implementation for a new consolidated printing plant and the management to be appointed.

2. Co-ordination Office

As a replacement for the management systems of Aneka Jasa, an agreement must be reached to create a co-ordination office that should be concerned with government needed printing affairs only. The existence of such an office would cut off all side-line affairs which are at present in the entire management and which cause great interference to the attached units. The function and sphere of action of this office must be restricted and classified as follows:

1. Acquiring all existing needs and obtaining all requests for printing matters from government departments which have an allocated budget for printing.
2. Classifying and handling those needs and requests according to government priorities, which have to be specified as either confidential, or to be classified, restricted as personnel affairs or declared as common printing orders.
3. After specifying each order to the applied criteria, releasing the order observing technical specifications and capacities to the government plant or for open quotation to the private sector.
4. Monitoring all order procedures as a steering committee, orientated on standards of general business and principles of the printing industry. In case of costly contraventions this office should have the authority to apply restrictions or to take legal actions.
5. Control of the monthly financial statements produced from the printing plant and comparing cost/price calculations from the private sector with those from the government printing plant.
6. Close observation of all activities from the private printing sector for recognizing indicators of possible trends. Monitoring developments from the printing industry for conclusions and actions to be taken.
7. In monthly meetings with members of the Board of Directors and the Management from the government printing plant all decisions should be made unanimously if possible.

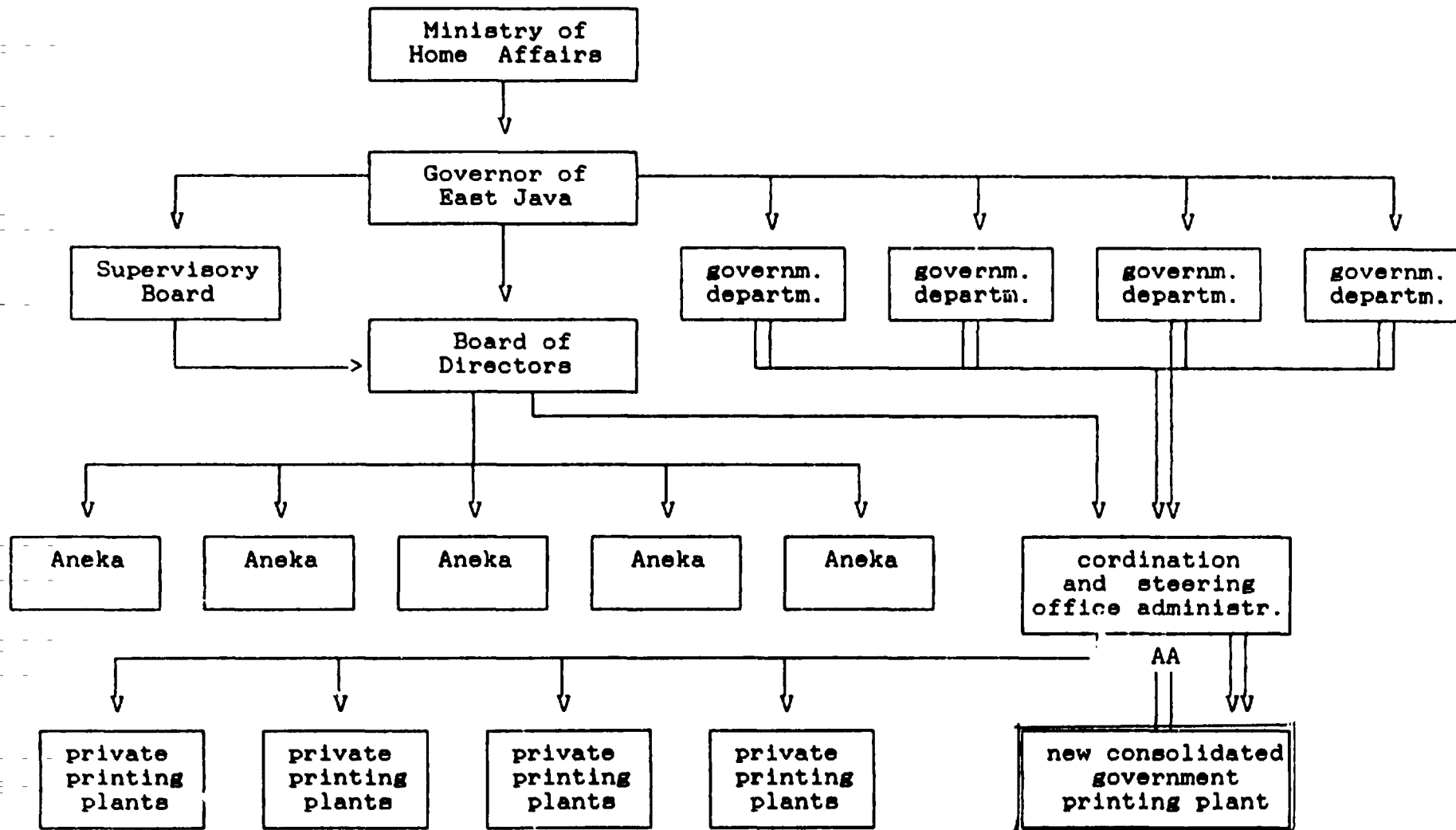
The ideal appointment for this office would consist of three experienced managers for administration, marketing and production, who must have a thorough knowledge of all business principles. The Administration Director should be

responsible for handling all affairs which are related to other governmental departments; the Marketing Director should be responsible for the interrelations with customers and departments and obtaining the necessary information, monitoring the market and the private industry; the Production Manager should be responsible for planning the utilization of capacities, overseeing all technical printing procedures and monitoring technical developments. For a smooth and efficient co-ordination a small number of staff, like secretaries, drivers, etc. should be attached.

See next page for organogram

The financial support for this office should be assured by adding a certain percentage on top of all executed printing jobs. Compared with 78 staff members from Aneka Jasa, the number of staff should not exceeding 10. This would correspond with allocated direction costs and observe traditional business behavior. The question of paying commissions should not be taken in consideration, as government orders should not be used to up-grade salaries. The present system of paying commissions and adding those costs shows the necessity to revise all present quotations. Neutral auditors should control at least twice yearly all account and trans-actions.

**PROPOSED CONTROL STRUCTURE
FOR
NEW PRINTING PLANT**



3. Financing programme for a new plant

In case of a decision for a new consolidated plant the present printing shops PURI, SETAIL and PANCA PUJIBANGUN have to be closed and their combined assets have to be used to assure the construction of this new printing plant. This means, separating the printing units from Aneka Jasa. This procedure could only be done by issuing a decree from the Government of East Java. After such an order has been published, negotiation for possible transaction can be arranged. The value of the real estate from PURI alone would be the financial assurance for the construction of a new printing plant. SETAIL is housed in rented property and the premises from PANCA PUJIBANGUN is actually in consideration as the location for the new printing plant.

The premises from PURI includes appr. 5,500 square metres, and the expected gross profit from the sale can be estimated at around 5,500 Million R. This figure is based on recent sales of property from Aneka Jasa, which achieved 1 Million R. per square metre. As only the costs for the construction have to be considered, the amount of 520 Million R. will be sufficient for a building of appr. 2,000 square metres.

These figures show the proportion and expected profit by selling the real estate of PURI and the construction of the new premises. To ensure integrity, this transaction of classified government property should be undertaken by a consortium of approved bankers.

Allowing, in addition to the cost of construction, fees for architectural management of around 80 Million R. would leave appr. 4,900 Million R. net. Together with the expected profit from the sale of equipment from those 3 plants of a minimum of appr. 700 Million R., the available amount summarizes to a total of

5,600 Million R.

net for taking care of personnel affairs, purchasing additional equipment and most important, working capital and absolute necessary cash reserves. In view of possible extensions and, shortly, the replacement of machines (2 to 4 years), those cash reserves must be always available. Here it is worth mentioning, that a new 4-colour press will cost appr. 2,300,000,000 R.

At this junction, consideration may be given to compensation factors e.g.

- a.) Local government authorities (Aneka Jasa) who have lost their income.
- b.) Staff and workers who have lost their job when Anekas are abandoned.
- c.) Staff and workers from all printing plants who are not required for the new plant.

This form of compensation will show the Government's social conscience in this rationalization programme.

It should be clearly understood, that, after all fees, compensations, construction costs etc. are paid, the remaining financial reserves must be strictly reserved for the new plant only. To ascertain this assurances, all transactions must be supervised through the Government and handled by an accepted

and reputable bank consortium. If certain amounts are foreseen for up-grading desolate units from Aneka Jasa or to render financial assistance to other Anekas, any amount should only be granted as a normal bank loan and treated by applying current conditions and interest rates.

4. Construction of the new plant

According to actual decisions, it must be assumed, that for the location of the new plant the premises of PANCA PUJIBANGUN had been selected since this land is property of the Government. It must be noted, however, that the selection of this site in the centre of old Surabaya is not ideal, because access is difficult and co-ordination with other departments will therefore be problematic. For a selection near the industrial zone with already developed infrastructures are not many options left, because the soil is either too soft (alluvial land) or there is not enough potable water. The best solution would be the construction of a new plant out-side of Surabaya near the high-way which would not impede communication with departments in Surabaya.

Any lay-out must be "tailor-made" for printing purposes only, contrary to the observed arbitrary and non-organized method. A prepared lay-out shows the basic structure and how a printing plant under consideration of the special function and production lines including all necessary security installation for all government requirements should be organized.

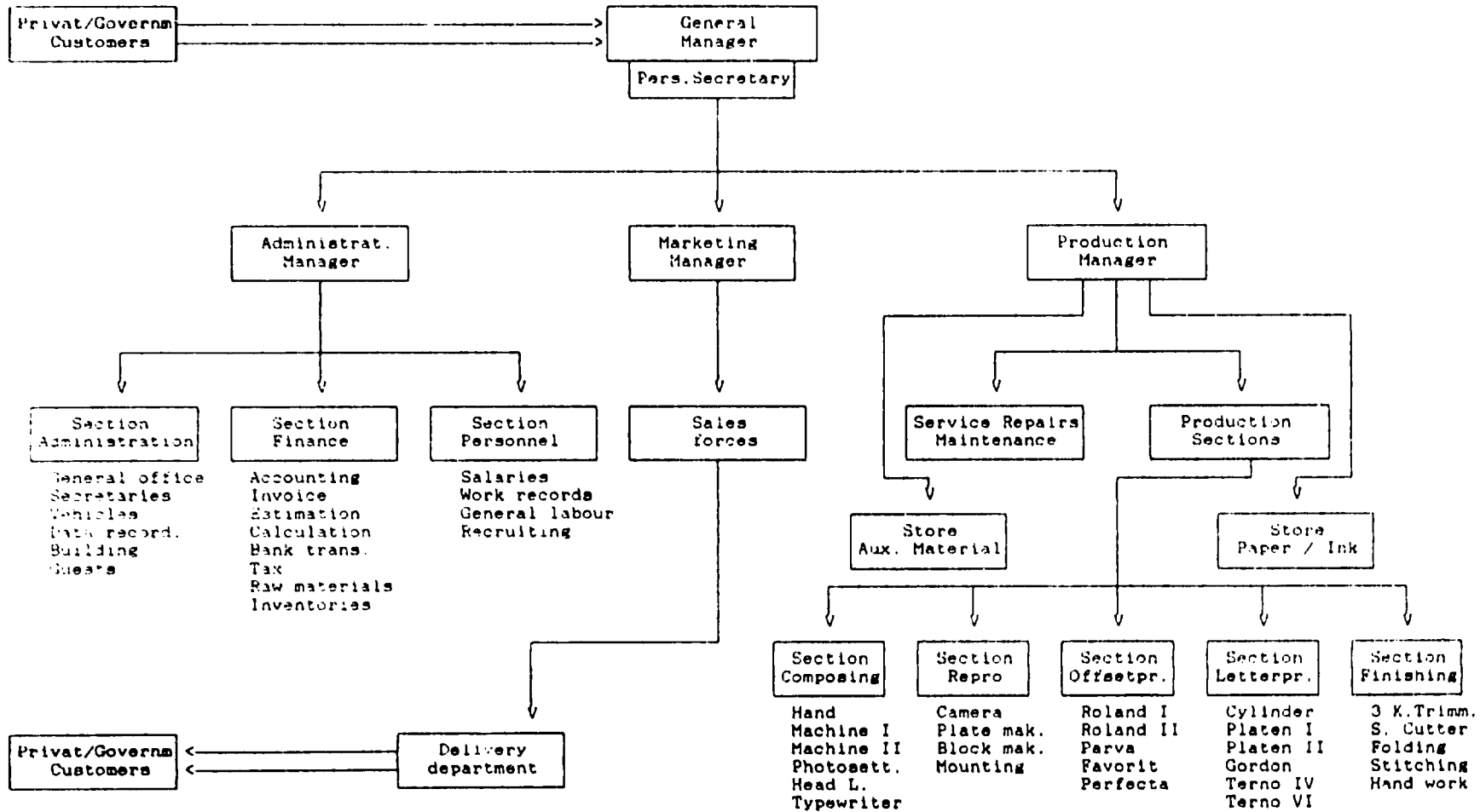
See Annex I

This technical lay-out was prepared under consideration of the installed co-ordination office as an overhead steering institution and, if handled in an appropriate way, will avoid presently observed situations. The co-ordinated procedures in arrangements with divided work sections will ensure an efficient and economical work flow.

See lay-out next page

Any construction should be executed under participation from approved printing experts; from the blue-print stage onwards until the final steps of placing the equipment. The prepared lay-out allows possible alterations in spacings, machine placements and external facilities. But as for the internal structure of offices and work stations the planning should be valid and be held to through all further possible alterations. Any alterations, extensions or considerations of the project should be discussed with those printing experts and their advice should be seen as the decisive authority.

Organisation structure of printing plant



5. Management and costing system

The previous management and accounting system, which was developed from the experienced Vice General Manager from PANCA PUJIBANGUN and valid until 1985, was replaced with an rather improvised and insufficient system. As this system was in accordance with the principles of the printing industry, it should be re-implemented with slight alterations. The registration of costs per work place and cumulations of total performed work hours per work place should be added with revised figures. As a sample, a short and summarized step-by-step procedure is attached.

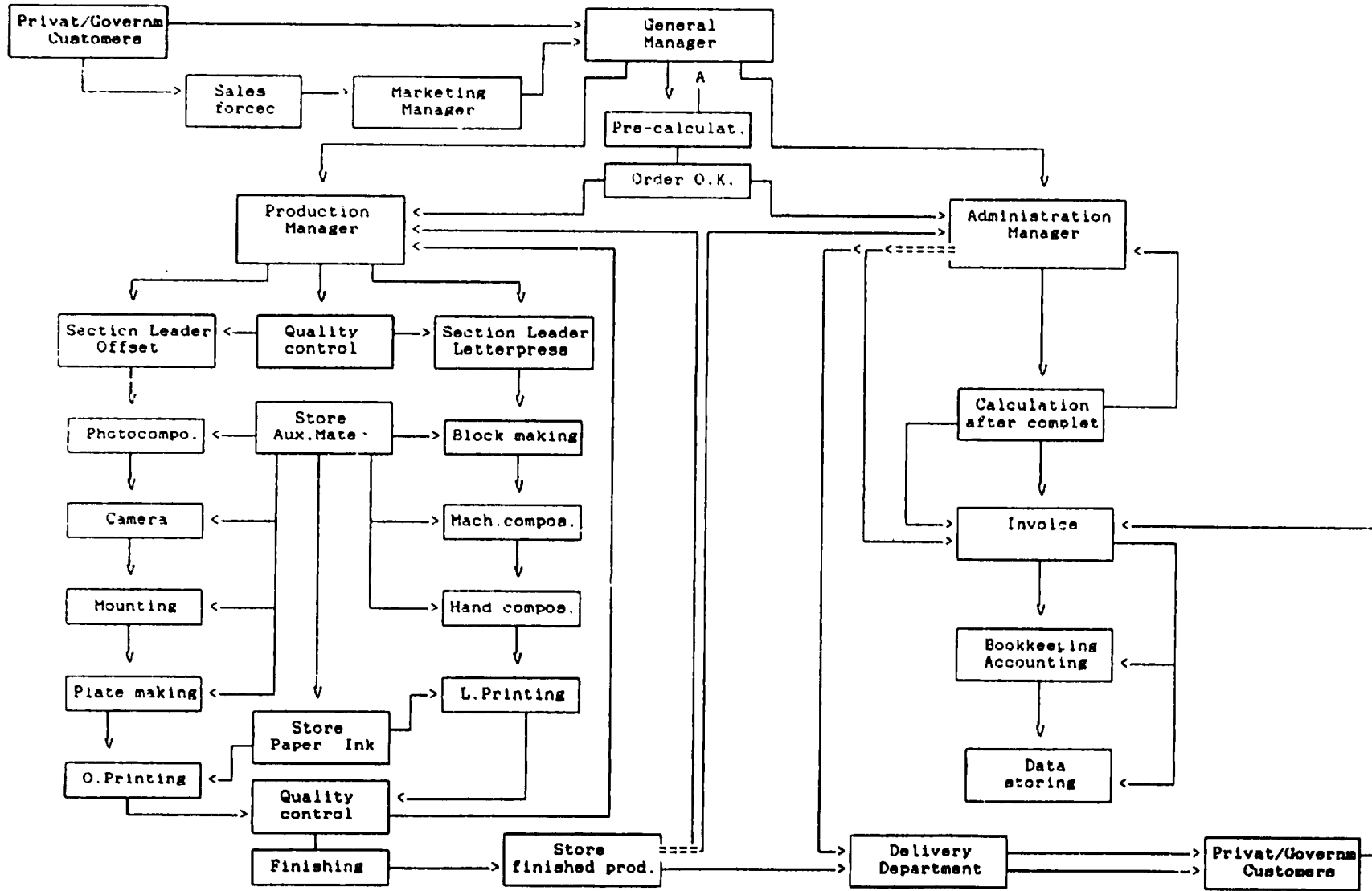
See Annex II

It is not the purpose of this report to give basic lectures in printing as there are enough manuals for basic management in printing available. Additional courses for printing management as part of on-the-job-training can be held by engaging experts in printing management for a certain period. Compared with other trades, the main reason for a solid and profound training in management is the unproportionally high investment in regard of expected turn-overs. To assure smooth and efficient over-lapping actions, attached experts should have their sphere of activity as advisers within the co-ordination office and as management experts in the new plant.

Two main weaknesses of the present management system are mentioned again: Lack of professional capability - which means thorough knowledge from the printing trade, and lack of necessary freedom as independent manager - which includes decisions for technical necessities for production. Ability to conduct a plant and to show real figures in profit which are accepted by auditors should be the main criteria in selecting the management. It should be well understood that new positions must correspond to the prevailing system in Indonesia, but observing the principles from the printing industry should have priority.

See lay-out next page

Organisation structure of order flow



The composition of the management, comprising in a General, a Marketing and a Production Manager is typical in the business world in Indonesia. Comparing European conditions, the duties of a Marketing Manager are often carried by the General Manager, who engages sales representatives, because orders have to be confirmed and negotiated by the General Manager only. But considering the present situation in Indonesia, an efficient Marketing Manager with a sales force is a necessity to assure a continuation of production.

The best solution for an initial start of a new consolidated plant would be found by contracting a management from the private industry. All three managers should be approved and placed legally under full responsibility to and from the Government of East Java. To assure a full engagement and to make it more attractive, those three managers should be entitled to a yearly bonus. The status of the General Manager would be twofold: Conducting the plant and acting as a liaison officer to the co-ordination office.

All personnel matters should be placed under the decision range of the management from the plant, but observed from the co-ordination office. Great attention should be given for up-grading the professional standards by selecting the right candidates for further training. This point had been underestimated in all observed printing shops and should be understood as a must to keep up path with the rapid developments in the printing industry.

6. Technical equipment

For the initial stage the equipment for the new plant has to be selected from the closed printing shops, as classified under annex III. This annex shows also the present market value of all equipment with the exceptions for equipment from the section hand composing. Suggestions are made for the equipment which is not necessary and can be abandoned. It must be mentioned that the remaining equipment is only transferred after completing thorough technical over-hauling or up-grading. This must be done under direct consultations with their respective general agents from the manufacturers.

See Annex III

The whole installation and equipment from SETAIL may be only valid for other small printing shops here in Indonesia, and should not be considered for the new plant. The idea may be again discussed that, with a selected number of equipment items from all plants, a letterpress printing shop for the government is re-opened. But this proposal should be treated separately, as those thoughts reflect the position of the workers presently engaged in SETAIL. Nevertheless, this proposal should be of minor importance, as the planing of a new consolidated plant must have absolute priority.

To achieve for the old-fashioned equipment from SETAIL and PURI the highest possible price, a proposal for a world wide auction under government control should be considered. Especially to Europe, this auction would be attractive for all manufactures of printing equipment. Also technical museums should be mentioned, which are interested in acquiring old-fashioned equipment and machines for their collections.

The equipment for the new plant is selected under consideration of a 4-step programme: Initial stage and extensions or alterations in 2, 5 and 10 years. For the initial stage, only a new photo setting system should be acquired. All

other present equipment is suitable for producing in average quality, with the exception of 2 machines, which can be used for higher quality. The aimed for 4-colour process work can be profitably realized when a full 4-colour machine with the necessary auxiliary equipment is purchased. Until such a machine is installed, all difficult orders should be open to the private sector.

Alterations and extensions including necessary investments which are based on today's figures, can be taken from the annex. No investments should be considered for the the existing plants, because they can not be brought up again to a profit-making state. This is also due to the destroyed reputation, since a good reputation is essential for a printing plant.

Final remarks and acknowledgments.

This report has ben prepared with the aim of clarifying the necessity of implementing a new government printing plant. Therefore, little thought was given to improving the overall situation of the existing printing plants. In consultation with the Expert for Marketing an agreement was reached, that, for more specified results, the necessary research work in Aneka Jasa will be continued. But it is certain that new investments or implementing new management system will not have an effective result because the basic short-comings remain. Nevertheless, the recommendations of this report should be compared with the report from the Expert for Marketing because of the ever-changing situation.

Special thanks go to Mr. Aryono Koesoemowinoto. Without his perfect and constant assistance, especially during the first 4 weeks, in acquiring necessary information, this report would not obtain all basic information. Many thanks also to Mr. Dinsbach from PANCA PUJIBANGUN for his helpful technical advice and Mr. Soemartono, whose advice as Co-ordinator for the counterpart was more than once well received and also to Mr. Loeff, the Associated Expert who tried his best to organize all affairs - especially at the end of the assignment.

A N N E X I

General directions for a new printing plant

1. General lay-out

The attached lay-out for a new consolidated printing plant was prepared under the actual circumstances and available data. The observed main factors are:

1. Available premises, which are under discussion.
2. Existing and expected production lines.
3. Selected and necessary additional equipment.

Considering the circumstances and situation in Indonesia, this plan includes all details to execute government orders in a modern printing plant. It shows a centralization in well divided levels of ground-, first- and second floors for administration and pre-stage work procedures. The managers for "Production" and "Marketing" are placed in the centre of the ground floor, which enables a direct control over the entire production line. The section leaders for "Printing" and "Finishing" are placed next to their section. The sub-sections "Mounting" and "Plate making" are located for immediate access next to the printing department. The section "Repro" and "Type setting" are combined with the central computer on the first floor. This combination is necessary for sound reasons and needs additional security for the power supply, which must be provided through a stand-by unit with automatic devices. An accumulator must be connected to the main power supply with a capacity for at least 10 minutes. The quality control for the entire section "Repro" is placed within the section "Graphic design" and the out-put from those pre-stage sections for the final control before printing are passed on through a lift-system direct to the office of the production manager.

The lay-out shows a corridor between the printing and finishing sections with a width of 3 metres for easy transportation of products and handling/installation of equipment. The store-rooms form part of their corresponding section; raw-materials for printing and ready-made products for finishing. The auxiliary stores with valuable goods are under direct (and only) access of their respective section leaders.

The building is planned with only two entrances: one for guests, office staff and pre-stage employees and one for the workers of the section printing and finishing. Security check-points are placed at all entrances with double controls for printing and finishing. All other doors would have to be sealed off and only used for deliveries of materials or installing machinery.

According to the counterpart, the electricity cost of the whole plant air-conditioning would be too great. Considering this, only the centre of the building is therefore classified as necessary and this is a must especially for all work-stations of the repro section and the central computer station. To minimize the temperature in the rest of the building, a double roof, with a distance in between of 1 metre, is recommended. A concrete construction will reduce temperatures of at least 10 degrees, which would still be too high according to modern printing requirements. The standards for offset printing are:

20 to 22 temperature and 55 % humidity

The printing rooms should face the north and be fitted over the total lengths with untinted glass windows. This method allows the use of day-light and

therefore a much better control over difficult colour jobs, because the day-light is measured in "Kelvin" degrees and the number of 2/3 is in alignment with standards from the ink manufactures (so called colour temperature).

Parking possibilities should correspond to necessities: management and guests in front of the building and employees should have their reserved space near to the entrances in the back. For security reasons, the whole premises should be surrounded by a fence with a height of at least 3 metres with two diagonally placed guard posts far enough apart to allow total visual control over all movements around the buildings. The solid drive-way, able to withstand trucks up to 30 tonnes, should have width of 10 metres and two guarded gates should stop any unauthorized traffic.

As the unit for a centralized air-conditioning is mounted on top of the building, the necessary over-dimensioned generator should be located at a distance of approx. 10 metres from the main building and the generator house should be constructed as sound-proof as possible. For economical reasons, two smaller units instead of one big unit could be purchased and only one could be fitted with an automatic change over system. Whichever solution is preferred, it must be assured that the available capacity is sufficient to serve the whole plant.

2. Estimated construction costs

Assuming a total enclosed area for the whole building of around 1,800 to 1,900 square metres, the construction should be purposes built and therefore realized in 2 different designs. The differences by application can be classified in:

1. Simple but solid for work shops which accommodate printing finishing and all store-rooms.
2. Extensive technical facilities for the administration and very sensitive pre-stage work stations.

The present proposal shows an average of 900 m² for administration and pre-stage work rooms; 1,375 m² for all other production rooms; 250 m² for parking in front of building; 420 m² for the drive-way and appr. 300 m of fences.

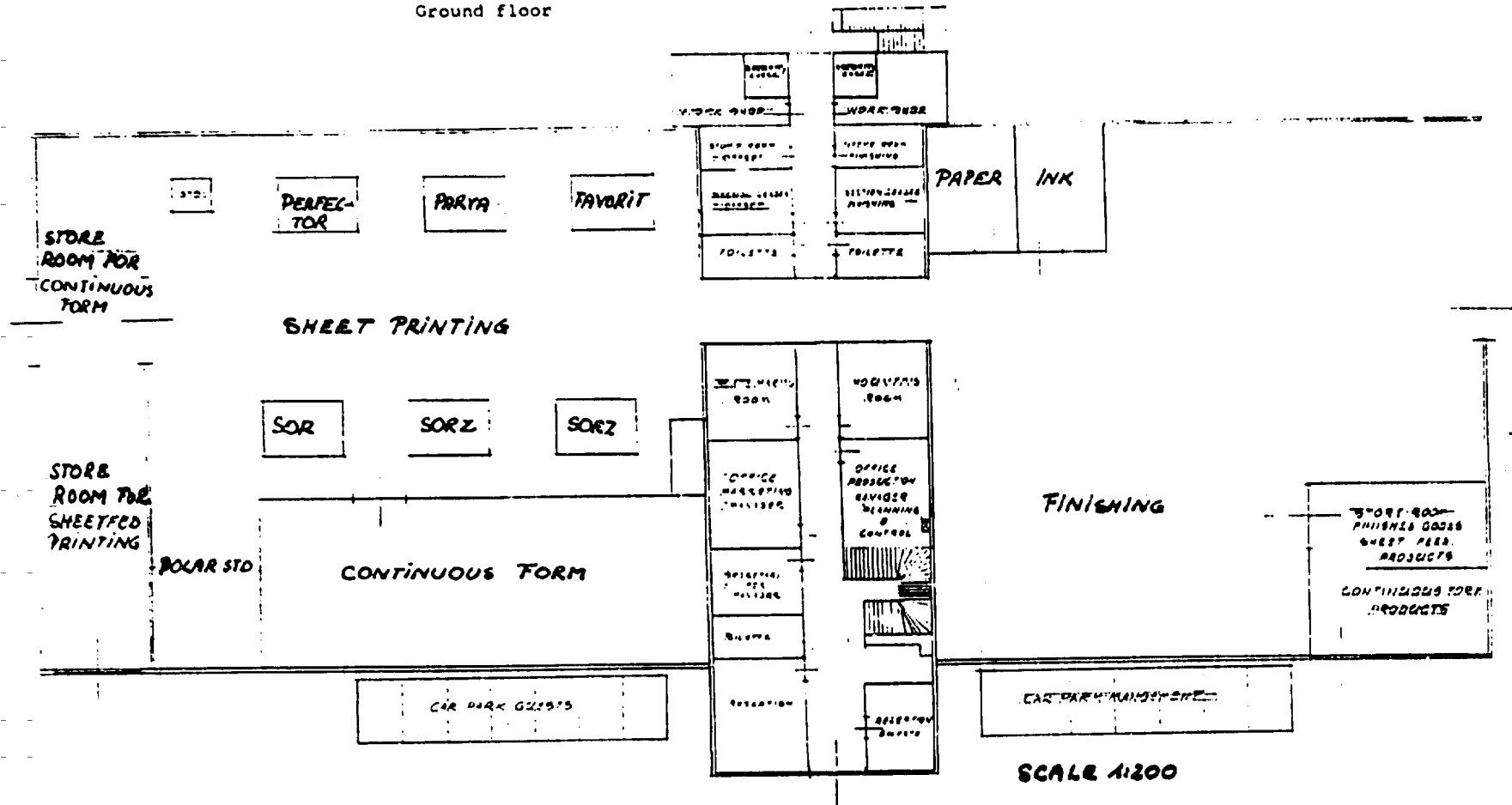
The remaining space must be reserved for possible extensions and can be used in the meantime for garden purposes, but without planting solid trees or other fast growing plants. According to discussions with general contractors, the present prices for construction per square metres can be estimated as follows:

1. Administration including pre-stage work stations, ground floor, first floor and second floor (all equal):
cost per m² 420,000 R x 900 m² - 378,000,000 R.
2. Printing and finishing sections, store-rooms and security posts
cost per m² 180,000 R. x 1,375 m² - 247,500,000 R.

3. Parking areas:
cost per m² 30,000 R. x 670 m² - 20,100,000 R.
4. Road to support heavy trucks
cost per m² 42,000 x 350 m² - 14,700,000 R.
5. Fences and gates
cost per metre 105,000 R. x 450 m. - 47,250,000 R.

Total estimated costs approximately 707,550,000 R.

Ground floor

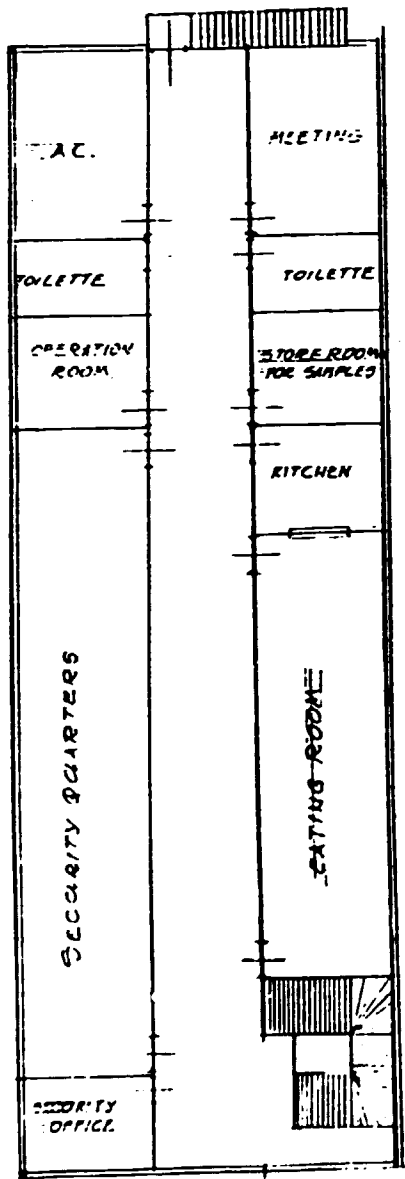


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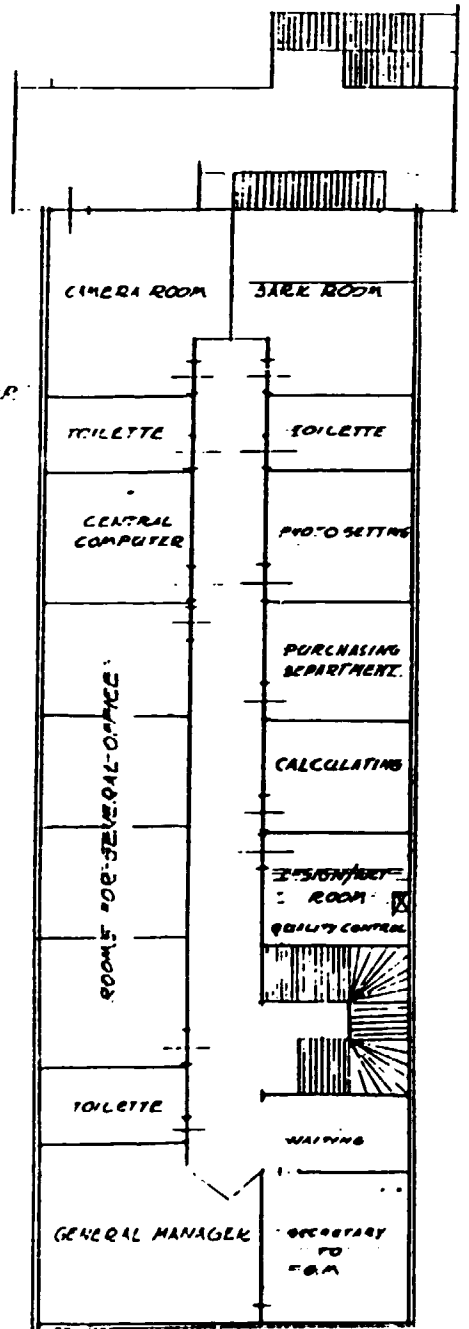
Third floor

Second floor

SECOND FLOOR
ALL AC.



FIRST FLOOR
ALL AC.



A N N E X I I

Calculation of costs per work place

The efficiency and success of a printing plant depends upon careful evaluation of all costs in relation to all produced goods. The first step for realizing those costs is the implementation of daily work sheets which must register the times used for every job, based on three factors:

1. Building (Space occupied for equipment)
2. Machines/Equipment (Machines/equipment used)
3. Personnel (Persons involved in production)

In addition to those three factors there is the costing system; divided in fixed costs and variable costs. Fixed costs (known costs) are steady for the whole year and can be used as pre-calculation for the oncoming year. Variable costs (unknown costs) vary during the year and can only be summarized at the end of a year.

1. Building

The first input for a calculation are the values of land/building, which are directly related to an out-put. If a plant is established, those values including all other expenses have to be correctly determined and as a basic balance-sheet item must be re-evaluated every year. In case of a donation or granted free of charge from the Government, the total values must also be registered as a documentary proof in the balance-sheet, as it is necessary to build up reserves for possible changes and neglecting of those values would distort the production costs. A distinction has to be made between the value of the land and the construction costs of the building. This is necessary, because land increases in value and a building decreases in the value. Therefore, the costs have to be classified into:

1. Total prices for acquired land or the site.
2. Total costs for constructing the building/work shop.

The total amounts, which are entered in the balance-sheet, must also comprise all other expenses such as fees for surveying, registration and the Architect, interest rates for possible bank loans, necessary insurance, costs for infrastructure - such as water, electricity and road construction, and all taxes.

After all costs are obtained, the life-time of the plant has to be estimated. This life-time must be calculated for the purposes of printing only and depends mainly upon 2 important factors: 1. Climatical conditions and 2. Applied technical procedures. Observing the situation in Indonesia, the life-time can be estimated of 25 years. To determine now the depreciation costs for one year, the total investment costs have to be divided by 25. This is the entry in the balance sheet for the first year and, according to the growth of the national gross product, and further extensions or supplementaries of the building, those figures have to be revised every year.

The variable costs, such as maintenance, repair work, etc. have to be summarized and added as operating costs at the end of each year. Separated according to the use for either production or administration purposes, the total value has to be divided by the estimated yearly capacity hours. This calculation can only be exactly determined after the first year. Together with the fixed

costs this is the first basic part for every pre-calculation for each job per work-place.

2. Equipment

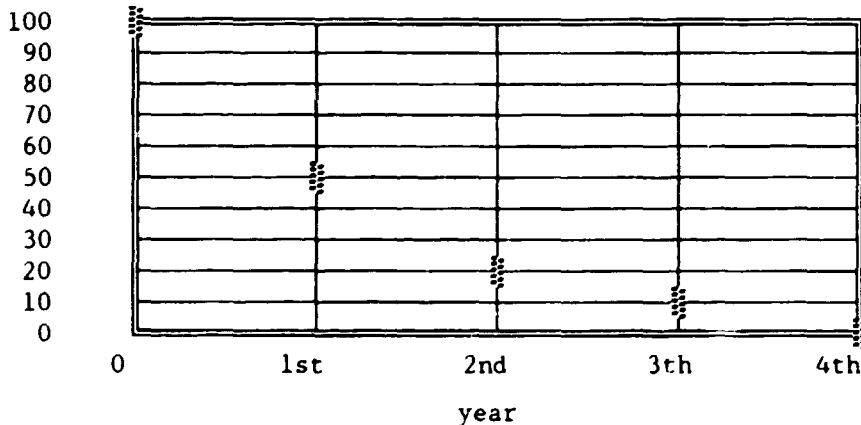
As the second basic part for calculating the costs per work place, the costs for all equipment and auxiliary machinery have to be determined. The nature of every item has to be classified and the different purchasing price reflects the very important machine costs per hour. As every item has only a certain 'time of use' in a production line, the printing industry has developed three classifications under consideration of the expected life-time or the applied techniques which are divided into:

- A. Equipment with a short life-time - up to 2 years
- B. Equipment with a medium life-time - up to 5 years
- C. Equipment with a long life-time - up to 10 years

The reason for this classification is the necessity to specify a depreciation line for every single item which includes calculated of the estimated capacity hours per year. The added amount is the financial reassurance for a replacement after the estimated life-time and entered as costs per work place. The life-time depends upon two main factors: Used = worn-out, or out-dated - too slow for production. During the last 30 years, the printing industry has made immense technical progress and developed so fast, that after 2 to 3 years some equipment is already out-dated. This applies especially to scanner techniques and photo composing systems.

The different life spans of all equipment make it necessary to use two different depreciation systems, which are classified as 'decreasing depreciation' and 'linear depreciation'. For equipment which will be used less than 4 years the decreasing system is used because the costs have to be recovered relatively fast.

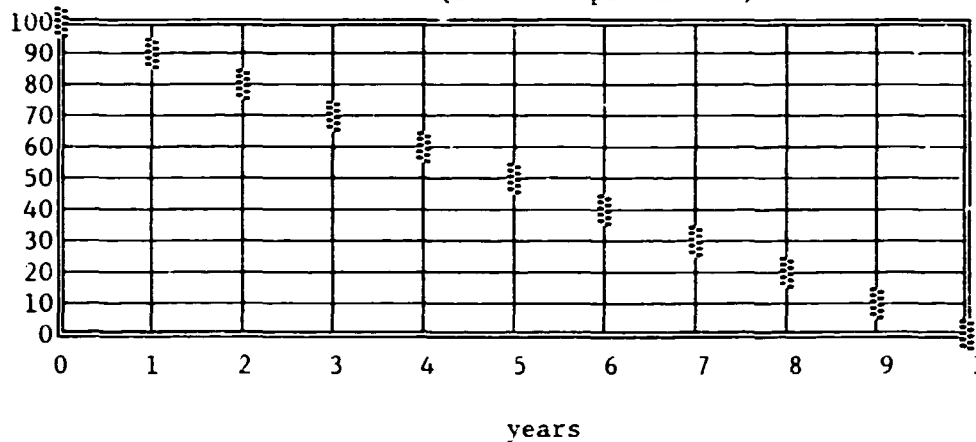
WRITING-OFF TABLE I (in %)
(decreasing depreciation)



The decreasing depreciation system varies according to the economic situation of a printing plant and shows a writing-off for the first year of, in general 45 to 50 %, in the second year 20 %, in the third year 15 to 20 % and the remainder in the fourth year.

For equipment with an expected medium life-time the time used, purchasing price, technical applications, volume of occupied space and persons needed for operation have to be considered. According to general experience, this equipment usually comes under linear depreciation.

WRITING-OFF TABLE II (in %) (linear depreciation)



The linear depreciation line is calculated on the price of the equipment which is reduced by equal annual percentage deduction according to the estimated life-time.

After the classification of every machine/equipment is specified it is also important for the registration of the exact costs per work place to divide the total amount of the purchasing price into fixed and variable costs.

Fixed costs are:

1. Price of the machine/equipment
2. Transportation costs and transport insurance
3. Bank fees for letters of credit
4. Additional costs for installation

Variable costs are:

1. Maintenance in general
2. Possible repairs
3. Insurance while operating

3. Personnel

The third basic factor to determine the costs per work place are the salaries for employees and workers. Here, it is very important to divide the personnel into productive (those which are producing) and non-productive (those which are under the administration) employees. Only the employees directly placed in the production line under the control of the production manager, have to fill out the daily work record sheets. Those sheets for recording times used and equipment occupied, have to be completed for each job, and are the basis for later calculations and future pre-calculations. The non-productive employees from the direct administration and the marketing section don't need such records and

their salaries, bonuses, premiums and other over-head costs have to be added according to volume of each job after the the whole production costs and raw materials are specified.

It requires careful consideration from the management in choosing the staff with the right qualifications for those logistic levels. In general, all expenditures should be balanced at a maximum of approx. 30 % for all non-productive employees. If indirect over-head costs exceed 40% this will endanger the profit margin and further increases will ultimately place the existence of the plant in question.

The salaries and other benefits for all employees should be based upon two factors: 1. Capability and willingness and 2. Quality and quantity of production. Years of service, achieved degrees from schools or training, present positions and social status have to be considered as socially important, but should not be main criteria for selections, promotions, increase in salaries or other entitlements.

All basic payments for all employees are fixed costs and overtime payments, bonus, premium, etc. are variable costs. As long as there is no payment scheme, salaries should not be negotiable. The introduction of such a scheme, orientated on the private printing industry in Indonesia, is necessary to settle all wages plus other benefits. Measured on the market, the presently paid salaries are far too low and this is one main reason why employees in PURI are absent. To motivate the employees, an increase of salaries by around 70 % is necessary and would avoid unreliable work records, because of employees having to make additional income somewhere else.

**Daily work sheets
for employees**

class. of section

Name : _____
 Profession : _____
 Section : _____
 Machine : _____

Total working hours : _____
 Normal working hours : _____
 Overtime hours : _____
 1./ 2./ 3. shift : _____

sample for printer —————>>>

Job.no.		Nature of work	Productive hours				Nonproductive hours			
			mr.h.	c/c	run h	sheet	w/u	oil	rep	wai/o
		see inserts following pages								

Remarks _____

Product. _____

Calculat. _____

Foreman _____

** Waiting/Other _____

Costing _____

Data Con. _____

Prod. Manager _____

Hand - / Machine - / Photo composing
Productive hours

Design preparing h	composing h	distribut. h	Autor correction h
-----------------------	----------------	-----------------	-----------------------

melt lead h	change fond h	composing h	Autor correction h
----------------	------------------	----------------	-----------------------

Design preparing h	composing h	Autor correction h
-----------------------	----------------	-----------------------

non-productive hours

Job correction h	New Type inlay h	mainten. cleaning h	* * waiting other
---------------------	---------------------	------------------------	-------------------

Job correction h	New Type inlay h	mainten. cleaning h	* * waiting other
---------------------	---------------------	------------------------	-------------------

Job correction h	mainten. cleaning h	* * waiting other
---------------------	------------------------	-------------------

C. H.

classification for
Hand composing

C.M. I + C.M. II

classification for
Machine composing

C.P. + C.H. + C.T.

classification for
Photo/Headl/Typewr.

Repro section

Size of films	No of films
---------------	-------------

Pictures taken h	developing retouching h
---------------------	----------------------------

repeat pictures h	maintenan. cleaning h	repairs h	* * waiting other
----------------------	--------------------------	--------------	-------------------

R. C.

classification for
Camera work

Type of plates	No of plates
----------------	--------------

Plates exposure h	Plates developm. h
----------------------	-----------------------

Plates correction h	maintenan. cleaning h	repairs h	* * waiting other
------------------------	--------------------------	--------------	-------------------

R. P L.

classification for
Plate making

Sizes of blocks	No of blocks
-----------------	--------------

preparing h	etching engraving h
----------------	------------------------

repeat blocks h	maintenan. cleaning h	repairs h	* * waiting other
--------------------	--------------------------	--------------	-------------------

R. B L.

classification for
Block making

Type of work	No of foils
--------------	-------------

preparing h	mounting h
----------------	---------------

correction h	storing classific. h	maintenan. cleaning h	* * waiting other
-----------------	-------------------------	--------------------------	-------------------

R. M.

classification for
Mounting

Printing section Offset and Letterpress printing - all machines

Productive hours

change to colour h	make/ ready h	run h	printed sheets no
--------------------------	---------------------	----------	-------------------------

Non-productive hours

final wash up h	maintenan. cleaning h	repairs h	* * waiting other
-----------------------	-----------------------------	--------------	-------------------------

P. O. + P. L.
classification for
Offset/Letterpress

Finishing section

Productive hours

presetting h	cutting h	No of sheets
-----------------	--------------	--------------------

Non-productive hours

change knives h	maintenan. cleaning h	repairs h	* * waiting other
-----------------------	-----------------------------	--------------	-------------------------

F. 3 K T. + S C.
classification for
Trimmer / Cutter

presetting h	folding h	No of sheets
-----------------	--------------	--------------------

maintenan. cleaning h	repairs h	* * waiting other
-----------------------------	--------------	-------------------------

F. F M.
classification for
Folding machine

presetting h	stitching h	No of sheets
-----------------	----------------	--------------------

maintenan. cleaning h	repairs h	* * waiting other
-----------------------------	--------------	-------------------------

F. S M
classification for
Stitching machine

Finishing section hand-work

Productive hours

hand collating h	hand folding h	hand stitching h	hand drilling h	hand perforat. h	hand gluing h	machine assistant h
------------------------	----------------------	------------------------	-----------------------	------------------------	---------------------	---------------------------

Non-productive

* * waiting other

F. H.
classification for
Hand work

Summary of production hours

printing plant P U R I

year _____

	work days multipl. hours day year	multipl w. employee		Total available work hours year	execut. 1 shift hours	execut. 2 shift hours	execut. 3 shift hours	Work days executed work hours year	in % of availabl year	Total productive work hours	%	Total nonproduct work hours	%
		start	end										
Composing section													
Hand composing													
Machine composing I													
Machine composing II													
Photo Composing unit													
Head liner													
Typewriter													
Repro Section													
Camera work													
Plate making													
Block making													
Mounting													
Letterpress printing													
HDB Cylinder													
HBD Platen I													
HDB Platen II													
Platen Gordon													
Terno IV													
Terno VI													
Offset printing													
Roland I													
Roland II													
Parva													
Favorit													
Perfecta													
Finishing section													
3 Knife Trimmer													
Single knife Cutter													
Folding machine													
Stitching machine													
Perforating machine													
Perfect binding													
Holt melt machine													
Hand work													
T o t a l													

A N N E X I I I

Selection and transfer of technical equipment

In regard of the new consolidated printing plant, the selection of the present machinery and equipment from the printing plants PURI, SETAIL and PANCA PUJIBANGUN must be considered under the following aspects:

1. Present condition
2. Expected production lines
3. Integration with other equipment
4. Further use by possible replacements.

As the most important fact, it must be printed out again, that all selected equipment has to be generally overhauled and up-graded before any transfer takes place and the installations are completed.

The equipment from PANCA PUJIBANGUN is the most important contribution for the new consolidated plant. Nearly all machines are suitable, even the 2 old HB machines, but in consideration of possible extensions and expected quantities and qualities of the production, those machines should be sold. Special attention for absolutely necessary repairs must be given to the cutters. The present market value for the heavy machinery and auxiliary equipment is estimated at 972,000,000 R. The transfer of machines with a value of 787,000,000 R. leaves an approximate net profit of 185,000,000 R. to be added to capital from the sale of the premises from PURI. A tabulation is prepared with the value and remarks of each item.

See next page

From the equipment of PURI only the 3 newer offset printing machines are selected, together with most of the equipment from the finishing line. Especially those machines are considered for the future requirements to produce books and pamphlets. The rest of machinery should be sold, because they are either in bad condition or, and this applies especially to the letterpress section, not necessary. The present market values are based on estimates from the Unit Manager, are considered to be underestimated, and show a total figure of 831,000,000 R. The transferred equipment with a value of 383,000,000 R. leaves an additional profit from the sales estimated at 448,000,000 R. The specification of each item is shown in a prepared tabulation.

See next pages

As the last contribution, the heavy equipment from the plant SETAIL had been considered and classified. None of these items are suitable for the new consolidated plant, and again it should be said, the whole equipment is best used to open up a printing museum for benefit to the public. If consideration is made in regard of selling those pieces, the profit could be estimated at approx. 67,000,000 R. and could be used to up-grade other machinery.

See next pages

Here it must be stated, that from all 3 plants only the letterpress machines are valued, and not the auxiliary materials like types for hand composing and corresponding machinery. Because of the present uncertain market conditions, it is difficult to put a market value on any old, outdated equipment.

Summarizing the values from the sales of machinery from all 3 plants:

PANCA PUJIBANGUN	185.000.000 R.
PURI	448.000.000 R.
SETAIL	67.000.000 R.

Total value	<u>700.000.000 R.</u>
-------------	-----------------------

This value considers the possible profit from an auction of the antique equipment. Under any circumstances the offer should be published world-wide as from experience and actual requests received, there is an urgent demand for such equipment. Especially technical museums or famous manufacturers of printing equipment should be approached, such as the Gutenberg Museum in Mainz, West-Germany.

List of present equipment
PURI

Section	Type of machine	age	value in Mill. R.		remarks
Mach. compos.	Monotype setting	30	35	R.	to be sold
" "	Monotype casting	30	35	R.	to be sold
Letter. print.	HB Cylind. A3	35	18	R.	to be sold
" "	HB Platen A4	35	8	R.	to be sold
" "	HB Platen A4	40	8		to be sold
" "	POLY Automat	35	10	R.	to be sold
" "	Terno IV	50	5	R.	to be sold
" "	Gordon Platen	60	5	R.	Museum piece ***
" "	Victoria m.size	60	0,5	R.	to be sold
" "	Miller m.size	60	0,5	R.	of scrap value *
" "	Centurion i.size	60	0,5	R.	Museum piece ***
Photo setting	Lino CRTronic	35	30	R.	to be transfered
" "	IBM Typewriter	20	2	R.	to be sold
Repro section	Camera EL 5000	5	30	R.	to be sold
" "	Plate mak. FT-40	20	22	R.	to be transfered
" "	Block mak. Pros.	15	4	R.	to be sold
Offset print.	Perfector JS2101	5	180	R.	to be transfered
" "	Roland Parva I	40	25	R.	to be sold
" "	Roland Parva I	30	25	R.	to be sold
" "	Roland Parva IIC	15	110	R.	to be transfered
" "	Roland FavoritOB	10	110	R.	to be transfered
" "	Planeta A 105	40	10	R.	to be sold
" "	Planeta 1.size	50	0,5	R.	of scrap value
" "	Centurion 1.size	60	0,5	R.	of scrap value *
					Museum piece ***
Finish. sect.	3 K. Trimmer	5	20	R.	to be transfered
" "	Cutter Perfecta	30	8	R.	to be sold
" "	Cutter Krause	30	8	R.	to be sold
" "	Cutter Polygraph	30	8	R.	to be sold
" "	Cutter MEW	60	0,5	R.	of scrap value *
" "					Museum piece ***
" "	Cutter Polygraph	30	4	R.	to be sold
" "	Perf.binder BSX0	5	10	R.	to be transfered
" "	" " "	5	10	R.	to be transfered
" "	" " "	5	10	R.	to be sold
" "					or spare parts **
" "	Perf.bind.Polygr	30	8	R.	to be sold
" "	Muller Marti.899	10	25	R.	to be transfered
" "	Folding TL 99	5	13	R.	to be transfered
" "	Folding TL 99	5	13	R.	to be transfered
" "	W.Stitch.M.M.271	7	10	R.	to be transfered
" "	W.Stitch. Worley	7	9	R.	to be sold

List of equipment SETAIL

Section	Type of machine	age	value in Mill. R.	remarks
Letter. print.	MAN Terno VI	65	6 R.	to be sold museum piece ***
" "	MAN Terno VI	70	0,5 R.	of scrap value
" "	MAN Terno IV	65	4 R.	to be sold museum piece ***
" "	MAN Terno IV	60	5 R.	to be sold
" "	HB Platen A 3	30	12 R.	to be sold
" "	HB Platen A 4I	30	7 R.	to be sold
" "	HB Platen A 4II	35	5 R.	to be sold
" "	HB Platen A 4III	35	6 R.	to be sold
" "	Gordon AC	50	4 R.	to be sold
" "	Chand+Price A 3	60	0,5 R.	of scrap value
" "	Chand+Price A 4	60	2 R.	to be sold
" "	Albert Poly	80	?	unique * museum piece ***
" "	Proof press	60	0,5 R.	to be sold
Reliur print.	Reinhard	100	?	unique * museum piece ***
Finish. sect.	Cutter Krause	70	0,5 R.	of scrap value
" "	Cut. Chand+Price	60	0,5 R.	of scrap value
" "	Cutter Kraus. III	50	5 R.	to be sold
" "	Cutter Kraus. IV	50	4 R.	to be sold
" "	Perforator hand	50	1 R.	to be sold
" "	Perforator hand	50	0,5 R.	of scrap value
" "	Punching hand	65	-	of scrap value
" "	Punching hand	65	-	of scrap value
" "	W.Stitch. Polyg.	30	3 R.	to be transfered
" "	W.Stitch. Polyg.	30	3 R.	to be sold
" "	Book press	100	?	unique * museum piece ***
" "	Book press	70	-	of scrap value
" "	Hand cutter	70	0,5	to be sold
" "	Round corn. hand	50	0,5	to be sold

* UNIQUE

This type of machine is seldom seen today. Most machines have been scrapped for replacing with new printing techniques.

*** MUSEUM PIECE

Should be sold through an auction, which is offered world-wide, especially to overseas clients.

**List of present equipment
PANCA PUJIBANGUN**

Section	Type of machine	age	value in Mill. R.	remarks
Repro section	2 room camera	20	5,5 R.	to be transfered
" "	Print down unit	20	2 R.	to be transfered
" "	Plate mak. unit	25	3 R.	to be transfered
" "	Plate develop.	25	2 R.	to be transfered
" "	Burn in oven	30	0,5 R.	to be sold
" "	H. develop. unit	20	1	to be transfered
" "	Film dryer	20	0,5 R.	to be transfered
" "	Bacher rule tab.	15	1 R.	to be transfered
" "	Lay out table b.	15	0,5	to be transfered
" "	Lay out table b.	15	0,5 R.	to be transfered
" "	Lay out table s.	15	0,5 R.	to be transfered
Offset print.	HB R.O.H. I	30	90 R.	to be sold ** or transfered
" "	HB R.O.H. II	30	90 R.	to be sold ** or transfered
" "	HB S.O.R	20	70 R.	to be transfered
" "	HB S.O.R.Z I	20	180 R.	to be transfered
" "	HB S.O.R.Z. II	20	180 R.	to be transfered
" "	HB G.T.O	15	40 R.	to be transfered
Letter print.	HB S.B.G.S.	20	30 R.	to be transfered
Die-cutting	WUPA Kerma I	20	15 R.	to be transfered
" "	WUPA Kerma II	20	15 R.	to be transfered or spare parts
Finish. sect.	Cut.Polar ST 115	20	60 R.	to be transf. ***
" "	Cut.Polar EL 115	20	90 R.	to be transf. ***
" "	Cut.Polar EL 115	20	90 R.	to be transf. ***
" "	W. Stitch.	20	5 R.	to be sold

**** to be sold**

Due to the age of the machinery it is preferable that they be sold. High quality printing is not possible any more. Funds from the sale to be used to upgrade (overhaul) other HB equipment.

***** to be transferred**

At any costs these machines must be brought up to general working condition, with special attention to security installation.

Proposed extensions and replacements of present machinery.

1. Present situation

As seen from the previous pages, the selection of equipment from the present plant is with one exception sufficient for the initial period for the new plant. This exception is the photo-type setting machine, because this item was thought to be a replacement for the old letterpress type-setting, but due to its age its capacity is insufficient for anticipated quantities and qualities. Therefore, a new photo-setting unit has to be considered as necessary, and in accordance with the expected order requests, a type-setting system LINOTYPE 200 or a similar fabrication with the same specifications should be recommended. One important purchasing aspect is the guarantee of after sales service. Together with a new film developing unit such as MULTILINE M 40 s or one of similar capacity, a new system is capable to fulfil every possible request. In addition, the purchasing of a small offset printing machine size A 4 as a replacement for the old letterpress machines is a necessity. The proposed type HB TOX has a production capacity of 4 or 5 present old letterpress machines from SETAIL and PURI.

The investment can be calculated as:

1. LINOTYPE L 200 complete	=	111,600,000 R.
2. MULTILINE M 40 s	=	18 000,000 R.
3. Printing machine HB TOX	=	70,000,000 R.

2. Proposed extension after 2 years

Any extension or alteration has to depend on the progress during the first 2 years. If, according to the analyses of the executed orders, an increase in production output is necessary, extensions can be made by adding printing machine. It can not be foreseen which machine for which job criteria is necessary, but generally a small machine like a 2-colour perfector HB GTO 2P-431 is recommendable. This type of machine is very easy to operate for smaller orders, which are typical of current job, performed by PURI and SETAIL. A machine of this class will cost approx.

HB 2 colour medium size - 340,900,000 R.

3. Proposed extension after 5 years

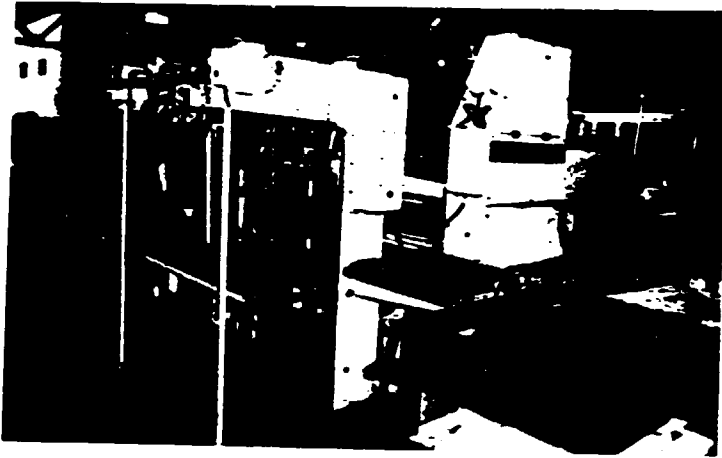
As mentioned before, the purchase of new equipment must be in conjunction with the market requests. But at this time the older machines from PANCA PUJIBANGUN will most likely have to be replaced. This will be a major change in the technical capacity and will require a respectable amount of investment. The proposed 2 machines of the type HB SORSZ or HP MO 2 above to be used as perfectors will increase the production even if acquired with the same technical specification as the present machines. The calculation for investment can be estimated with an increase of at least 20% from the present prices and be quoted with

1 Machine HB MO perfector	=	455,000,000 R.
or		
1 Machine HB SORSZ perfector	=	870,000,000 R.

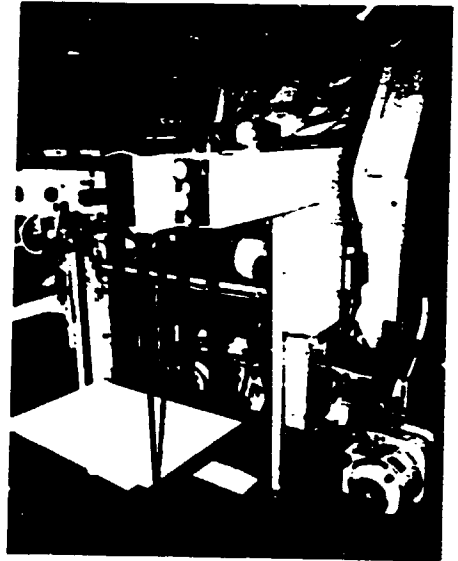
P H O T O S

P U R I

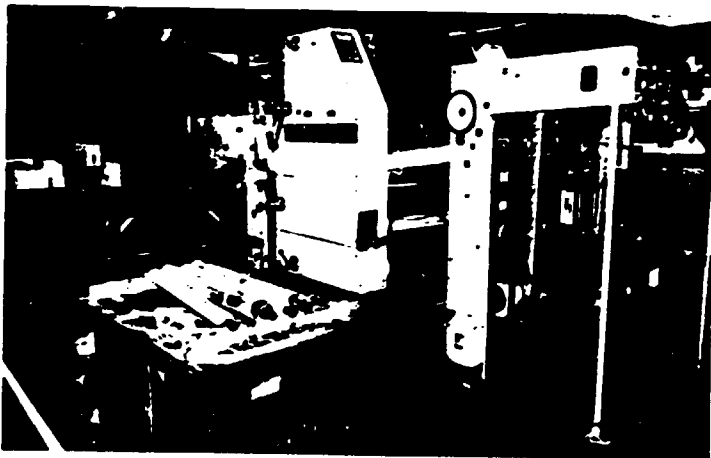
Offset machines to be transfered



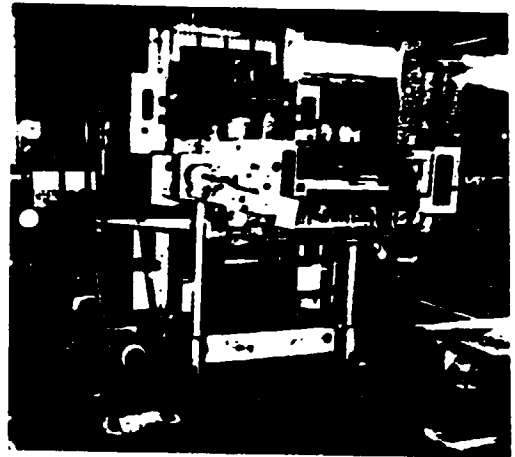
Perfector JS 2101



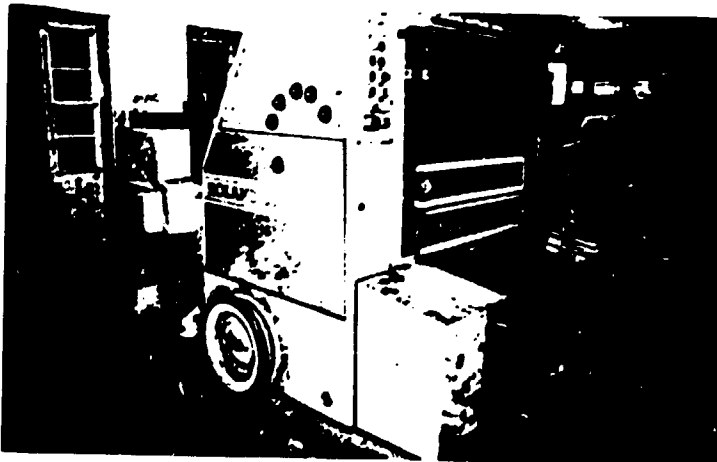
Perfector JS 2101



Perfector JS 2101



Perfector JS 2101

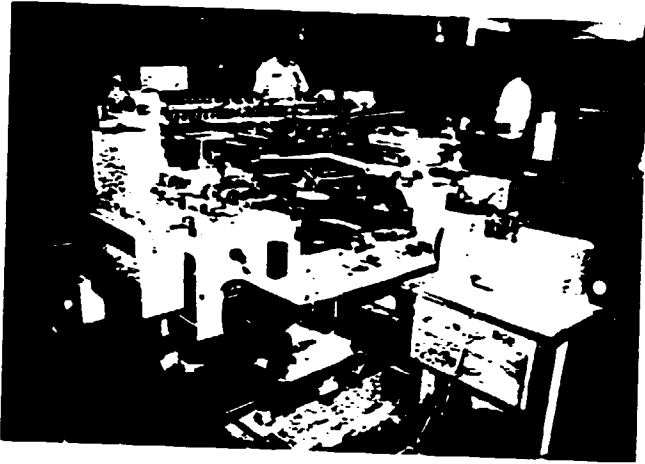


Roland Favorit

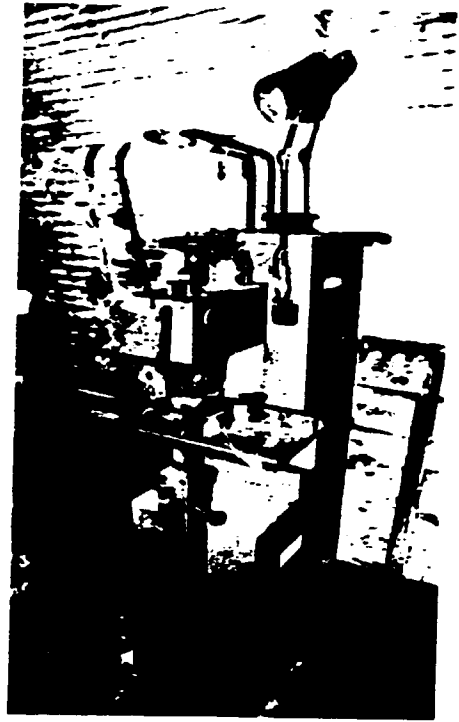


Roland Parva IIC

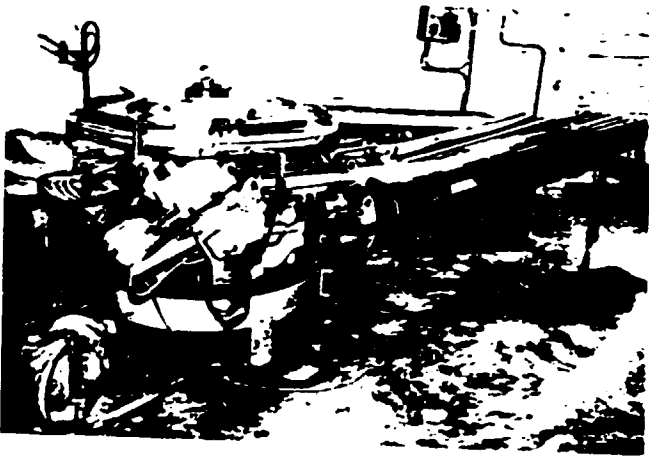
Machines for finishing section to be transferred



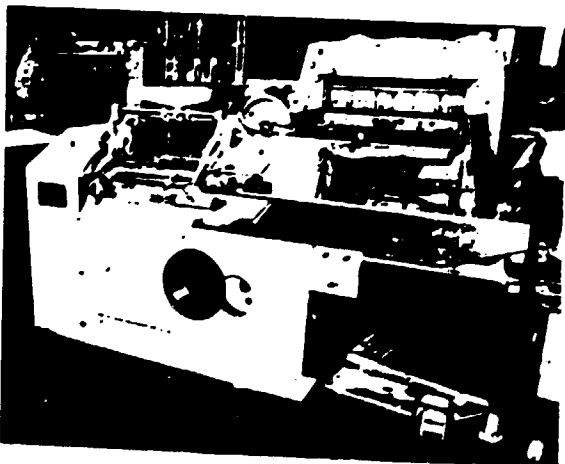
Folding machine



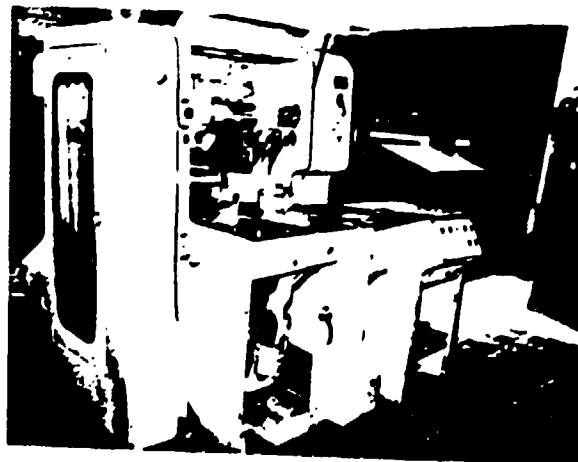
Wire stitching machine



Hot-melt Mueller Martini

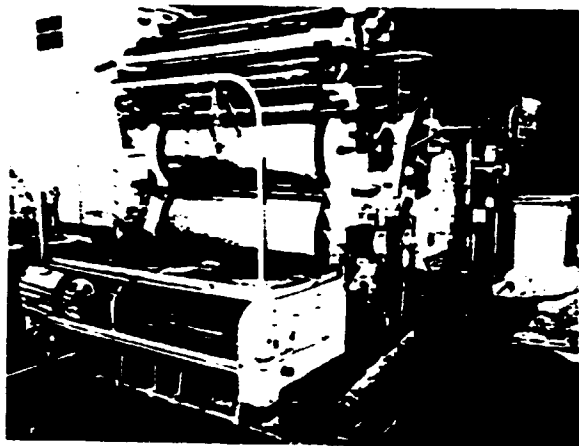


Perfect binder

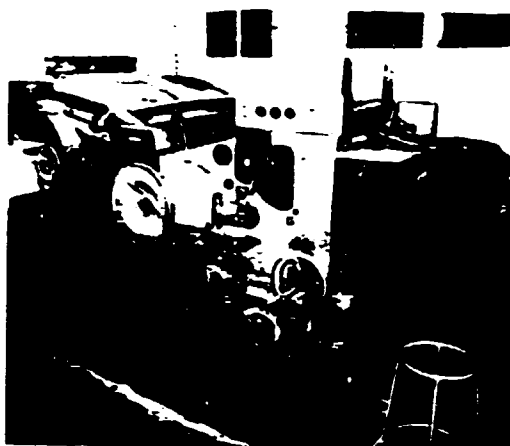


3-Knife trimmer

Offset and letterpress machines to be sold



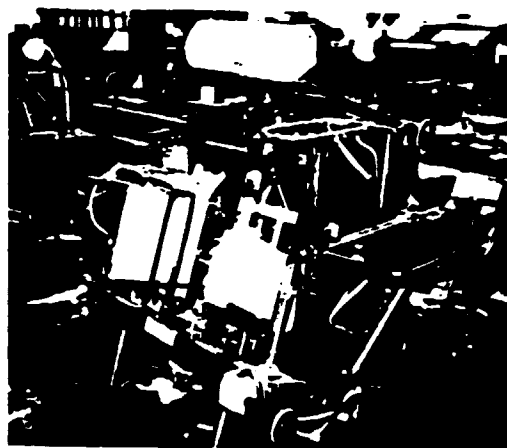
Offset machine
Planeta A105



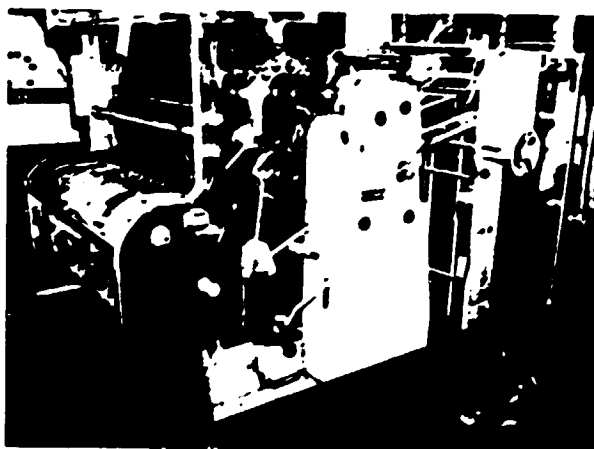
Letterpress machine
Poly Automat



Offset machine
Planeta



Letterpress machine
HB Platen A4

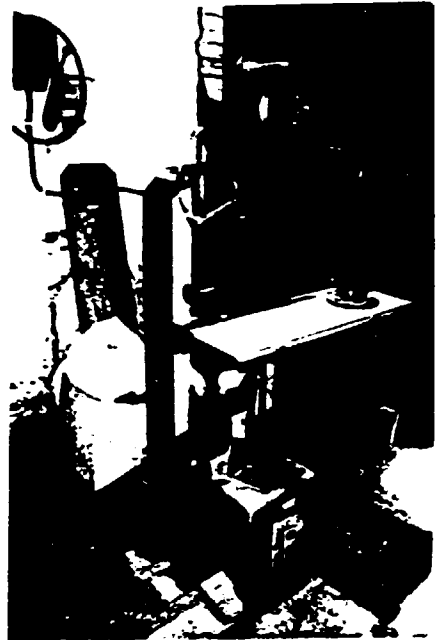


Offset machine
Roland Parva I

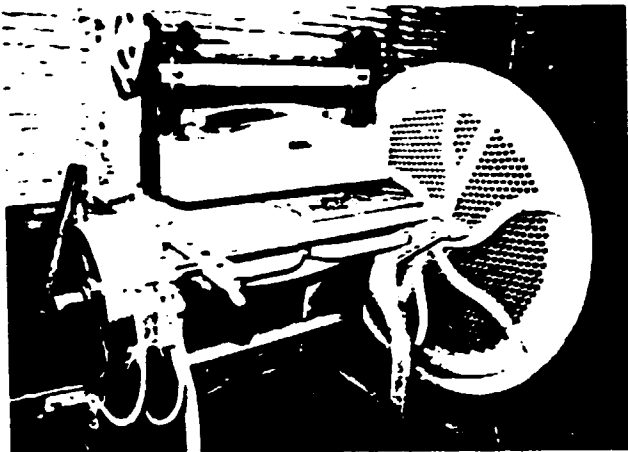
Finishing machines to be sold



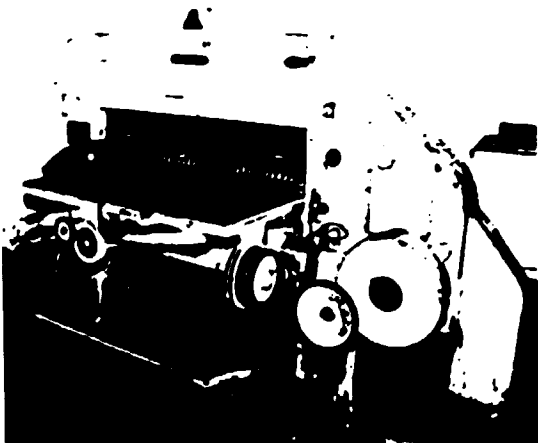
Cutters placed in line



Wire stitching
machine



Die-cutter machine



Cutter Krause



Cutter Perfecta

Equipment to be transferred or sold



Photo-setting
Lino CRTronic



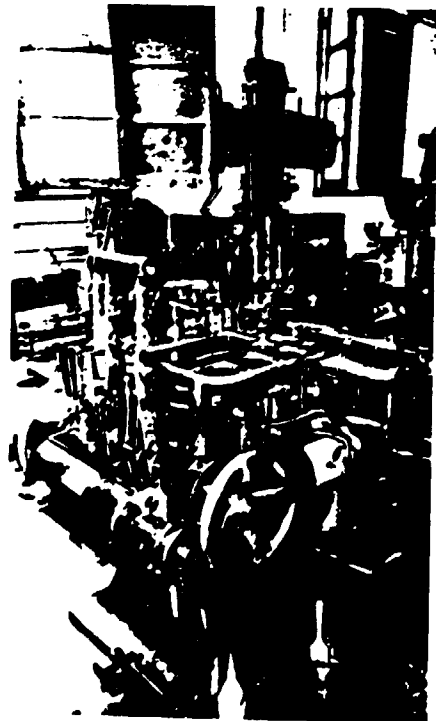
Camera EL 5000



Typewriter IBM

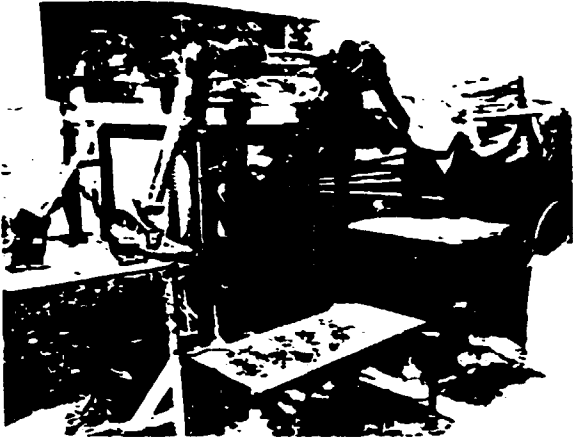


Hand composing section



Machine composing
Monotype casting

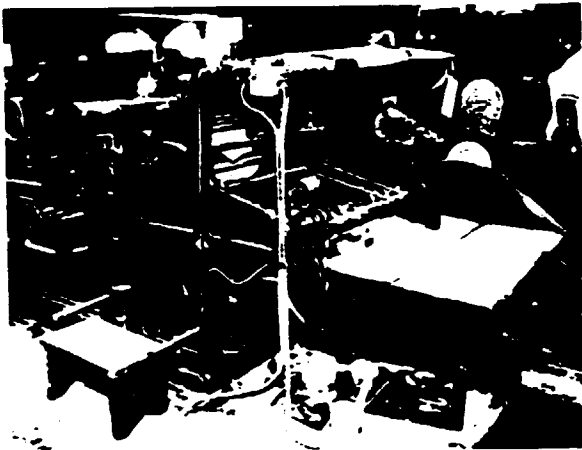
Machines of antique value
or to be scraped



Offset Machine
Centurion large size



Letterpress machine
Terno VI



Letterpress machine
Victoria

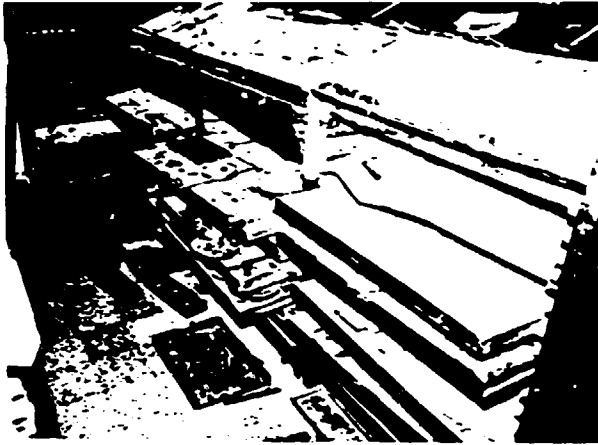


Letterpress machine
Centurion large size

P H O T O S

S E T A I L

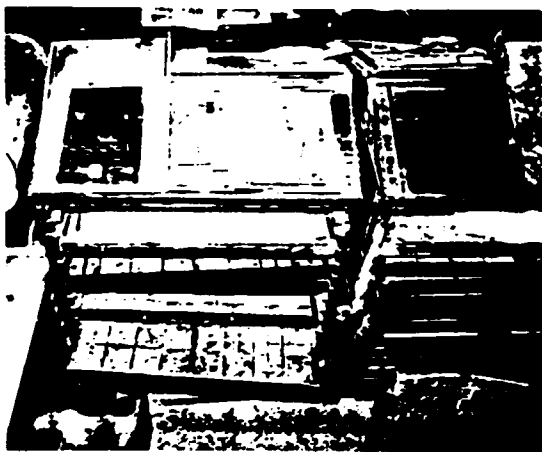
General impression of section hand composing
and old letterpress machines



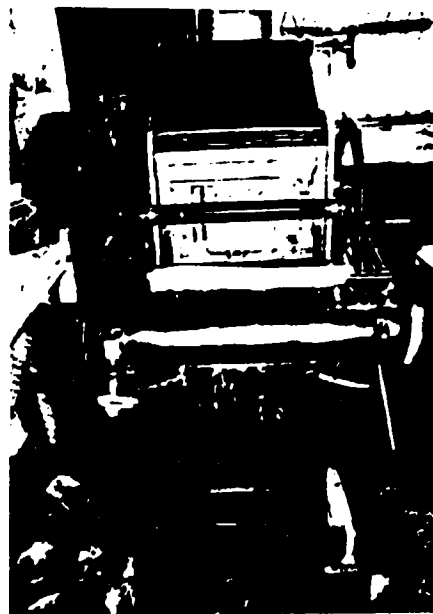
Hand composing section



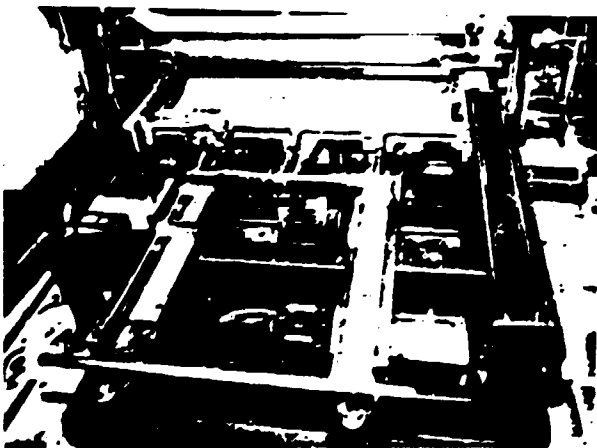
Hand composing
section



Hand composing section



Letterpress machine
system Gordon

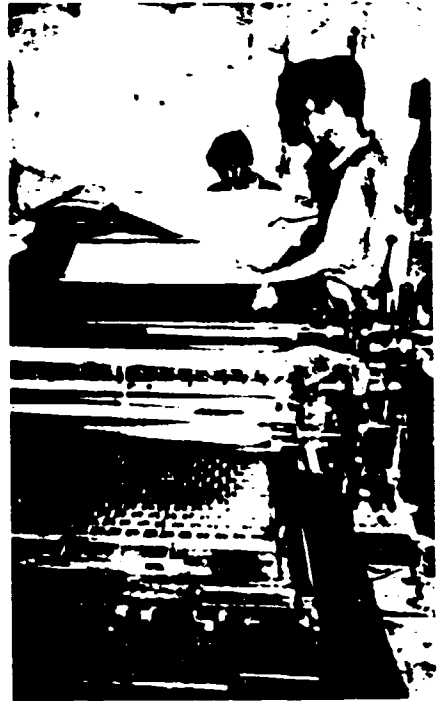


Inside view
Letterpress machine Terno

Letterpress machines to be sold



Terno IV
Delivery part



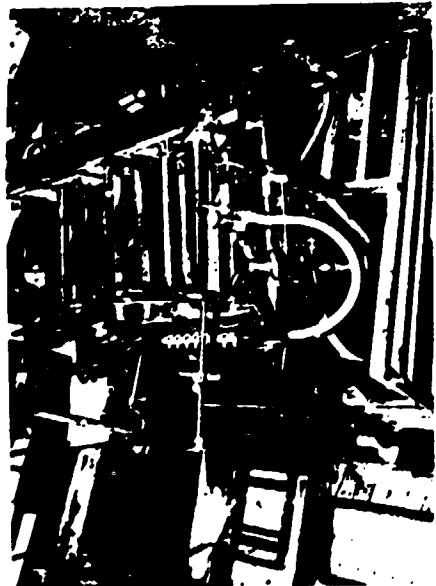
Terno IV
Feeding part



HB Platen A 4

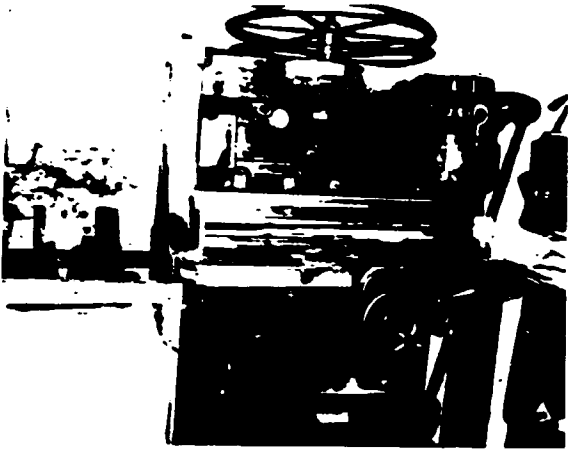


HB Platen A 3



HB Platen A 4

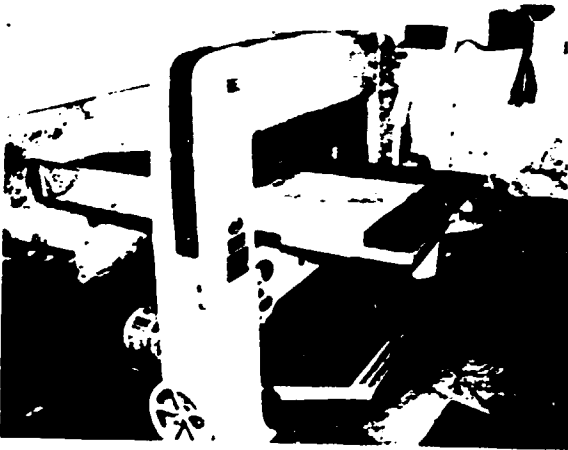
General impressions of printing in Setail



Krause cutter



HB Platen
in line



Newest cutter from 1950

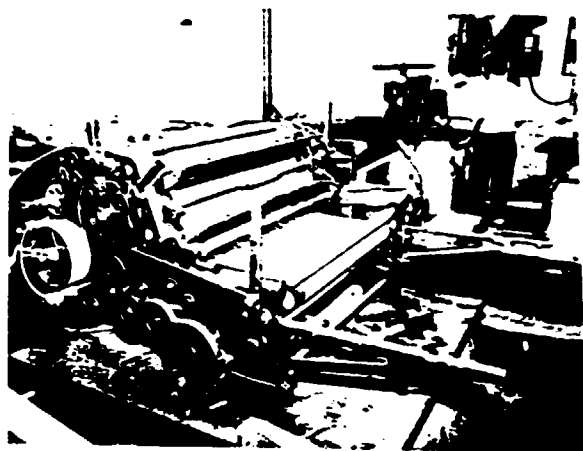


Store room

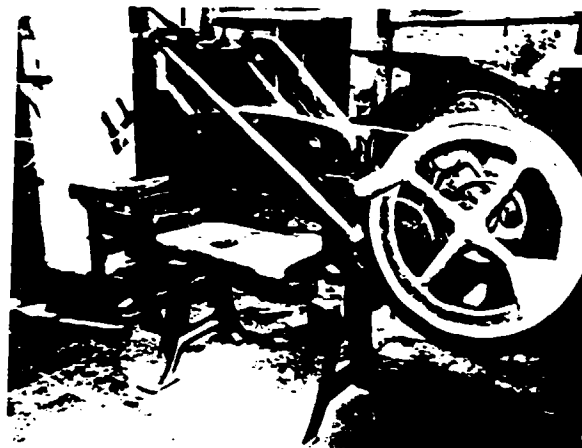


Old main
transmission drive

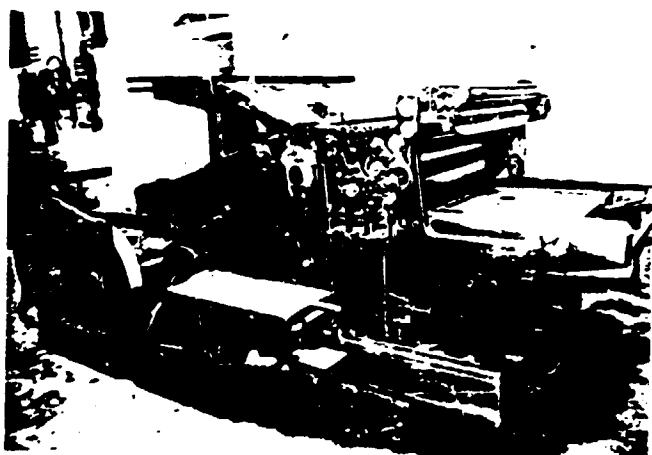
Machines of antique value
or to be scraped



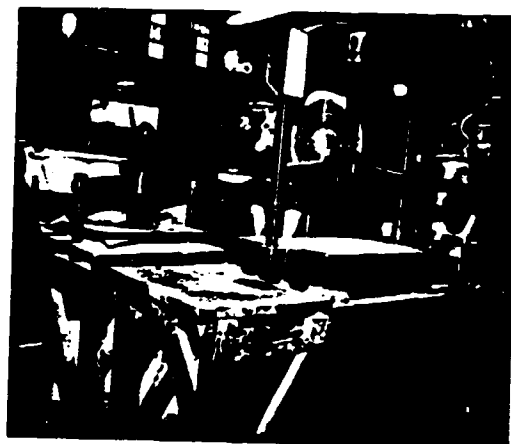
Reliure machine
Reinhard from 1880



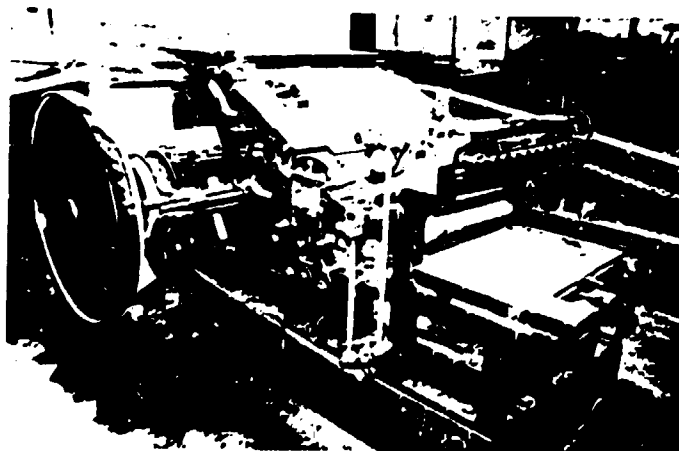
Cutter Krause
from 1920



Terno VI from 1920



Book press from 1880

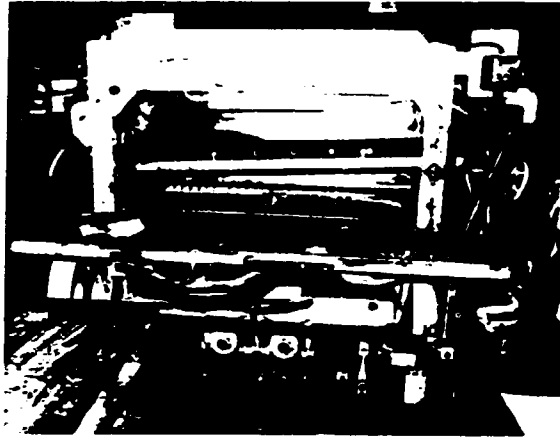


Terno IV from 1925

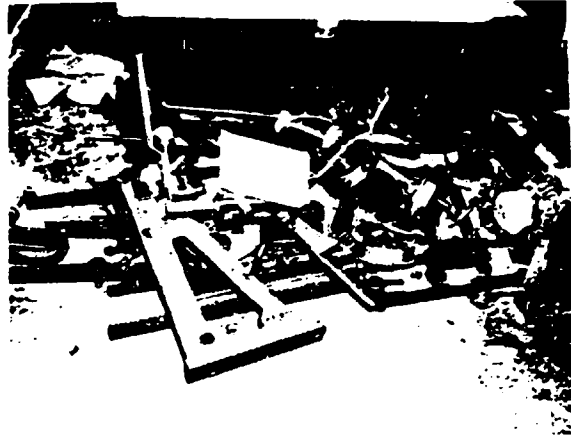
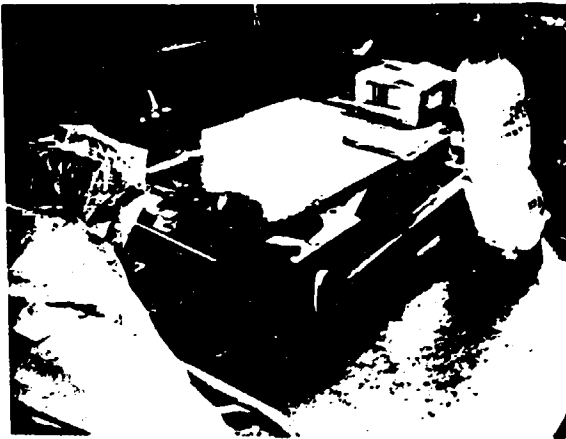
Machines of antique value
or to be scraped



Chandler + Price
from 1910



unidentified cutter
from 1910



Dismantled but complete Terno IV from 1920



Terno VI from 1925