

CHAPTER 4.
PREPARATION OF TENTATIVE PLAN
FOR REHABILITATION OF SSP

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CHAPTER 4. PREPARATION OF TENTATIVE PLAN FOR REHABILITATION OF SSP

It was analyzed in Chapter 1 that the closure of SSP's plant was caused by many factors which exerted influences intricately. A tentative plan was studied in order to sound out the extent by which SSP's management can be improved by devising various measures and means for removing these causes.

4.1 Basic Policies for Preparation of Tentative Plan

The following basic plans were adopted in determining the kinds and sizes of products to be manufactured by SSP in order to draft a new product mix:

- (1) Among the products producible with the existing facilities, those with larger future demands are to be produced in a wider range of sizes.
 - (2) If products which are in demand but have not been produced in the past can be manufactured by adding a minimum of new production equipment, they are to be added to the existing product mix.
 - (3) Production is to be terminated for products which are not in big demand now and for which increases of demand in future cannot be anticipated.
 - (4) In order to maintain and improve the quality of special steel products, the advancement of productions management technologies in a broader sense is to be aimed at high production efficiency, high yield and low unit consumption of raw materials and utilities by addition of necessary production facilities with minimum investment and also under the guidance of advanced countries.
 - (5) A new system on production management which is well-balanced between the production plan including number of employees and organization required for production is to be worked out.
 - (6) Mild steel is not to be produced with the same facilities for producing special steel.
- The production plan described hereunder was prepared on the basis of the basic policies described above.

4.2 Production Plan

The production plan adopted by SSP hitherto is shown in Table 1-1.

Operating SSP's entire line of production facilities for this wide range of products has the effect of leveling out the disparity in sales caused by economic fluctuations and help to stabilize the company's management. On the other-hand, if SSP produces diverse products in small lots, the rate of operation of the production facilities for these products becomes very low as indicated by the SSP's past performance, resulting in excessive administrative costs for production facilities, personnel and raw materials, and aggravating SSP's management.

Accordingly, in order to prepare a tentative plan for rehabilitation of SSP on the basis of the basic policies outlined earlier, SSP's products are divided into 1) special steel rolled products which are to be produced and 2) plate, sheet, castings and forgings which are not to be produced. A detailed description of these products is offered hereunder, based on the results of demand survey and estimation.

4.2.1 Special Steel Rolled Products

The products earmarked in the tentative production plan are special steel rolled bars for which an increased demand is anticipated in the future for use in the manufacture of automobiles, farm tractors, motorcycles and bicycles; flat bars which had not been included in the SSP's original production plan; and special steel billets of certain size limitations by the production capacity to be described later which are to be used for making forgings.

(1) A Study on the Expansion of Range of Product Sizes

Among the demands for special steel products indicated in Table 3-9, those with 91 - 150 mm size round bars and billets comprise the largest proportion.

In order to produce 91 - 150 mm size round bars by the blooming mill, it will be necessary to equip 1) a grip tilter at the entry side table of the mill and 2) roll guides at the entry and the delivery sides. However, the layout of the mill does not provide the space necessary for installing these equipment additionally.

This is because 1) it is impossible to provide a sufficient spacing for the roll gap of the roller table and 2) the two feed rollers setting through the roll stand housing as well as the manipulator side guide obstruct the installation of the aforementioned equipment. In addition,

since the maximum design capacity of the hot shear is 90 x 90 mm, it is not recommendable to shear 91 - 150 mm size round bars and billets.

In order to roll round bars of up to 70 mm diameter by the bar mill, billets have to be a minimum size of from 110 x 110 to 120 x 120 mm. However, the blooming mill is incapable of producing billets of these sizes, as described earlier.

The roughing rolls of the bar mill have a design diameter of 450 mm. Unless the roll diameter is about 500 mm, its strength is insufficient to roll round bars of 70 mm diameter. However, increasing the roll diameter is impossible from the aspects of the mill design.

90 x 90 mm billets rolled by the blooming mill may be further rolled by the roughing rolls of the bar mill to 50 x 50 mm - 60 x 60 mm billets, which may be reheated and rolled to make 11 - 21 mm diameter round bars. However, repetition of reheating and re-rolling in the manufacturing process results in a substantial increase in the manufacturing costs.

Today, round bars of up to 11 - 21 mm diameter are generally produced from bars in coil form which are produced by wire rod mills. SSP products requiring three heating processes are unable to compete pricewise with bar produced from bars in coil.

Production of flat bars having cross-section of from 22 mm to 40 mm is possible. However, a scale breaker is required to be added for improving the quality of these products.

Based on these results, the conclusion is that the range of product sizes cannot be expanded beyond the range of the existing products size.

4.2.2 Sheets and Plates

(1) Stainless Steel Sheets

Based on the results of demand survey and estimation, the demand for stainless steel sheets is expected to be 7,000 t/y in 1979/80 and 8,000 t/y in 1984/85, respectively, as shown in Tables 3-11 and 3-14. The larger portion of these demands (97%) is consumed by about several hundreds large and small manufacturers for producing tableware and cooking utensils.

These stainless steel sheets are second-grade products or nearly equivalent to scraps of strip coil ends or with surface defects during manufacture by the strip mills of industrially advanced countries or which have been discovered in the process of distribution, or are shorter

than their prescribed lengths. They are imported at low prices.

End users are satisfied with the quality and prices of these imported stainless steel sheets, therefore the supply and demand situation for these products is expected to remain unchanged for a long period of time.

Another factor deserving attention is that besides the demand of Stainless Steel Sheets of BA & 2B finish, stainless steel sheets in 0.7 mm thicknesses and above are also used in 2D finish. BA & 2B finishes are produced in Annealing & Pickling lines of Strip Mills, non-existent in SSP facilities.

Roughly 60% of this demand is for thin sheets having a thickness of under 0.7 mm, which are produced by strip mill rolling, specifically by applying a tension from both front and rear ends of the sheets.

While the larger portion of these demands are for producing tableware and kitchen utensils, a small demand exists for railway car.

As judged from the present situation and future outlook of demand for stainless steel sheets in Pakistan, as well as the impossibility of producing stainless steel sheets of bright surface finish and in sizes which are in demand, stainless steel sheets have been excluded from the tentative production plan.

(2) Stainless Steel and Carbon Steel Hot Rolled Plates

Stainless steel and carbon steel hot rolled plates are in demand for the manufacture of vessels for the heavy chemical industry as well as for building, ships and industrial plants, but since these industries are not yet developed in Pakistan, there is hardly any domestic demand for these hot rolled plates.

Owing to the reasons outlined above, the manufacture of stainless steel and carbon steel hot rolled plates is excluded from the tentative production plan.

4.2.3 Steel Castings and Forgings

In conducting this survey, the survey mission visited end users of steel castings and forgings such as Heavy Foundry & Forge Ltd. (HFF), Heavy Mechanical Complex Ltd. (HMC), PECO and PMTF. A characteristic of the users in Pakistan of these materials is that the users make steel castings and forgings they require by themselves or rely on their affiliated manufacturers.

Moreover, these users satisfy their own demands, and those same group, and still have a large surplus production capacity. For example, HFF has a production capacity of 6,000 t/y of castings and 13,000 t/y of forgings, but the rate of operation of these production facilities is reportedly only 25% respectively.

As shown in Tables 3-15 and 3-16, the demands for steel castings and forgings to be met by external procurements, excluding those produced by the end users themselves, are 372 t/y and 1,155 t/y, respectively, in 1979/80. These demands are expected to increase respectively to 830 t/y and 1,010 t/y in 1984/85.

Among these demands, that for cast steel balls for crushing cement raw materials is expected to be 139 t/y in 1984/85. These 13-Cr cast iron balls are presently being imported from Belgium and other countries, and are expected to increasingly replace forged steel balls. However, since cast iron balls are manufactured by special technologies, they cannot be readily manufactured by SSP.

A demand of 930 t/y is anticipated for forged steel balls in 1984/85. Since HFF alone has a steel ball manufacturing capacity of over 2,000 t/y, SSP, as a newcomer in the business, may not be able to compete with other manufacturers in aspects of technology even if it ventures to produce forged steel balls.

The demand for forgings will increase henceforth owing to the increased domestic production of parts for buses, trucks, farm tractors, motorcycles and bicycles. It is more rational for these parts to be mass produced by PMTF producing Bedford truck parts, or by HFF and HMC developing this technology presently.

In addition, because PACO plans to establish an exclusive-purpose parts manufacturing plant for automobiles and motorcycles for standardization and interchangeability of parts, the operation of SSP's general-purpose forging facilities is not considered practical.

Owing to the reasons described above, the manufacture of castings and forgings was not included in SSP's production plan. However, special steel rolled products for making forgings are included in the production plan of special steel rolled products, limited to sizes which are producible by SSP.

4.3 Tentative Plan for Rehabilitation of SSP

In accordance with the basic policy for preparing the tentative plan for rehabilita-

of SSP, the items to be manufactured by SSP were limited to special steel rolled products, excluding stainless steel plates and sheets, as described in the preceding paragraph.

The tentative plan is prepared on the premise that all the necessary prerequisite for rehabilitation has been fully met, including the facilities, personnel, manufacturing know-how and capital necessary for manufacturing special steel rolled products.

4.3.1 Production and Sales Plans

Based on Table 3-2 indicating the present demand and the estimated demand in future of all the special steels in Pakistan, an estimated demand on special steels producible by SSP was obtained. Assuming that SSP will restart operation in July 1981, Table 4-1 is compiled to show the production plan of SSP for the following ten years.

The ratio between the total demand in Pakistan and the capacity producible by SSP was calculated. The result is about 12% for round bars, about 8% for square bars, and about 70% for flat bars. This indicates that with the exception of flat bars, an overwhelming demand exists for products which SSP cannot produce due to restrictions on the production facilities.

Based on the results of demand estimation made in Chapter 3, the 1984/85 demand for special steel rolled products producible by SSP is expected to increase at a mean annual rate of a little less than 18% with respect to the 1979/80 demand.

Incidentally, this high rate of increase in demand is based on the premise that the increase as planned is achieved on the output of automobiles, farm tractors and other industrial products and also on the domestic production of parts. It is, however, highly improbable that the plan will materialize judging from the present economic circumstances in Pakistan.

In this reports, the average annual growth rate of GDP of 10% (1973/74 - 1977/78 performance was 3.8%) of the manufacturing industry in "the Fifth Five Year Plan" (1978 - 1983) is adopted, and the volumes of demand for the respective products in 1984/85 are estimated.

The production plan for ten years of SSP is shown in Table 4-1. The figures were calculated on the annual growth rate of 10% and it has been planned under the consideration of the following three preconditions.

Table 4-1. Production Plan of SSP

Unit: t/y

	Year	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Billet (75 - 90 mm)	SC	550	610	670	730	800	880	970	1,070	1,180	1,300
	AL	110	120	130	150	170	180	190	210	240	260
	Sub-Total	660	730	800	880	970	1,070	1,160	1,280	1,420	1,560
Round Bar (22 - 40 mm)	SC	920	1,020	1,120	1,230	1,350	1,490	1,640	1,810	1,980	2,180
	AL	920	1,020	1,120	1,230	1,350	1,490	1,640	1,810	1,980	2,180
	Sub-Total	1,840	2,040	2,240	2,460	2,700	2,980	3,280	3,620	3,960	4,360
Square Bar (22 - 40 mm)	SC	230	250	280	310	340	370	410	450	500	540
	AL	230	250	280	310	340	370	410	450	500	540
	Sub-Total	460	500	560	620	680	740	820	900	1,000	1,080
Flat-Bar	SUP	4,180	4,600	5,060	5,560	6,120	6,730	7,410	8,150	8,960	9,860
	AL	660	730	800	880	980	1,060	1,170	1,290	1,410	1,560
	Sub-Total	4,840	5,330	5,860	6,440	7,100	7,790	8,580	9,440	10,370	11,420
Total	SC	1,700	1,880	2,070	2,270	2,490	2,750	3,020	3,330	3,660	4,020
	AL	1,920	2,120	2,330	2,570	2,840	3,100	3,410	3,760	4,130	4,540
	SUP	4,180	4,600	5,060	5,560	6,120	6,730	7,410	8,150	8,960	9,860
Grand Total		7,800	8,600	9,460	10,400	11,450	12,580	13,840	15,240	16,750	18,420

Remark: SC: Carbon Steel for Machine Structural Use

AL: Alloy Steels

SUP: Spring Steels

- (1) SSP will supply 100% of products which it can manufacture in the demanded sizes and which are neither to be produced by domestic manufacturers nor to be imported.
- (2) SSP will produce the raw materials for making cold drawn bars to be supplied to users such as KBS Pumps Co., Ltd., PECO, Pakistan Ordnance Factory Ltd. and Heavy Rebuild Factory Ltd. Cold drawing work will be subcontracted.
- (3) Estimating the demand existing ten years later by kind of end user industry will be quite difficult, the production volume of 1989/90 has been calculated using the same annual rate of growth as the period from 1979/80 to 1984/85.

This production plan is the basic plan for planning the production facilities, personnel arrangement and improvement of technology and is the one to be utilized for the financial analysis of the tentative plan, too.

4.4 Machinery and Equipment Plan

When a special steel manufacturer receives an order on special steel product, it has to deliberate exhaustively with the client on such subjects as the product's chemical composition, physical properties, surface conditions, inner qualities and size tolerances, and should supply products meeting the qualities and specifications required for the specific purpose of the product.

SSP possesses facilities for performing chemical analysis and various kinds of mechanical tests. In order to upgrade the quality levels of the various kinds of special steel rolled products including billets and flat bars additionally included in SSP's production plan, and in order to produce quality products to the satisfaction of its clients, it will have to install at least the machinery and equipment shown in Table 4-2.

Table 4-2. Additional Machinery & Equipment

Machinery and Equipment	Number	Purpose
Scale Breaker	2 sets	Surface quality of flat bars
Ultrasonic Flaw Detector	2 sets	Checking of inner defects of billets
Straightener Machine	1 set	Straightening of billet products
Magnetic Crack Detector	1 set	Checking of surface defects of bar products
Others		

4.5 Improvement of Plant Operation Techniques

SSP's production plan is now limited to the manufacture of special steel rolled products, as described in Paragraph 4.2.

According to SSP's past production record, its production yield was extremely poor owing to its low level of plant operation techniques. Therefore, its production yield will necessarily have to be improved to raise its productivity.

In order to practice these measures, the technical guidance for at least three years by special steel experts of industrially advanced countries is required.

In the new personnel plan, it will be necessary to hire experienced and skilled employees for performing steel making, rolling, maintenance (mechanical and electrical) crane operation and analysis. Depending on the quality of these specially skilled employees, they may have to receive technical training for at least a few months before assignment to actual production.

This training plan is a part of technical guidance, and the number and period of time for extending operational guidance by special steel engineers of industrially advanced countries will depend on the technical levels of these trainees.

A rough estimate of costs for dispatching trainees, receiving technical guidance engineers, and payment of know-how fees, is described later.

The target values to be attained by improving the plant operation techniques through the technical guidance program described above are indicated in a table form for the principle items such as production yield, unit consumption of raw materials and utilities, and plant operation ratio, respectively. These target values are the basis for the various calculations described hereunder.

4.5.1 Production Yield

Table 4-3 shows target production yield values by manufacturing process. These target values are the basis for the subsequent calculations of various kinds of indicators. Although much difficulty is anticipated in attaining the target values from the 1st year of the production plan, these values are employed for calculating the annual production yields of respective periods.

In this table, the Good Ingot/Raw Material ratio (%) is less than SSP's performance because for producing ingots the top-pouring system adopted hitherto in the steel making shop will be converted to the bottom-pouring system.

Table 4-3. Production Yield

Final Product	Item	SSP Performance	Plan by Survey Team
Billet	Good Ingot/Raw Material (A)	88.2%	86%
	Billet Product/Ingot (B)	-	71%
	(A) x (B)	-	66%
Bar	Good Ingot/Raw Material (A)	88.2%	86%
	Billet/Ingot (B)	75.0%	82%
	Bar Product/Billet (C)	58.8%	88%
	(A) x (B) x (C)	38.9%	62%

4.5.2 Plant Operation Ratio and Production Capacity

Table 4-4 indicates the plant's maximum production capacity by manufacturing process. The steel making hour (tap to tap) for electric arc furnace operation in the steel making shop was planned at 4.5 hr/heat. (See p. 4-11.)

From Table 4-4 (Maximum Production Capacity) and Table 4-1 (Production Plan of SSP), the annual Production Plan and Operation Conditions of Equipment were tabulated as shown in Table 4-5. (See p. 4-12.)

4.5.3 Unit Consumption and Unit Price of Principal Raw Materials

Taking into consideration the raw materials situation in Pakistan, a plan was made to determine the charging ratio of steel scrap, the quality of ferro alloy and the volumes of raw materials in the electric arc furnaces and also the unit consumption of these raw materials. SSP's actual purchase price in 1979 were adopted as the unit prices of these raw materials, inclusive of the import duty of 40%.

Table 4-4. Maximum Production Capacity

Mill	Calculation of Production Capacity
Steel Making Shop Electric Arc Furnace: 10/12 t x 2 fec. 3/4 t x 1 fec.	$10/12 \text{ t fec.} \times 11 \text{ t/heat} \times 2 \text{ fec.} \times 300 \text{ d/y} \times 24 \text{ hr/d} \times \frac{1}{4.5 \text{ hr}} \times 0.8 = 28,160 \text{ t/y}$ $3/4 \text{ t fec.} \times 3.5 \text{ t/heat} \times 1 \text{ fec.} \times 300 \text{ d/y} \times 24 \text{ hr/d} \times \frac{1}{4.5 \text{ hr}} \times 0.8 = 4,480 \text{ t/y}$ <p style="text-align: right;">Total = 32,640 t/y</p>
Blooming Mill Reheating Furnace Capacity: 9 t/hr	$9 \text{ t/hr} \times 300 \text{ d/y} \times 21 \text{ hr/d} \times 0.8 = 45,360 \text{ t/y}$
Bar Mill Average Reheating Capacity: 5.3 t/hr	$5.3 \text{ t/hr} \times 300 \text{ d/y} \times 21 \text{ hr/d} \times 0.72 = 24,040 \text{ t/y}$

Remark: * : Actual operation ratio

*** : Actual working hour is 7 hr/shift x 3 shift/d

Table 4-5. Production Plan and Operation Conditions of Equipment

Year	Steel Making Shop		Blooming Mill		Bar Mill	
	Metallic Charge (Steel Scrap + Ferro Alloy)	Operation System	Ingot to be input	Number of Shifts/d	Billet to be input	Number of Shifts/d
1st	12,770 t/y	10 t fce. x 1 (81%)	10,990 t	1 (65%)	8,290	1 (92%)
2nd	14,170 t/y	10 t fce. x 1 (81%)	12,190 t	1	9,200	2 (74%)
3rd	15,560 t/y	10 t fce. x 1 3 t fce. x 1 (81%)	13,380 t	1	10,100	2
4th	16,960 t/y	10 t fce. x 1 3 t fce. x 1 (81%)	14,580 t	1	11,010	2
5th	18,350 t/y	10 t fce. x 1 3 t fce. x 1 (99%)	15,780 t	1 (100%)	11,910	2
6th	19,740 t/y	10 t fce. x 2	16,980 t	2	12,810	2
7th	21,140 t/y	10 t fce. x 2	18,180 t	2	13,720	2
8th	22,530 t/y	10 t fce. x 2	19,370 t	2	14,620	2
9th	23,930 t/y	10 t fce. x 2	20,570 t	2	15,530	2
10th	25,320 t/y	10 t fce. x 2 (90%)	21,770 t	2 (72%)	16,430	2 (100%)

Remark: () shows Operation Rate

Table 4-6 indicates the variable costs of producing billets, calculated from the unit manufacturing costs by product. As there are various kinds of alloy steels, the table indicates the variable costs of SAE 8620, a typical alloy steel.

Table 4-6. Variable Costs of Billet Products per Tonne

Unit: Rs./t

Item	Carbon Steel	Alloy Steel
Steel Making	6,676	9,301
Blooming	250	250
Conditioning & Inspection of Billet	167	167
Industrial Water	45	45
Recovery of Steel Scrap	Δ937	Δ1,504
Variable Cost of Billet Product	6,201	8,259

Table 4-7. Variable Costs of Bar Products per Tonne

Unit: Rs./t

Item	Carbon Steel	Alloy Steel	Spring Steel
Steel Making	7,124	9,925	7,575
Blooming	178	178	178
Conditioning & Inspection of Billet	187	187	187
Bar Rolling	502	502	502
Conditioning & Inspection of Bar	26	26	26
Industrial Water	45	45	45
Recovery of Steel Scrap	Δ1,000	Δ1,605	Δ1,003
Variable Cost of Bar Product	7,062	9,258	7,510

Tables 4-6 and 4-7 indicate the various kinds of variable costs involved in the manufacture of billet and bar products. Table 4-8 separately indicates the rates of unit consumption of raw materials and utilities involved only in steel making, and Table 4-9 indicates the unit prices of raw materials involved only in steel making.

Table 4-8. Unit Consumption of Raw Materials & Utilities in Steel Making

Unit: Kg/t of Charge

Item	Carbon Steel	Alloy Steel	Spring Steel	Imported Material (o)
Purchased Steel Scrap	700	741	750	o
Pig Iron	56			o
Steel Scrap Produced in Plant	234	220	220	
Fe-Si	3.2	3.9	21.7	o
Fe-Mn (H)	3.3	3.5		o
Fe-Mn (L)	1.0	1.2		o
Si-Mn (L)	2.7		7.6	o
Fe-Cr (H)		8.7		o
Fe-Cr (L)		1.0		o
Fe-Mo		2.5		o
Fe-Ni		18.2		o
Melting Materials (Rs.)	131	135	162	(o)
	(90)	(94)	(121)	
Fuel (NM ³)	9.5	9.5	9.5	
Electrode	6.2	6.7	6.2	o
Power (kWh)	646	665	646	
Refractories (Rs.)	533	533	533	(o)
	(468)	(468)	(468)	
Others for Steel Making (Rs.)	208	208	208	

Remark: Figures in () shows the value of imported portion within unit consumption represented by Rs.

Table 4-9. Unit Prices of Raw Materials & Utilities per Tonne of Ingot in Steel Making

Unit: Rs/t

Item	Unit Price	Item	Unit Price
Purchased Steel Scrap	o 2,800	Fe-Mo	o 75,200
Used Pig Iron	o 4,480	Fe-Ni	o 61,320
Steel Scrap Generated in Mill		CaCO ₃	165
Carbon Steel	2,817	CaF ₂	1,200
Alloy Steel	4,521	Carbon Powder	o 5,000
Spring Steel	2,824	CaSi	o 23,300
Fe-Si	o 19,460	Al Ingot	o 17,740
Fe-Mn (H)	o 9,324	Fuel (NM ³)	0.36
Fe-Mn (L)	o 13,160	Electrode	o 19,000
Si-Mn (L)	o 16,380	Electric Power (KWH)	0.55
Fe-Cr (H)	o 23,100	Water (/l)	45
Fe-Cr (L)	o 32,200		

Remark: Symbol o denotes Imported Material

Table 4-10 indicates the variable costs for rolling and conditioning of ingots, billets, bars, etc.

Table 4-10. Variable Costs for Rolling and Conditioning

Unit: Rs./t

Item	Variable Cost	Import Material Cost including Variable Cost
Billet Rolling	128	33
Billet Product Rolling	193	48
Bar Product Rolling	441	119
Conditioning of Billet	165	149
Conditioning of Billet Product	167	149
Conditioning of Bar Product	26	5

4.5.4 Personnel Plan

Table 4-11 shows the arrangement of personnel for performing efficient production on the basis of the production plan shown in Table 4-1. This table was prepared on the premise that skilled workers would be hired whenever possible by mutual understanding between management and labour, to avoid hiring of excessive personnel, and represents a personnel plan designed for materializing the production plan shown in Table 4-5. The number of personnel for administrative work in the head office is assumed at 14% of the number of personnel required for plant operation.

Table 4-11. Arrangement of Personnel

Year	Steel Making	Blooming	Bar Rolling	Conditioning & Inspection	Others	Sub-total	Head Office	Total
1st	91	35	52	56	102	336	70	406
2nd	91	35	98	68	102	394	70	464
3rd	125	35	98	68	102	428	70	498
4th	125	35	98	68	102	428	70	498
5th	125	35	98	68	102	428	70	498
6th	157	68	98	80	121	524	87	611
7th	157	68	98	80	121	524	87	611
8th	157	68	98	90	121	534	87	621
9th	157	68	98	90	121	534	87	621
10th	157	68	98	90	121	534	87	621

Remarks: 1. Personnel for repair of electric furnaces roof are not included in the table on assumption of contracting repair to outside enterprises.
 2. Others are the personnel of maintenance, transportation, technical engineering and administration section in the plant.
 3. Workers are expected to do more than one assignment at various places.

CHAPTER 5.
CAPITAL REQUIREMENTS

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CHAPTER 5. CAPITAL REQUIREMENTS

This chapter deals with the studies on the capital necessary for carrying out the tentative plan described in Chapter 6 for the rehabilitation of SSP.

5.1 Items Requiring Capital Disbursements

(1) Additional Machinery and Equipment

A fund of roughly Rs.16.6 million will be required for procuring at least the machines and equipment necessary for the manufacture of special steels listed in Chapter 4. A breakdown of the cost is shown in Table 5-1.

Table 5-1. Estimated Cost of New Machinery & Equipment

Unit: Rs. Thousand

Machinery & Equipment	Estimated Cost
Scale Breaker	2,000
Ultrasonic Flaw Detector	120
Levelling Machine	6,480
Magnetic Crack Detector	6,800
Others	1,200
Total	16,600

(2) Receiving of Technical Guidance

In order for SSP to attain the objectives described in Paragraph 4.5, it will have to receive an integrated technical guidance for corporate management, plant operation and various kinds of control systems on special steel manufacturing from industrially advanced countries. In addition, a total sum of about Rs.25,000,000 will be required over a three-year period for dispatching technical trainees overseas, acceptance of technical guidance engineers, and payment of technical know-how fees.

(3) Working Capital

A sum of Rs.44,000,000 is assumed as working capital, which is equivalent to ½ of the sum of variable costs that would be needed in the fifth year of plant operation.

5.2 Capital Disbursement Plan

The yearly disbursement plan of the capital for the funds described above is shown in Table 5-2.

Table 5-2. Capital Disbursement Plan

Unit: Rs. Thousand

Item \ Year	Year			
	0	1st	2nd	3rd
Machinery & Equipment	16,600	-	-	-
Technical Guidance	-	9,000	9,000	7,000
Working Capital	44,000	-	-	-
Total	60,600	9,000	9,000	7,000

5.3 Plan for the Procurement of Required Capital

Since SSP already carries an excessive deficit, procuring the funds necessary for its rehabilitation by loans will result in a heavier burden of interest and make it further difficult to repay the principle. Accordingly, the financial analysis of this report is prepared on the premise that the above capital requirements will be met by increasing its corporate capital.

5.4 Funds for Rehabilitation of Existing Production Facilities

SSP closed its plant in December, 1979, so production facilities have not been in operation for about one year. There were no indications that maintenance work was conducted during the surveying period of this survey mission. Judging from these situations, it is highly improbable that these facilities can be used as they are for resumption of production.

A careful survey must be made to confirm what degree of rehabilitation work will be required for existing machinery and equipment and the specific kinds of parts and materials necessary for the rehabilitation, and their quantities before resuming plant operation. In order to do so, it will be necessary to actually operate these machinery and equipment, confirm their condition exhaustively, and check for the necessity of replacement parts and materials in detail. A considerable period of time will be required for this survey.

At the present stage, there is no way of determining the costs for conducting the survey, and procuring the parts and materials necessary for resumption of production.

In industrially advanced countries, maintenance work is performed regularly even if a special steel plant ceases its operations, and there has been no case in which plant machinery and equipment have been left idle without maintenance work for nearly a year.

In this report, because of the above conditions, the financial analysis is made disregarding the cost to be required for restoring the machines and equipment to working conditions.

For reference:

The SSP contract relating to the supply of machinery and equipment included the supply of spare parts for one year operation worth ¥250,000,000 (Rs.10,000,000) and consumables worth ¥500,000,000 (Rs.20,000,000). These figures may serve as reference when considering the costs necessary for the resumption of operations of existing plant.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the success of any business and for the protection of the interests of all parties involved. The document outlines the various methods and systems that can be used to ensure the accuracy and reliability of financial records.

The second part of the document provides a detailed overview of the different types of financial statements that are commonly used in business. It explains the purpose and content of each statement, including the balance sheet, income statement, and cash flow statement. The document also discusses the importance of reconciling these statements and ensuring that they are consistent and accurate.

The third part of the document focuses on the role of internal controls in maintaining accurate financial records. It describes the various internal control procedures that can be implemented to prevent errors and fraud, and to ensure the integrity of the financial reporting process. The document also discusses the importance of regular audits and the role of external auditors in verifying the accuracy of financial statements.

The fourth part of the document discusses the importance of transparency and disclosure in financial reporting. It explains the various disclosure requirements that apply to different types of businesses and the importance of providing clear and concise information to investors and other stakeholders. The document also discusses the role of regulatory bodies in ensuring that financial reporting is transparent and accurate.

The fifth part of the document provides a summary of the key points discussed in the document and offers some final thoughts on the importance of accurate financial records. It emphasizes that accurate financial records are essential for the success of any business and for the protection of the interests of all parties involved. The document concludes by encouraging businesses to implement the best practices discussed in the document to ensure the accuracy and reliability of their financial records.

The document is intended to provide a comprehensive overview of the various aspects of financial record-keeping and to provide practical guidance on how to implement best practices. It is intended for use by business owners, managers, and accountants who are responsible for maintaining accurate financial records. The document is written in a clear and concise style and is intended to be easy to read and understand.

The document is a valuable resource for anyone who is interested in learning more about financial record-keeping and the importance of accurate financial records. It provides a comprehensive overview of the various aspects of financial record-keeping and provides practical guidance on how to implement best practices. The document is written in a clear and concise style and is intended to be easy to read and understand.

CHAPTER 6.
FINANCIAL ANALYSIS

THE UNIVERSITY OF CHICAGO
PHYSICS DEPARTMENT

CHAPTER 6. FINANCIAL ANALYSIS

A financial analysis of the tentative plan for rehabilitation of SSP is made in this chapter.

6.1 Preconditions for Financial Analysis

- (1) Plant operation is to resume on July 1, 1981.
- (2) The period of time for financial analysis is for ten years.
- (3) Various data obtained from SSP during the period of survey by the survey mission were evaluated, and the evaluated figures are used in this financial analysis.
- (4) The financial statements obtained from SSP by the survey mission were used in principle for evaluating SSP's financial situation.
- (5) The variable costs used in the financial analysis from the initial year were obtained from the figures shown in Paragraph 4.5.3 of this Report. These variable costs are calculated on the basis of the production yield and unit consumption of raw materials and utilities described in Paragraph 4.5.3, which can only be attained after operating the plant for 3 — 4 years with the aid of technical guidance. It is very difficult to attain these levels of variable costs from the first year of operation.

6.1.1 Sales Revenues

The products to be made and marketed by SSP are classified as shown in Table 4-1. In this financial analysis, the products are classified into five groups of products by kind of steel, shape and selling prices, as shown in Table 6-1.

Carbon steel represents the typical case of SC 1030, alloy steel the typical case of SAE 8620, and spring steel the typical case of SUP 7. The unit selling prices represent the CIF Karachi prices including a 60% import duty for billets and a 70% import duty for bars. In Pakistan, the distribution price generally consists of the above-mentioned unit selling price

plus 10% of sales tax and reasonable amount of profit.

Table 6-1. Unit Selling Prices of Products per Tonne

Unit: Rs.

Product	Billet		Bar		
	Carbon Steel (SC)	Alloy Steel (AI)	Carbon Steel (SC)	Alloy Steel (AI)	Spring Steel (SUP)
Unit Price	6,870	10,190	9,120	12,070	9,840

Remark: Unit selling prices do not include sales tax.

6.1.2 Variable Costs

The figures shown in Paragraph 4.5.3 are used for determining the variable costs of products, which primarily consists of the costs for raw materials and utilities. (Refer to Paragraph 6.1, item (5)).

Table 6-2. Variable Costs of Products per Tonne

Unit: Rs

Product	Billet		Bar		
	Carbon Steel (SC)	Alloy Steel (AI)	Carbon Steel (SC)	Alloy Steel (AI)	Spring Steel (SUP)
Variable Cost	6,201	8,259	7,062	9,258	7,510

Remark: Import duty (40%) of raw materials is about 20% of variable cost.

6.1.3 Fixed Costs

(1) Labour Costs

The personnel plan drafted on the basis of the rehabilitation plan is as shown in Paragraph 4.5.4. By using past SSP performance as reference, the mean annual wages per employee (including health and welfare expenses) is set at Rs. 15,000.

Table 6-3. Mean Annual Labour Cost

Unit: Rs.1,000

Year	1st	2nd	3rd-5th	6th-7th	8th-10th
Steel Making	1,365	1,365	1,875	2,355	2,355
Blooming	525	525	525	1,020	1,020
Bar Rolling	780	1,470	1,470	1,470	1,470
Inspection Treatment	840	1,020	1,020	1,200	1,350
Others at Plant	1,530	1,530	1,530	1,815	1,815
Head Office	1,050	1,050	1,050	1,305	1,305
Total	6,090	6,960	7,470	9,165	9,315

(2) Depreciation Cost

Based on the depreciation (see APPENDIX 3) outstanding as of June 6, 1978, an annual depreciation schedule was prepared for depreciating the tangible fixed assets outstanding as of June 30, 1979, and newly added fixed assets. The results are shown in Table 6-4.

A breakdown of the costs of SSP's plant machinery and equipment by shop is shown in Table 6-5.

Table 6-4. Depreciation Schedule

Unit: Rs.1,000

	Rate %	Written down value is at 30, Jan. 79	1	2	3	4	5	6	7	8	9	10
Leasehold Land	0	60										
Internal Road	5	824	43	41	39	37	35	34	32	30	29	27
Building	5	25,767	1,288	1,224	1,163	1,105	1,049	997	947	900	855	812
Plant Machinery and Equipment	10	276,249	27,625	24,862	22,376	20,139	18,125	16,312	14,681	13,207	11,889	10,701
Electric and Gas Installation	10	1,756	176	158	142	128	115	104	93	84	76	68
Vehicle	20	253	51	41	33	26	21	17	13	11	9	7
Furniture Fixed	6	258	15	15	14	13	12	11	11	10	9	9
Office Equipment	15	92	14	12	10	8	7	6	5	4	4	3
Other	10	308	31	27	25	24	22	20	19	17	15	13
Sub Total (Old)		305,567	29,243	26,380	23,802	21,480	19,386	17,501	15,801	14,263	12,886	11,640
Machinery and Equipment newly installed	10	16,600	1,660	1,494	1,345	1,210	1,089	980	882	793	715	643
Amortization (Technical Assistance)		(25,000)	900	1,800	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Sub Total		41,600	2,560	3,294	3,845	3,710	3,589	3,480	3,382	3,293	3,215	3,143
Grand Total		347,167	31,803	29,674	27,647	25,190	22,975	20,981	19,183	17,556	16,101	14,783

Table 6-5. Costs of Plant Machinery and Equipment by Kind of Shop

Unit: ¥1,000

	FOB	Freight	C & F Karachi	%
Steel Melting Shop	502,584	39,592	542,176	13.41
Casting Shop*	125,646	9,898	135,544	3.35
Blooming & Slabbing Shop	905,947	71,370	977,317	24.18
Sheet & Plate Rolling Mill Shop*	961,623	75,750	1,037,373	25.67
Bar Rolling Mill Shop	493,214	38,850	532,064	13.16
Forging Shop*	60,088	4,730	64,818	1.60
Maintenance Shop	65,528	5,160	70,688	1.75
Power Supply System	376,984	29,700	406,684	10.06
Laboratory & Test Shop	10,692	840	11,532	0.29
Auxiliary Facilities	244,470	19,260	263,730	6.52
Sub Total	3,746,776	295,150	4,041,926	100.00
Spare Parts	250,000	21,340	271,340	
Consumables	500,000	39,110	539,110	
Structural Steel	85,000	14,400	99,400	
Grand Total	4,581,776	370,000	4,951,776	

Remark: * indicates facilities which are not to be used in the rehabilitation plan.

(3) Interest

The most recent among the financial statements which the survey mission obtained from SSP extended over the corporate fiscal years of from July 1, 1977 to June 30, 1978 (see APPENDIX 3). Also, the figures for 1979 described in Chapter 1, Paragraph 1.7, Management Analysis, are based on statements prepared by SSP which had not been inspected by the auditor.

SSP's total debt as of June 30, 1979, runs up to Rs. 948,314,000. Since there is no clear outlook for repaying these debts, they are to be left in the present state of loans, and the

method of only paying interests on these loans is considered. Assuming the annual interest rate at 10%, the amount of interest to be paid annually would be:--

$$\text{Rs. } 948,314,000^* \times 10\% = \text{Rs. } 94,831,000.$$

(Remarks: Symbol * indicates total debt as of June 30, 1979.)

Since an excessive burden of interest aggravates SSP's balance of profits and losses, SSP is appealing to the government to have this excessive amount of liabilities converted into corporate capital which accompanies no interest. Specifically, SSP is proposing to have its total capital composed of 70% of corporate capital and 30% of liabilities.

In this case, SSP's capital and liabilities are as follows:

$$\text{Capital: Rs. } 990,885,000 \times 70\% = \text{Rs. } 693,620,000$$

$$\text{Loans: Rs. } 990,885,000 \times 30\% = \text{Rs. } 297,265,000$$

The amount of interest to be paid annually on loans is as follows:

$$\text{Interest: Rs. } 297,265,000 \times 10\% = \text{Rs. } 29,726,000$$

(4) Other Fixed Costs

Fixed costs other than those described above are based on SSP's past performance and are shown in Table 6-6.

Table 6-6. Other Fixed Costs

	Unit: Rs.
	Fixed Cost
Manufacturing Department	1,010,000
General Administration and Sales Department	990,000
Total	2,000,000

6.2 Production Costs

The production costs of the products of SSP in the 5th year of the tentative plan are as shown in Table 6-7.

Table 6-7. Production Costs of Products per Tonne

Unit: Rs.

	Billet		Bar		
	Carbon Steel (SC)	Alloy Steel (AI)	Carbon Steel (SC)	Alloy Steel (AI)	Spring Steel (SUP)
Variable Cost	6,201	8,259	7,062	9,258	7,501
Labor cost	421	418	573	574	574
Depreciation	1,148	1,218	1,483	1,547	1,498
Others	89	89	88	88	88
Fixed Cost	1,658	1,725	2,144	2,209	2,160
Manufacturing Cost per Ton	7,859	9,984	9,206	11,467	9,661

Remark: Depreciation costs do not include those of the Casting Shop, Sheet & Plate Rolling Mill Shop and Forging Shop.

6.3 Financial Analysis

A financial analysis of the rehabilitation plan is made on the basis of the preconditions described in Paragraph 6.1.

S A L E S R E V E N U E

(YEAR)	0	1	2	3	4	5	6	7	8
(1) BILLET (SC)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		350	610	670	730	800	890	970	1070
UNIT PRICE		6670	6870	6870	6870	6870	6870	6870	6870
REVENUE		5779	4191	4603	5015	5496	6114	6664	7331
(2) BILLET (CAL)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		110	120	150	170	180	180	190	210
UNIT PRICE		10190	10190	10190	10190	10190	10190	10190	10190
REVENUE		1121	1223	1525	1732	1836	1836	1936	2140
(3) BAR (SC)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		1150	1270	1400	1540	1690	1860	2050	2260
UNIT PRICE		9120	9120	9120	9120	9120	9120	9120	9120
REVENUE		10485	11582	12768	14045	15413	16993	18696	20617
(4) BAR (CAL)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		1610	2000	2200	2420	2670	2920	3220	3550
UNIT PRICE		12070	12070	12070	12070	12070	12070	12070	12070
REVENUE		21647	26140	26554	29200	32227	35244	38865	42849
(5) BAR (SUP)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		4190	4690	5060	5560	6120	6750	7410	8150
UNIT PRICE		9840	9840	9840	9840	9840	9840	9840	9840
REVENUE		41331	43264	49790	54710	60221	66223	72914	80196
REVENUE FROM PRODUCT		76369	86400	95040	104504	115089	126378	139075	153147
REVENUE (LOCAL)		78566	86400	95040	104504	115089	126378	139075	153147
REVENUE (EXPORT)		78566	86400	95040	104504	115089	126378	139075	153147
TOTAL REVENUE		78566	86400	95040	104504	115089	126378	139075	153147

S A L E S R E V E N U E

(YEAR) 9 10

(1) BILLET (SC)
RATE OF OPERATION

LOCALITY			
QUANTITY	(TON)	1740	1500
UNIT PRICE	(RS)	6870	6670
REVENUE	(100RS)	8107	8931

(2) BILLET (CAL)
RATE OF OPERATION

LOCALITY			
QUANTITY	(TON)	240	480
UNIT PRICE	(RS)	10190	19190
REVENUE	(100RS)	2446	4649

(3) BAR (SC)
RATE OF OPERATION

LOCALITY			
QUANTITY	(TON)	2480	4720
UNIT PRICE	(RS)	9120	9120
REVENUE	(100RS)	22618	24804

(4) BAR (CAL)
RATE OF OPERATION

LOCALITY			
QUANTITY	(TON)	3890	4280
UNIT PRICE	(RS)	12070	12070
REVENUE	(100RS)	46952	51660

(5) BAR (SUP)
RATE OF OPERATION

LOCALITY			
QUANTITY	(TON)	8960	9660
UNIT PRICE	(RS)	9840	9840
REVENUE	(100RS)	88166	97072

REVENUE FROM PRODUCT

	(100RS)	168289	183066
--	-----------	--------	--------

REVENUE (LOCAL)

	(100RS)	168289	183066
REVENUE (EXPORT)	(100RS)	168289	183066
TOTAL REVENUE	(100RS)	168289	183066

PROGRAM ANALYSIS STATEMENT

	1	2	3	4	5	6	7	8
REVENUE	76500	86400	95040	104500	115049	126378	139075	153167
=====								
(1) VARIABLE COST								
BILLET (CS)	350	610	670	730	800	890	970	1070
REQUIREMENT (RS)	6401	6201	6201	6201	6201	6201	6201	6201
UNIT PRICE (100RS)	3471	5783	4353	4627	4961	5519	6013	6633
VALUE								
BILLET (AL)	110	120	130	150	170	190	190	210
REQUIREMENT (RS)	8239	8239	8239	8239	8239	8239	8239	8239
UNIT PRICE (100RS)	908	991	1074	1239	1404	1487	1569	1734
VALUE								
BAR (CS)	1050	1270	1400	1540	1690	1860	2030	2260
REQUIREMENT (RS)	7062	7062	7062	7062	7062	7062	7062	7062
UNIT PRICE (100RS)	8121	8969	9867	10875	11933	13133	14477	15960
VALUE								
BAR (AL)	1070	2000	2200	2420	2670	2920	3220	3530
REQUIREMENT (RS)	9238	9238	9238	9238	9238	9238	9238	9238
UNIT PRICE (100RS)	1675	18316	20368	22404	24719	27033	29811	32866
VALUE								
VARIABLE COST								
BAR (CS)	4700	4600	5040	5360	6120	6730	7410	8130
REQUIREMENT (RS)	7310	7310	7310	7310	7310	7310	7310	7310
UNIT PRICE (100RS)	31362	34346	38001	41734	45961	50649	55669	61207
VALUE	6490	6060	7470	7470	7470	9163	9163	9315
(2) OPERATING LABOUR (FC)								
DEPRECIATION (FC)								
OLD	2943	2630	23802	21480	19386	17501	15801	14263
NEW	4360	3294	3843	3710	3589	3480	3362	3263
(3) OTHER EXPENSE (FC)								
TOTAL OPERATING COST								
NET OPERATING INCOME	10042	10549	11002	11361	12163	12982	13789	14723
INTEREST	-2410	-19039	-15362	-10933	-6336	-3484	-1206	5874
SPECIAL ITEMS	6431	9483	9483	9483	9483	9483	9483	9483
NET INCOME BEFORE TAX	-11647	-113870	-110393	-105784	-101147	-98313	-93623	-88937
INCOME TAX								
NET INCOME AFTER INT. X TAX	-11647	-113870	-110393	-103784	-101167	-98313	-93623	-88937

P R O F I T A N D L O S S S T A T E M E N T

(YEAR) 9 10

NET INCOME AFTER INT. & TAX (1000RS) 188269 182065
 TOTAL REVENUE

-----COST-----

(1) VARIABLE COST			
BILLET (SC)	(TON)	1140	1500
REQUIREMENT	(RS)	6237	6201
UNIT PRICE	(1000RS)	7577	8001
VALUE			
BILLET (AL)	(TON)	240	260
REQUIREMENT	(RS)	6250	6250
UNIT PRICE	(1000RS)	1932	2147
VALUE			
BAR (SC)	(TON)	2440	2720
REQUIREMENT	(RS)	7062	7462
UNIT PRICE	(1000RS)	17514	19200
VALUE			
BAR (AL)	(TON)	3800	4280
REQUIREMENT	(RS)	9258	9258
UNIT PRICE	(1000RS)	36014	39020
VALUE			
VARIABLE COST			
BAR (CSUP)	(TON)	8900	9800
REQUIREMENT	(RS)	7510	7510
UNIT PRICE	(1000RS)	67200	74049
VALUE			
(2) OPERATING LABOUR (FC)	(1000RS)	9315	9315
(3) DEPRECIATION (FC)	(1000RS)	12880	11040
OLD	(1000RS)	3215	3145
NEW			
(4) OTHER EXPENSE (FC)	(1000RS)	2000	2000
TOTAL OPERATING COST	(1000RS)	157533	161188
NET OPERATING INCOME	(1000RS)	10736	12980
INTEREST	(1000RS)	94831	94831
SPECIAL ITEMS	(1000RS)		
NET INCOME BEFORE TAX	(1000RS)	-84075	-76951
INCOME TAX	(1000RS)		
NET INCOME AFTER INT. & TAX	(1000RS)	-84075	-76951

CASH FLOW

Unit: Rs.1,000

	0	1	2	3	4	5	6	7	8	9	10
Capital Increase	60,600	9,000	9,000	7,000							
Total Revenue		78,366	86,400	95,040	104,508	115,089	126,378	139,075	153,147	168,289	185,068
Cash Inflow	60,600	87,366	95,400	102,040	104,508	115,089	126,378	139,075	153,147	168,289	185,068
Capital Investment	60,600	9,000	9,000	7,000							
Total Operating Cost		100,482	105,439	110,602	115,461	121,425	129,862	137,869	147,273	157,533	169,188
Depreciation (Add Back)		-31,803	-29,674	-27,647	-25,190	-22,975	-20,981	-19,183	-17,556	-16,101	-14,785
Interest		94,831	94,831	94,831	94,831	94,831	94,831	94,831	94,831	94,831	94,831
Principal Repayment		0	0	0	0	0	0	0	0	0	0
Cash Outflow	60,600	172,510	179,596	184,786	185,102	193,291	203,713	213,517	224,548	236,263	249,234
Cash Balance	0	-85,144	-84,196	-82,746	-80,594	-78,192	-77,335	-74,442	-71,401	-67,974	-64,166
Remark:	Debt: 96% Equity: 4%										

INTERNAL RATE OF RETURN (FINANCIAL)										(UNIT =	1000\$)
YEAR	INVESTMENT	NET OPERATING INCOME	SPECIAL ITEMS	INCOME TAX AT 100% EQUITY	DEPRECIATION	SALVAGE VALUE	RECLAIMED WORKING CAPITAL	NET CASH INFLOW	DISCOUNT FACTOR	PRESENT VALUE OF NET CASH INFLOW	
0	366167	0	0	0	0	0	0	-366167	1.00000	-366167	
1	9000	-22116	0	0	51603	0	0	687	1.07728	740	
2	9000	-19039	0	0	49074	0	0	1653	1.16054	1897	
3	7000	-15562	0	0	47647	0	0	5085	1.25023	6357	
4	0	-10443	0	0	45190	0	0	14237	1.34685	19175	
5	0	-6526	0	0	42375	0	0	16039	1.45005	24742	
6	0	-3484	0	0	40981	0	0	17497	1.56308	27340	
7	0	1204	0	0	19183	0	0	20389	1.68388	34333	
8	0	5874	0	0	17526	0	0	23430	1.81402	42503	
9	0	10726	0	0	16101	0	0	26857	1.95422	52485	
10	0	75880	0	0	14783	0	44000	74663	2.10523	157785	
										TOTAL=0	

INTERNAL RATE OF RETURN = 7.17% X

S A L E S R E V E N U E

	0	1	2	3	4	5	6	7	8
(1) BILLET (CS)									
RATE OF OPERATION									
==LOCALLY==									
QUANTITY		350	410	670	800	800	750	890	1070
UNIT PRICE		6870	6870	6870	6870	6870	6870	6870	6870
REVENUE		2400	2817	4583	5496	5496	5197	6114	7357
(2) BILLET (CAL)									
RATE OF OPERATION									
==LOCALLY==									
QUANTITY		110	120	150	170	170	150	180	210
UNIT PRICE		10190	10190	10190	10190	10190	10190	10190	10190
REVENUE		1121	1223	1528	1732	1732	1528	1834	2140
(3) BAR (CS)									
RATE OF OPERATION									
==LOCALLY==									
QUANTITY		715	770	1600	1600	1600	1520	1860	2260
UNIT PRICE		9120	9120	9120	9120	9120	9120	9120	9120
REVENUE		6520	7012	14672	14672	14672	13850	16932	20612
(4) BAR (CAL)									
RATE OF OPERATION									
==LOCALLY==									
QUANTITY		2000	2070	2200	2670	2670	2620	2920	3350
UNIT PRICE		12070	12070	12070	12070	12070	12070	12070	12070
REVENUE		24140	24914	26514	32227	32227	31614	35264	40465
(5) BAR (SUPT)									
RATE OF OPERATION									
==LOCALLY==									
QUANTITY		410	400	500	6120	6120	590	6730	8150
UNIT PRICE		9840	9840	9840	9840	9840	9840	9840	9840
REVENUE		4036	3928	4920	6021	6021	5802	6623	8016
REVENUE FROM PRODUCT		7365	7365	9340	11509	11509	11241	12638	15317
REVENUE (LOCAL)		7365	7365	9340	11509	11509	11241	12638	15317
REVENUE (EXPORT)									
TOTAL REVENUE		7365	7365	9340	11509	11509	11241	12638	15317

		R A L E S		R E V E N U E		1970		1971		1972	
		(YEAR)	Q	(YEAR)	Q	(YEAR)	Q	(YEAR)	Q	(YEAR)	Q
(1) MILLY (CSC)											
RATE OF OPERATION											
LOCALLY											
QUANTITY		1100	1300								
UNIT PRICE		6870	6873								
REVENUE		8117	8931								
(2) MILLET (CAL)											
RATE OF OPERATION											
LOCALLY											
QUANTITY		490	240								
UNIT PRICE		10190	10190								
REVENUE		2446	2064								
(3) BAR (CSC)											
RATE OF OPERATION											
LOCALLY											
QUANTITY		2-10	2720								
UNIT PRICE		9120	9120								
REVENUE		22618	24816								
(4) BAR (CAL)											
RATE OF OPERATION											
LOCALLY											
QUANTITY		5090	3640								
UNIT PRICE		12070	14070								
REVENUE		60932	51060								
(5) BAR (CUP)											
RATE OF OPERATION											
LOCALLY											
QUANTITY		8940	9840								
UNIT PRICE		9810	9722								
REVENUE		148249	148249								
REVENUE FROM PRODUCT											
REVENUE (LOCAL)			164219								
REVENUE (EXPORT)											
TOTAL REVENUE			164219								

P R O F O R M A I N C O M E S T A T E M E N T

	(YEAR)	0	1	2	3	4	5	6	7	8
*****REVENUE*****	(C		7836A	86400	95040	102400	119089	12637X	130075	153147
TOTAL REVENUE	(C									
*****COST*****										
(1) VARIABLE COST										
WILLET (SC)	(C		350	610	670	730	800	890	970	1070
REQUIREMENT	(C		9600	6201	6201	6200	6201	6201	6201	6201
UNIT PRICE	(C		3611	5783	6155	4827	4961	5519	6015	6635
VALUE	(C									
WILLET (CAL)	(C		110	120	150	150	170	180	190	210
REQUIREMENT	(C		8459	8259	8259	8259	8259	8259	8259	8259
UNIT PRICE	(C		908	991	1074	1404	1467	1569	1569	1734
VALUE	(C									
BAR (SC)	(C		1150	1270	1400	1540	1690	1860	2050	2260
REQUIREMENT	(C		7062	7062	7062	7062	7062	7062	7062	7062
UNIT PRICE	(C		8321	8969	9887	10874	11935	13135	14477	15960
VALUE	(C									
BAR (CAL)	(C		1450	2000	2200	2420	2670	2920	3220	3550
REQUIREMENT	(C		9258	9258	9258	9258	9258	9258	9258	9258
UNIT PRICE	(C		16757	13510	20368	22404	24719	27033	29811	32860
VALUE	(C									
VARIABLE COST										
BAR (SUP)	(C		4700	4600	5040	5500	6120	6750	7410	8150
REQUIREMENT	(C		7570	7570	7570	7570	7570	7570	7570	7570
UNIT PRICE	(C		31562	34346	38001	41758	45961	50542	55649	61207
VALUE	(C									
(2) OPERATING LAUNDR (FC)	(C		6000	6900	7470	7470	7470	9165	9165	9315
(3) DEPRECIATION (FC)	(C		29443	26380	23402	21420	19386	17501	15801	14263
OLD	(C		4343	3246	3845	3710	3580	3480	3382	3293
NEW	(C									
(4) OTHER EXPENSE (FC)	(C		2000	2000	2000	2000	2000	2000	2000	2000
TOTAL OPERATING COST	(C		100642	105439	110602	115467	121423	129062	137869	147273
NET OPERATING INCOME	(C		-22170	-19039	-15502	-10954	-6336	-1684	1206	5874
INTEREST	(C		24729	29720	29720	29720	29720	29720	29720	29720
SPECIAL ITEMS	(C									
NET INCOME BEFORE TAX	(C		-51062	-48769	-45288	-40479	-34062	-13210	-28520	-23852
INCOME TAX	(C									
NET INCOME AFTER INT. & TAX	(C		-51062	-48769	-45268	-40479	-34062	-13310	-28520	-23852

PRO FORMA INCOME STATEMENT

(YEAR) 9 TO

NET INCOME AFTER INT. & TAX (1000RS) 158259 THRU65
 TOTAL REVENUE

COST

(1) VARIABLE COST			
BILLET (SC)	(1000RS)	1750	1500
EQUIPMENT	(RS)	6207	6207
UNIT PRICE	(1000RS)	7317	6061
VALUE			
WILLET (CAL)	(1000RS)	240	269
EQUIPMENT	(RS)	8459	8459
UNIT PRICE	(1000RS)	1942	2147
VALUE			
BAR (SC)	(1000RS)	2450	2720
EQUIPMENT	(RS)	7062	7062
UNIT PRICE	(1000RS)	17514	19209
VALUE			
BAR (CAL)	(1000RS)	5890	4280
EQUIPMENT	(RS)	9258	9258
UNIT PRICE	(1000RS)	36014	39624
VALUE			
VARIABLE COST			
BAR (CSUP)	(1000RS)	8960	9860
EQUIPMENT	(RS)	7510	7510
UNIT PRICE	(1000RS)	6720	74049
VALUE	(1000RS)	9315	9315
(2) OPERATING LAOUR (FC)			
(3) DEPRECIATION (FC)	(1000RS)	12866	11040
OLD	(1000RS)	5215	5143
NEW			
(4) OTHER EXPENCE (FC)	(1000RS)	2000	2000
TOTAL OPERATING COST	(1000RS)	157535	169196
NET OPERATING INCOME	(1000RS)	10756	13660
INTEREST	(1000RS)	29726	29726
SPECIAL ITEMS	(1000RS)		
NET INCOME BEFORE TAX	(1000RS)	-18470	-13660
INCOME TAX	(1000RS)		
NET INCOME AFTER INT. & TAX	(1000RS)	-18470	-13660

CASH FLOW

Unit: Rs.1,000

	0	1	2	3	4	5	6	7	8	9	10
Capital Increase	60,600	9,000	9,000	7,000							
Total Revenue		78,366	86,400	95,040	104,508	115,089	126,378	139,075	153,147	168,289	185,068
Cash Inflow	60,600	87,366	95,400	102,040	104,508	115,089	126,378	139,075	153,147	168,289	185,068
Capital Investment	60,600	9,000	9,000	7,000							
Total Operating Cost		100,482	105,439	110,602	115,461	121,425	129,862	137,869	147,273	157,533	169,138
Depreciation (Add Back)		-31,803	-29,674	-27,647	-25,190	-22,975	-20,981	-19,183	-17,556	-16,101	-14,785
Interest		29,726	29,726	29,726	29,726	29,726	29,726	29,726	29,726	29,726	29,726
Principal Repayment		0	0	0	0	0	0	0	0	0	0
Cash Outflow	60,600	107,405	114,491	119,681	119,997	128,176	138,607	148,412	159,443	171,158	184,129
Cash Balance	0	-20,039	-19,091	-17,641	-15,489	-13,087	-12,229	-9,337	-6,296	-2,869	939

Remark: Debt: 30% Equity: 70%

INTERNAL RATE OF RETURN (FINANCIAL) (UNIT= 100RS)

YEAR	INVESTMENT	NET OPERATING INCOME	SPECIAL ITEMS	INCOME TAX AT 100%	DEPRECIATION	RECLAIMED WORKING CAPITAL	NET CASH INFLOW	DISCOUNT FACTOR	PRESENT VALUE OF NET CASH INFLOW
0	366167	0	0	0	0	0	-366167	1.00000	-366167
1	9000	-22170	0	0	31803	0	887	1.07728	740
2	9000	-19039	0	0	49074	0	1633	1.16034	1897
3	7000	-15562	0	0	27667	0	3083	1.25023	6357
4	0	-10933	0	0	43190	0	14237	1.34683	19173
5	0	-6334	0	0	27973	0	16639	1.45093	24142
6	0	-3484	0	0	20941	0	17497	1.56308	27349
7	0	1204	0	0	19783	0	20389	1.68388	34333
8	0	3874	0	0	17230	0	23430	1.81402	42503
9	0	10756	0	0	14101	0	26837	1.95422	52485
10	0	15480	0	0	14783	44000	74663	2.10523	137183
									TOTAL=0

INTERNAL RATE OF RETURN = 7.37%

S A L E S R E V E N U E

(YEAR)	0	1	2	3	4	5	6	7	8
(1) BILLET (CS)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		350	610	670	730	800	890	970	1070
UNIT PRICE		757	757	757	757	757	757	757	757
REVENUE		2645	4617	5063	5417	6066	6720	7330	8086
(2) BILLET (CAL)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		110	120	130	150	170	180	190	210
UNIT PRICE		11209	11209	11209	11209	11209	11209	11209	11209
REVENUE		1233	1345	1457	1649	1906	2018	2130	2334
(3) BARK (CS)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		1150	1270	1400	1540	1690	1860	2050	2260
UNIT PRICE		10032	10032	10032	10032	10032	10032	10032	10032
REVENUE		11537	12741	14043	15449	16934	18660	20366	22672
(4) BARK (CAL)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		1810	2000	2200	2420	2670	2920	3220	3550
UNIT PRICE		15277	15277	15277	15277	15277	15277	15277	15277
REVENUE		27651	30554	33600	36910	40695	44504	49377	54153
(5) BARK (SUB)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		4780	4600	5060	5560	6120	6730	7410	8150
UNIT PRICE		10824	10824	10824	10824	10824	10824	10824	10824
REVENUE		51744	49790	54768	60182	66243	72840	80006	88216
REVENUE FROM PRODUCT		86207	92040	102543	114058	126509	139019	152984	168467
REVENUE (LOCAL)		86207	92040	102543	114058	126509	139019	152984	168467
REVENUE (EXPORT)									
TOTAL REVENUE		86207	92040	102543	114058	126509	139019	152984	168467

SALES REVENUE

(1) BILLET (CSC)	(YEAR)	(1970)	(1971)
RATE OF OPERATION			
==LOCALLY==			
QUANTITY	(TON)	1180	1300
UNIT PRICE	(RS)	7257	7257
REVENUE	(100RS)	8577	9824
(2) BILLET (CAL)			
RATE OF OPERATION			
==LOCALLY==			
QUANTITY	(TON)	240	240
UNIT PRICE	(RS)	11209	11609
REVENUE	(100RS)	2690	2794
(3) BAR (CSC)			
RATE OF OPERATION			
==LOCALLY==			
QUANTITY	(TON)	2480	2720
UNIT PRICE	(RS)	10012	10032
REVENUE	(100RS)	24870	27287
(4) BAR (CAL)			
RATE OF OPERATION			
==LOCALLY==			
QUANTITY	(TON)	3890	4280
UNIT PRICE	(RS)	13277	13277
REVENUE	(100RS)	51664	56820
(5) BAR (SUB)			
RATE OF OPERATION			
==LOCALLY==			
QUANTITY	(TON)	8900	9660
UNIT PRICE	(RS)	10824	10824
REVENUE	(100RS)	96483	105723
REVENUE FROM PRODUCT	(100RS)	185117	203374
REVENUE (LOCAL)	(100RS)	185117	203370
REVENUE (EXPORT)	(100RS)	185117	203370
TOTAL REVENUE	(100RS)	185117	203370

STATE OF CALIFORNIA - DEPARTMENT OF REVENUE - STATEMENT

	1	2	3	4	5	6	7	8
(YEAR)								
TOTAL REVENUE	84201	93640	104543	114957	126599	139019	152984	168491
=====								
(1) VARIABLE COST								
BILLET (CS)	350	610	670	730	800	890	970	1070
EQUIPMENT	6201	6201	6201	6201	6201	6201	6201	6201
UNIT PRICE	3411	3783	4155	4527	4961	5319	6015	6635
VALUE								
BILLET (AL)	170	120	130	150	170	180	190	210
EQUIPMENT	8457	8259	8259	8259	8259	8259	8259	8259
UNIT PRICE	408	991	1074	1250	1404	1487	1599	1734
VALUE								
BAR (CS)	1150	1270	1400	1540	1690	1860	2050	2260
EQUIPMENT	7062	7062	7062	7062	7062	7062	7062	7062
UNIT PRICE	6121	8969	9467	10874	11935	13135	14477	15960
VALUE								
BAR (AL)	1840	2000	2200	2420	2670	2920	3220	3530
EQUIPMENT	4254	9258	9258	9258	9258	9258	9258	9258
UNIT PRICE	16757	18516	20368	22404	24719	27033	29811	32866
VALUE								
=====								
(2) OPERATING EXPENSE								
BAR (CS)	4140	4600	5060	5560	6120	6730	7410	8130
EQUIPMENT	7510	7510	7510	7510	7510	7510	7510	7510
UNIT PRICE	31592	34546	34001	41754	45961	50342	55649	61207
VALUE								
=====								
(3) DEPRECIATION								
OLD	29243	26380	23802	21630	19386	17501	15801	14263
NEW	4201	3294	3445	3710	3589	3480	3582	3293
=====								
(4) OTHER EXPENSE								
TOTAL OPERATING COST	100484	109439	118602	128467	139425	149862	157809	167223
NET OPERATING INCOME	-14281	-10399	-6059	-1031	5174	9157	15115	21768
INTEREST	94831	94831	94831	94831	94831	94831	94831	94831
SPECIAL ITEMS								
NET INCOME BEFORE TAX	-101112	-102250	-100490	-95754	-80657	-65074	-70716	-73643
INCOME TAX								
NET INCOME AFTER INT. & TAX	-101112	-102250	-100490	-95754	-80657	-65074	-70716	-73643

P R O F O R M A I N C O M P S T A T E M E N T

(YEAR) 9 10

NET INCOME AFTER INT. & TAX (100RS) 185117 203276
 TOTAL REVENUE

****COST****

(1) VARIABLE COST
 BILLET (SO) 1504
 REQUIREMENT (TON) 1180
 UNIT PRICE (RS) 601
 VALUE (100RS) 7517 8061
 BILLET (AL) 641
 REQUIREMENT (TON) 260
 UNIT PRICE (RS) 8250
 VALUE (100RS) 1982 2167
 BAR (SP) 2720
 REQUIREMENT (TON) 2410
 UNIT PRICE (RS) 7062
 VALUE (100RS) 17314 19205
 BAR (AL) 4280
 REQUIREMENT (TON) 3890
 UNIT PRICE (RS) 9258
 VALUE (100RS) 39624 4280
 VARIABLE COST (TON) 9866
 BAR (SUP) 7376
 REQUIREMENT (TON) 7376
 UNIT PRICE (RS) 74049
 VALUE (100RS) 9315 9315

(2) OPERATING LABOUR (FC)

(3) DEPRECIATION (FC)
 OLD 11060
 NEW 3165
 (4) OTHER EXPENSE (FC) 2000 2000
 TOTAL OPERATING COST (100RS) 13253 16188
 NET OPERATING INCOME (100RS) 27544 34388
 INTEREST (100RS) 9687 9687
 SPECIAL ITEMS (100RS)
 NET INCOME BEFORE TAX (100RS) -8727 -60443
 INCOME TAX (100RS) -8727
 NET INCOME AFTER INT. & TAX (100RS) -8727 -60443

YEAR	INVESTMENT	NET OPERATING INCOME	SPECIAL ITEMS	INCOME TAX AT 100% EQUITY	DEPRECIATION	SALVAGE VALUE	RECLAIMED WORKING CAPITAL	NET CASH INFLOW	DISCOUNT FACTOR	PRESENT VALUE OF NET CASH INFLOW
0	366167	0	0	0	0	0	0	-366167	1.00000	-366167
1	9000	-16241	0	0	31403	0	0	8522	1.01591	8522
2	9000	-10399	0	0	49074	0	0	10273	1.03207	10005
3	7000	-6059	0	0	47667	0	0	14588	1.06849	15295
4	0	503	0	0	43790	0	0	24087	1.06317	26296
5	0	5174	0	0	22475	0	0	28149	1.08212	30467
6	0	9157	0	0	40487	0	0	30138	1.09934	33132
7	0	13175	0	0	19183	0	0	34298	1.11683	36305
8	0	21186	0	0	17520	0	0	58744	1.13460	45939
9	0	27544	0	0	16101	0	0	43083	1.15265	50354
10	0	56582	0	0	14743	0	44000	93171	1.17099	109103
										TOTAL=

INTERNAL RATE OF RETURN = 12.500 %

VALUES RECEIVED

(YEAR)	0	1	2	3	4	5	6	7	8
(1) BILLET (SC)									
RATE OF OPERATION									
--LOCALLY--									
QUANTITY		350	610	470	800	730	800	970	1070
UNIT PRICE		6742	6183	6183	6183	6183	6183	6183	6183
REVENUE		3401	3772	4143	4946	4514	4946	5998	6676
(2) BILLET (CAL)									
RATE OF OPERATION									
--LOCALLY--									
QUANTITY		110	120	130	170	150	170	190	210
UNIT PRICE		9171	9171	9171	9171	9171	9171	9171	9171
REVENUE		1009	1101	1192	1559	1374	1559	1742	1926
(3) BILLET (SC)									
RATE OF OPERATION									
--LOCALLY--									
QUANTITY		1150	1270	1400	1690	1540	1690	2050	2260
UNIT PRICE		6406	8208	8208	8208	8208	8208	8208	8208
REVENUE		7430	10424	11491	13872	12640	13872	16826	18550
(4) BILLET (CAL)									
RATE OF OPERATION									
--LOCALLY--									
QUANTITY		1916	2000	2200	2670	2420	2670	3220	3550
UNIT PRICE		10663	10663	10663	10663	10663	10663	10663	10663
REVENUE		20442	21226	23399	28394	25754	28394	34279	37664
(5) BILLET (SUP)									
RATE OF OPERATION									
--LOCALLY--									
QUANTITY		4100	4600	5040	6120	5640	6120	7410	8150
UNIT PRICE		8856	8856	8856	8856	8856	8856	8856	8856
REVENUE		36276	40752	44616	54192	49824	54192	65523	72176
REVENUE FROM PRODUCT		70524	77761	85536	103580	96057	103580	125168	137832
REVENUE (LOCAL)									
REVENUE (EXPORT)		70524	77761	85536	103580	96057	103580	125168	137832
TOTAL REVENUE		70524	77761	85536	103580	96057	103580	125168	137832

S A L E S R E V E N U E

(YEAR) 0 10

(1) BILLET (SC)
RATE OF OPERATION

--LOCALLY--
(QUANTITY) 1120 1500
(UNIT PRICE) 6123 4183
(REVENUE) 7296 6284

(2) BILLET (AL)
RATE OF OPERATION

--LOCALLY--
(QUANTITY) 260 460
(UNIT PRICE) 9171 9171
(REVENUE) 2201 2394

(3) BAR (CSC)
RATE OF OPERATION

--LOCALLY--
(QUANTITY) 2480 4720
(UNIT PRICE) 8208 4208
(REVENUE) 20526 22528

(4) BAR (AL)
RATE OF OPERATION

--LOCALLY--
(QUANTITY) 3890 6480
(UNIT PRICE) 10863 7063
(REVENUE) 42237 46494

(5) BAR (CSP)
RATE OF OPERATION

--LOCALLY--
(QUANTITY) 8900 9600
(UNIT PRICE) 8856 8856
(REVENUE) 79320 87320

REVENUE FROM PRODUCT

151440 160362

REVENUE (LOCAL)

151440 160362

REVENUE (BYPASS)

151440 160362

TOTAL REVENUE

151440 160362

FOUR YEAR PROJECTIONS OF REVENUE AND INCOME STATEMENT									
	(YEAR)	1	2	3	4	5	6	7	8
*****REVENUE*****									
TOTAL REVENUE	(C)	70324	77761	85336	94037	103580	113742	125168	137832
*****COST*****									
(1) VARIABLE COST									
REQUIRMENT	(C)	350	610	670	734	800	890	970	1070
UNIT PRICE	(RS)	6201	6201	6201	6201	6201	6201	6201	6201
VALUE	(100RS)	3411	3783	4155	4527	4961	5519	6015	6635
BILLET (AL)									
REQUIRMENT	(C)	110	120	130	130	170	180	190	210
UNIT PRICE	(RS)	6434	8234	8234	8234	8234	8234	8234	8234
VALUE	(100RS)	908	991	1074	1074	1404	1487	1569	1734
BARREL (CSP)									
REQUIRMENT	(C)	1150	1270	1400	1440	1690	1800	2050	2260
UNIT PRICE	(RS)	7062	7062	7062	7062	7062	7062	7062	7062
VALUE	(100RS)	8121	8969	9887	10274	11933	13133	14477	15960
BARREL (AL)									
REQUIRMENT	(C)	1670	2000	2200	2420	2470	2020	3220	3530
UNIT PRICE	(RS)	4434	4234	4234	4234	4234	4234	4234	4234
VALUE	(100RS)	10752	18516	20368	22404	24719	27033	29811	32866
VARIABLE COST									
BARREL (CSP)	(C)	4340	4600	5040	5260	6120	6730	7410	8150
REQUIRMENT	(C)	7310	7310	7310	7310	7310	7310	7310	7310
UNIT PRICE	(RS)	31392	34346	38001	41734	45961	50342	55649	61207
VALUE	(100RS)	6046	6960	7470	7470	7470	9165	9165	9315
(2) OPERATING LAOUR (FC)									
(3) DEPRECIATION (FC)									
OLD	(C)	20443	20380	23802	21480	19386	17501	15801	14263
NEW	(C)	2500	3244	3645	3710	3589	3480	3382	3293
(4) OTHER EXPENSE (FC)									
	(C)	4000	2000	2000	2000	2000	2000	2000	2000
TOTAL OPERATING COST									
NET OPERATING INCOME	(C)	100442	105439	110602	113451	121423	129864	137869	147273
IMPACT	(C)	-24433	-27678	-25066	-27604	-17843	-10120	-12701	-9441
SPECIAL ITEMS	(C)	94831	94831	94831	94831	94831	94831	94831	94831
NET INCOME BEFORE TAX	(C)	-124784	-172309	-119897	-116233	-112676	-110931	-107532	-104272
INCOME TAX	(C)								
NET INCOME AFTER INT. N. TAX	(C)	-124784	-172309	-119897	-116233	-112676	-110931	-107532	-104272

P R O F O R M A I N C O M E S T A T E M E N T

(YEAR) 9 10

NET INCOME AFTER INT. & TAX (100RS) 15140 160562
 TOTAL REVENUE (100RS)

*****COST*****

(1) VARIABLE COST				
BILLET (SC)	(1TON)	1180		1300
REQUIREMENT	RS)	6201		6201
UNIT PRICE	(100RS)	7317		6061
VALUE				
BILLET (AL)	(1TON)	240		440
REQUIREMENT	RS)	8259		6259
UNIT PRICE	(100RS)	1982		4147
VALUE				
BAR (SC)	(1TON)	2400		4720
REQUIREMENT	RS)	7062		7062
UNIT PRICE	(100RS)	17314		19209
VALUE				
BAR (AL)	(1TON)	3890		4280
REQUIREMENT	RS)	9238		9238
UNIT PRICE	(100RS)	36014		39624
VALUE				
VARIABLE COST				
BAR (SUM)	(1TON)	8960		9800
REQUIREMENT	RS)	7310		7310
UNIT PRICE	(100RS)	67200		74046
VALUE		9315		9315
(2) OPERATING LABOUR (FC)				
(3) DEPRECIATION (FC)				
OLD	(100RS)	12846		11641
NEW	(100RS)	3215		3165
(4) OTHER EXPENSE (FC)				
TOTAL OPERATING COST	(100RS)	2000		2000
NET OPERATING INCOME	(100RS)	15733		16018
INTEREST	(100RS)	-6073		-6026
SPECIAL ITEMS	(100RS)	9631		9431
NET INCOME BEFORE TAX	(100RS)	-100904		-97457
INCOME TAX	(100RS)			
NET INCOME AFTER INT. & TAX	(100RS)	-100904		-97457

INTERNAL RATE OF RETURN (FINANCIAL)										(UNIT=	10000)
YEAR	INVESTMENT	NET OPERATING INCOME	SPECIAL ITEMS	INCOME TAX AT 100% EQUITY	DEPRECIATION	SALVAGE VALUE	RECLAIMED WORKING CAPITAL	NET CASH INFLOW	DISCOUNT FACTOR	PRESENT VALUE OF NET CASH INFLOW	
0	366167	0	0	0	0	0	0	-366167	1.00000	-366167	
1	2000	-20953	0	0	31805	0	0	-7150	1.17042	-8369	
2	9000	-27078	0	0	29674	0	0	-7004	1.36990	-9595	
3	7000	-25066	0	0	27647	0	0	-4419	1.60337	-7083	
4	0	-21404	0	0	25790	0	0	3786	1.87663	7103	
5	0	-17845	0	0	22972	0	0	5130	2.19646	11268	
6	0	-16120	0	0	20987	0	0	4961	2.57080	12497	
7	0	-12701	0	0	19185	0	0	6482	3.00894	19504	
8	0	-9441	0	0	17356	0	0	8115	3.52176	28579	
9	0	-6073	0	0	16101	0	0	10028	4.12197	47335	
10	0	-2626	0	0	14783	0	44000	36157	4.82447	270928	
										TOTAL=0	

INTERNAL RATE OF RETURN = 14.761%

Table 6-10

	XXXXX	XXX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
XXXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
XXXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
XXXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
XXXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
XXXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

10% Increase of Variable Cost
Debt Equity Ratio (96 : 4)

SALES REVENUE

(YEAR)	0	1	2	3	4	5	6	7	8
(1) BILLET (CS)									
RATE OF OPERATION									
LOCALITY									
QUANTITY		350	670	670	800	890	970	1070	1070
UNIT PRICE		6870	6870	6870	6870	6870	6870	6870	6870
REVENUE		3779	4791	4603	5496	6114	6664	7351	7351
(2) BILLET (AL)									
RATE OF OPERATION									
LOCALITY									
QUANTITY		110	120	130	170	180	190	210	210
UNIT PRICE		10190	10190	10190	10190	10190	10190	10190	10190
REVENUE		1121	1223	1325	1732	1834	1936	2140	2140
(3) BARRIL (CS)									
RATE OF OPERATION									
LOCALITY									
QUANTITY		1150	1270	1400	1690	1860	2030	2260	2260
UNIT PRICE		1120	9120	9120	9120	9120	9120	9120	9120
REVENUE		10488	11582	12768	15413	16963	18696	20611	20611
(4) BARRIL (AL)									
RATE OF OPERATION									
LOCALITY									
QUANTITY		1610	2000	2200	2670	2920	3220	3550	3550
UNIT PRICE		12070	12070	12070	12070	12070	12070	12070	12070
REVENUE		27647	24140	26554	32227	35244	38865	42849	42849
(5) BARRIL (CSUR)									
RATE OF OPERATION									
LOCALITY									
QUANTITY		4780	6000	5040	6120	6730	7410	8150	8150
UNIT PRICE		4840	4840	4840	4840	4840	4840	4840	4840
REVENUE		47131	45264	40790	60221	66223	72914	80196	80196
REVENUE FROM PRODUCT		78566	86400	95040	115089	126378	139075	153147	153147
REVENUE (LOCAL)		78566	86400	95040	115089	126378	139075	153147	153147
REVENUE (EXPORT)									
TOTAL REVENUE		78566	86400	95040	115089	126378	139075	153147	153147

S A L E S R E V E N U E

(YEAR)	9	10
(1) WILEY (SC)		
RATE OF OPERATION		
=LOCALLY=		
QUANTITY	1780	1300
UNIT PRICE	6870	6870
REVENUE	8107	8951
(2) WILEY (AL)		
RATE OF OPERATION		
=LOCALLY=		
QUANTITY	260	260
UNIT PRICE	10170	10190
REVENUE	2446	2649
(3) BAR (SC)		
RATE OF OPERATION		
=LOCALLY=		
QUANTITY	2430	2720
UNIT PRICE	9120	9120
REVENUE	22078	24800
(4) BAR (AL)		
RATE OF OPERATION		
=LOCALLY=		
QUANTITY	3890	4280
UNIT PRICE	12070	12370
REVENUE	46952	51660
(5) BAR (CSUP)		
RATE OF OPERATION		
=LOCALLY=		
QUANTITY	8960	9680
UNIT PRICE	9660	9660
REVENUE	86166	97022
REVENUE FROM PRODUCT	164439	183068
REVENUE (LOCAL)	164439	183068
REVENUE (EXPORT)		
TOTAL REVENUE	164439	183068

REPORT FOR MONTHLY INCOME STATEMENT

(YEAR) 1 2 3 4 5 6 7 8

REVENUE
 78000 86000 95000 104500 115080 126378 139075 153747

COSTS
 1000RS 2000RS 3000RS 4000RS 5000RS 6000RS 7000RS 8000RS

1000RS 2000RS 3000RS 4000RS 5000RS 6000RS 7000RS 8000RS

1000RS 2000RS 3000RS 4000RS 5000RS 6000RS 7000RS 8000RS

1000RS 2000RS 3000RS 4000RS 5000RS 6000RS 7000RS 8000RS

1000RS 2000RS 3000RS 4000RS 5000RS 6000RS 7000RS 8000RS

1000RS 2000RS 3000RS 4000RS 5000RS 6000RS 7000RS 8000RS

1000RS 2000RS 3000RS 4000RS 5000RS 6000RS 7000RS 8000RS

1000RS 2000RS 3000RS 4000RS 5000RS 6000RS 7000RS 8000RS

1000RS 2000RS 3000RS 4000RS 5000RS 6000RS 7000RS 8000RS

1000RS 2000RS 3000RS 4000RS 5000RS 6000RS 7000RS 8000RS

1000RS 2000RS 3000RS 4000RS 5000RS 6000RS 7000RS 8000RS

P R O F O R M A I N C O M E S T A T E M E N T

(YEAR) 9 10

NET INCOME AFTER INT. & TAX (100PRS) 168249 185008
 TOTAL REVENUE

*****COST*****

(1) VARIABLE COST

BILLET (5C)	(1TON)	1180	1500
REQUIREMENT	(RS)	6821	8821
UNIT PRICE	(100PRS)	8049	8867
VALUE			
BILLET (A1)	(1TON)	240	461
REQUIREMENT	(RS)	9045	9085
UNIT PRICE	(100PRS)	2180	4562
VALUE			
BAR (5C)	(1TON)	240	470
REQUIREMENT	(RS)	7768	7768
UNIT PRICE	(100PRS)	19265	21129
VALUE			
BAR (A1)	(1TON)	380	428
REQUIREMENT	(RS)	10192	10186
UNIT PRICE	(100PRS)	39016	43385
VALUE			
VARIABLE COST			
BAR (5C)	(1TON)	890	960
REQUIREMENT	(RS)	8261	8261
UNIT PRICE	(100PRS)	74019	81453
VALUE			
OPERATING LABOUR (FC)	(100PRS)	9315	9315
VALUE			

(2) DEPRECIATION (FC)

OLD	(100PRS)	12886	11640
NEW	(100PRS)	3215	3145
VALUE			

(3) OTHER EXPENSE (FC)

TOTAL OPERATING COST	(100PRS)	170245	183497
NET OPERATING INCOME	(100PRS)	-2256	11771
INTEREST	(100PRS)	94859	94859
SPECIAL ITEMS	(100PRS)		
NET INCOME BEFORE TAX	(100PRS)	-97087	-93260
INCOME TAX	(100PRS)	-97087	-93260
NET INCOME AFTER INT. & TAX	(100PRS)	168249	185008

INTERNAL RATE OF RETURN (FINANCIAL) (UNIT: 1000RS)

YEAR	INVESTMENT	NET OPERATING INCOME	SPECIAL ITEMS	INCOME TAX AT 100% RISK ADJUSTMENT	DEPRECIATION	SALVAGE VALUE	RECLAIMED WORKING CAPITAL	NET CASH INFLOW	DISCOUNT FACTOR	PRESENT VALUE OF NET CASH INFLOW
0	366167	0	0	0	0	0	0	-366167	1.00000	-366167
1	0	-28175	0	0	31803	0	0	-5372	1.14680	-6150
2	0	-25719	0	0	29674	0	0	-5045	1.31056	-6612
3	7000	-23909	0	0	27647	0	0	-2262	1.50033	-3394
4	0	-19033	0	0	25700	0	0	6157	1.71758	10575
5	0	-15235	0	0	23973	0	0	7762	1.96629	15223
6	0	-13256	0	0	22471	0	0	7725	2.25101	17389
7	0	-9545	0	0	19183	0	0	9638	2.57696	24837
8	0	-5966	0	0	15550	0	0	11590	2.95011	34192
9	0	-2250	0	0	11701	0	0	13643	3.37728	40750
10	0	1571	0	0	7473	0	46000	60354	3.86632	233545
										TOTAL=0

INTERNAL RATE OF RETURN = 12.564%

SALES REVENUE

(YEAR)	0	1	2	3	4	5	6	7	8
(1) BILLET (CS)									
RATE OF OPERATION									
LOCALITY									
QUANTITY	550	610	670	730	800	890	970	1070	
UNIT PRICE	6870	6870	6870	6870	6870	6870	6870	6870	
REVENUE	3770	4197	4603	5015	5496	6114	6664	7337	
(2) BILLET (CAL)									
RATE OF OPERATION									
LOCALITY									
QUANTITY	1190	120	130	150	170	180	190	210	
UNIT PRICE	10190	10190	10190	10190	10190	10190	10190	10190	
REVENUE	1223	1223	1325	1520	1732	1834	1936	2140	
(3) BARRAGE (CS)									
RATE OF OPERATION									
LOCALITY									
QUANTITY	1130	1270	1400	1560	1690	1860	2050	2260	
UNIT PRICE	6120	6120	6120	6120	6120	6120	6120	6120	
REVENUE	10687	11582	12768	14045	15413	16963	18696	20677	
(4) BARRAGE (CAL)									
RATE OF OPERATION									
LOCALITY									
QUANTITY	1810	2006	2200	2420	2670	2920	3220	3550	
UNIT PRICE	14071	12070	12070	12070	12070	12070	12070	12070	
REVENUE	25447	24140	26554	29200	32227	35244	38865	42849	
(5) BARRAGE (CSUB)									
RATE OF OPERATION									
LOCALITY									
QUANTITY	4740	4600	5060	5560	6120	6730	7410	8150	
UNIT PRICE	4841	4840	4840	4840	4840	4840	4840	4840	
REVENUE	22940	22264	24490	26870	29520	32478	35864	39616	
REVENUE FROM PRODUCT	78306	86400	93040	104508	115089	126378	139073	153147	
REVENUE (LOCAL)									
REVENUE (EXPORT)									
TOTAL REVENUE	78306	86400	93040	104508	115089	126378	139073	153147	

S A L E S R E V E N U E

(YEAR) 9 10

(1) MILLET (SC)
 RATE OF OPERATION
 *LOCALLY**
 QUANTITY 1120 1300
 UNIT PRICE RS) 8670 8070
 REVENUE RS) 8107 8931
 (2) BILLET (AL)
 RATE OF OPERATION
 *LOCALLY**
 QUANTITY 400 441
 UNIT PRICE RS) 10740 10740
 REVENUE RS) 2440 2069
 (3) BAR (SC)
 RATE OF OPERATION
 *LOCALLY**
 QUANTITY 2420 2720
 UNIT PRICE RS) 9120 9120
 REVENUE RS) 22078 24908
 (4) BAR (CAL)
 RATE OF OPERATION
 *LOCALLY**
 QUANTITY 3890 4240
 UNIT PRICE RS) 12070 12070
 REVENUE RS) 46952 51160
 (5) BAR (SUP)
 RATE OF OPERATION
 *LOCALLY**
 QUANTITY 8900 9040
 UNIT PRICE RS) 9840 9840
 REVENUE RS) 88100 97022
 REVENUE FROM PRODUCT 148269 162068
 REVENUE (LOCAL) 148269 162068
 REVENUE (EXPORT)
 TOTAL REVENUE 148269 162068

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
FORMULA IN COMPARE STATEMENT								
	(YEAR)	(YEAR)	(YEAR)	(YEAR)	(YEAR)	(YEAR)	(YEAR)	(YEAR)
	(100MS)	(100MS)	(100MS)	(100MS)	(100MS)	(100MS)	(100MS)	(100MS)
TOTAL REVENUE	7436	8660	9504	10450	11508	12637	13907	15317
=====								
(1) VARIABLE COST								
BUYER (SC)	350	610	670	730	800	890	970	1070
REQUIREMENT	3281	3281	3281	3281	3281	3281	3281	3281
UNIT PRICE	3070	3404	3230	4074	4685	5581	5581	5581
VALUE								
BULLET (AL)	110	120	130	150	170	190	190	210
REQUIREMENT	7433	7433	7433	7433	7433	7433	7433	7433
UNIT PRICE	878	892	906	1119	1264	1338	1412	1561
VALUE								
BULLET (SC)	1130	1270	1400	1540	1690	1860	2050	2260
REQUIREMENT	6326	6326	6326	6326	6326	6326	6326	6326
UNIT PRICE	7504	8072	8598	9784	10742	11822	13030	14365
VALUE								
BULLET (AL)	1610	2000	2200	2420	2670	2920	3220	3550
REQUIREMENT	6332	6332	6332	6332	6332	6332	6332	6332
UNIT PRICE	15047	16664	18330	20764	22246	24320	26820	29570
VALUE								
VARIABLE COST								
BULLET (SUM)	4180	6600	5060	5560	6120	6730	7470	8150
REQUIREMENT	6750	6750	6750	6750	6750	6750	6750	6750
UNIT PRICE	2853	31091	34201	37590	41363	45488	50084	55086
VALUE	6090	6090	7470	7470	7470	9165	9165	9375
(2) OPERATING LABOUR (FC)								
(3) DEPRECIATION (FC)								
OLD	29423	26360	23402	21450	19386	17501	15801	14263
NEW	2560	3204	3843	3710	3589	3480	3382	3295
(4) OTHER EXPENSE (FC)								
TOTAL OPERATING COST	4000	2000	2000	2000	2000	2000	2000	2000
NET OPERATING INCOME	9424	9873	10323	10780	11232	12090	12717	13434
INVESTMENT	-10058	-12337	-14211	-2472	2562	6288	11958	17713
SPECIAL ITEMS	94831	94831	94831	94831	94831	94831	94831	94831
NET INCOME BEFORE TAX	-11065	-10716	-10304	-9770	-9226	-8543	-8273	-7718
INCOME TAX								
NET INCOME AFTER INT. & TAX	-11065	-10716	-10304	-9770	-9226	-8543	-8273	-7718

P R O F O R M A T I N C O M P S T A T E M E N T

	(YEAR)	9	10
NET INCOME AFTER INT. & TAX	(	168229	183048
TOTAL REVENUE	(
*****COST*****			
(1) VARIABLE COST			
BILLET (ISC)	(	1180	1500
REQUIREMENT	(	5581	5581
UNIT PRICE	(	6586	7433
VALUE	(
BILLET (AL)	(	460	460
REQUIREMENT	(	7433	7433
UNIT PRICE	(	1764	1933
VALUE	(
BAR (ISC)	(	2440	4720
REQUIREMENT	(	6536	6536
UNIT PRICE	(	15783	17284
VALUE	(
BAR (AL)	(	3890	4286
REQUIREMENT	(	8332	8332
UNIT PRICE	(	3241	35667
VALUE	(
VARIABLE COST	(
BAR (CSUP)	(	8960	9866
REQUIREMENT	(	8738	8738
UNIT PRICE	(	60361	66644
VALUE	(	9315	9315
(2) OPERATING LABOUR (FC)	(
(3) DEPRECIATION (FC)	(
OLD	(	12884	11640
NEW	(	3215	3743
(4) OTHER EXPENSE (FC)	(	2660	4000
TOTAL OPERATING COST	(	164371	156879
NET OPERATING INCOME	(	23748	50124
INTEREST	(	94841	94831
SPECIAL ITEMS	(
NET INCOME BEFORE TAX	(	-71063	-60642
INCOME TAX	(	-71063	-66642
NET INCOME AFTER INT. & TAX	(

INTERNAL RATE OF RETURN (FINANCIAL)

< UNIT = 100RS >

YEAR	INVESTMENT	NET OPERATING INCOME	SPECIAL ITEMS	INCOME TAX AT 100% EQUITY	DEPRECIATION	SALVAGE VALUE	RECLAIMED WORKING CAPITAL	NET CASH INFLOW	DISCOUNT FACTOR	PRESENT VALUE OF NET CASH INFLOW
0	366167	0	0	0	0	0	0	-366167	1.00000	-366167
1	4000	-1405A	0	0	51405	0	0	6745	1.02813	6935
2	9000	-12337	0	0	49674	0	0	8377	1.03703	8792
3	7000	-8211	0	0	27647	0	0	12436	1.08678	13515
4	0	-2872	0	0	45190	0	0	24318	1.11730	24937
5	0	2562	0	0	29675	0	0	23337	1.14879	29337
6	0	6288	0	0	40981	0	0	37269	1.18110	32208
7	0	11958	0	0	19183	0	0	31141	1.21433	37816
8	0	17713	0	0	17350	0	0	33269	1.24849	44033
9	0	23768	0	0	16101	0	0	30869	1.28361	51176
10	0	30189	0	0	14785	0	44000	28972	1.31972	117470
										TOTAL=0

INTERNAL RATE OF RETURN = 2.750 %

S A L E S R E V E N U E

	0	1	2	3	4	5	6	7	8
(1) BILLET (SC)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		350	470	670	730	800	890	970	1070
UNIT PRICE		6070	6870	6870	6870	6870	6870	6870	6870
REVENUE		2125	3239	4603	5014	5496	6114	6664	7351
(2) BILLET (CAL)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		1190	120	130	150	170	180	190	210
UNIT PRICE		10190	10190	10190	10190	10190	10190	10190	10190
REVENUE		12121	1223	1325	1520	1732	1834	1936	2140
(3) BILLET (SC)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		1150	1270	1400	1540	1690	1860	2050	2260
UNIT PRICE		9120	9120	9120	9120	9120	9120	9120	9120
REVENUE		10488	11582	12768	14048	15413	16963	18696	20611
(4) BILLET (CAL)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		2000	2070	2200	2420	2670	2920	3220	3550
UNIT PRICE		12070	12070	12070	12070	12070	12070	12070	12070
REVENUE		24140	24954	26554	29226	32227	35264	38865	42869
(5) BILLET (SUP)									
RATE OF OPERATION									
LOCALLY									
QUANTITY		4140	4600	5060	5540	6120	6730	7470	8130
UNIT PRICE		4131	4264	4264	4264	4264	4264	4264	4264
REVENUE		73060	86400	95040	104508	115089	126378	139075	153167
REVENUE FROM PRODUCT									
REVENUE (LOCAL)									
REVENUE (EXPORT)									
TOTAL REVENUE									

S A L E S R E V E N U E

(YEAR) 9 10

(1) BILLET (SC)					
RATE OF OPERATION					
==LOCALLY==					
QUANTITY	1140	1300			
UNIT PRICE	6870	6670			
REVENUE	8117	8931			
(2) BILLET (AL)					
RATE OF OPERATION					
==LOCALLY==					
QUANTITY	260	200			
UNIT PRICE	10190	11700			
REVENUE	2646	2340			
(3) BAR (SC)					
RATE OF OPERATION					
==LOCALLY==					
QUANTITY	240	270			
UNIT PRICE	9720	9120			
REVENUE	2328	2460			
(4) BAR (AL)					
RATE OF OPERATION					
==LOCALLY==					
QUANTITY	360	420			
UNIT PRICE	12070	12070			
REVENUE	4345	5069			
(5) BAR (SUP)					
RATE OF OPERATION					
==LOCALLY==					
QUANTITY	690	660			
UNIT PRICE	9840	9440			
REVENUE	6789	6236			
REVENUE FROM PRODUCT	16829	18506			
REVENUE (LOCAL)	16829	18506			
REVENUE (EXPORT)					
TOTAL REVENUE	16829	18506			

P R O F O R M A I N C O M E S T A T E M E N T

	1	2	3	4	5	6	7	8
(YEAR)								
REVENUE	78366	86400	95040	104504	115089	126378	139075	153147
TOTAL REVENUE								
COST								
(1) VARIABLE COST								
BILLET (SC)	350	670	670	730	800	890	970	1070
REQUIREMENT	4961	4961	4961	4961	4961	4961	4961	4961
UNIT PRICE	2720	3026	3324	3622	3969	4475	4812	5308
VALUE								
BILLET (AI)	110	120	130	150	170	180	190	210
REQUIREMENT	6007	6607	6607	6607	6607	6607	6607	6607
UNIT PRICE	727	793	859	894	1123	1189	1255	1387
VALUE								
BAR (SC)	1156	1270	1400	1540	1690	1860	2050	2260
REQUIREMENT	5650	5650	5650	5650	5650	5650	5650	5650
UNIT PRICE	6494	7176	7910	8704	9549	10509	11583	12769
VALUE								
BAR (AI)	1810	2000	2200	2420	2670	2920	3220	3550
REQUIREMENT	7406	7406	7406	7406	7406	7406	7406	7406
UNIT PRICE	13403	14812	16293	17623	19774	21626	23847	26291
VALUE								
VARIABLE COST								
BAR (SUM)	4340	4600	5000	5560	6120	6730	7470	8150
REQUIREMENT	6008	6008	6008	6008	6008	6008	6008	6008
UNIT PRICE	25113	27637	30400	33606	36769	40434	44319	48963
VALUE								
OPERATING LABOUR (FC)	6000	6960	7470	7470	7470	9165	9165	9375
(2) OPERATING LABOUR (FC)								
DEPRECIATION (FC)								
OLD	29423	26380	23402	21480	19386	17501	15801	14263
NEW	4560	3294	3645	3710	3589	3480	3382	3293
(3) DEPRECIATION (FC)								
OTHER EXPENSE (FC)								
TOTAL OPERATING COST								
NET OPERATING INCOME	86563	92078	93903	99407	103629	110319	118304	125391
INTREST	-4999	-5678	-663	5207	11480	10059	22711	29356
SPECIAL ITEMS	94831	94831	94831	94831	94831	94831	94831	94831
INCOME TAX	-104630	-110509	-94694	-89424	-83371	-78772	-74120	-69275
NET INCOME AFTER INT. & TAX	-104630	-100509	-95694	-89424	-83371	-78772	-74120	-69275

P R O F O R M A I N C O M E S T A T E M E N T

(YEAR) 9 10

NET INCOME AFTER INT. & TAX (100RS) 18829 18908
 TOTAL REVENUE (100RS) 18829 18908

COST

(1) VARIABLE COST			
BILLET (SF)	(TON)	1180	1500
REQUIREMENT	RS	6941	4761
UNIT PRICE	(100RS)	5856	6460
VALUE			
BILLET (AL)	(TON)	240	440
REQUIREMENT	RS	6607	6607
UNIT PRICE	(100RS)	1586	1714
VALUE			
BAR (SF)	(TON)	2430	2720
REQUIREMENT	RS	5650	5650
UNIT PRICE	(100RS)	14012	12568
VALUE			
BAR (AL)	(TON)	3800	4280
REQUIREMENT	RS	7406	7406
UNIT PRICE	(100RS)	28809	31698
VALUE			
VARIABLE COST			
BAR (SUM)	(TON)	8960	9460
REQUIREMENT	RS	6008	6008
UNIT PRICE	(100RS)	53852	59234
VALUE		4935	4935
(2) OPERATING LABOUR (FC)			

(3) DEPRECIATION (FC)			
OLD	(100RS)	12886	11640
NEW	(100RS)	3715	3715
(4) OTHER EXPENSE (FC)			
	(100RS)	2000	4000

TOTAL OPERATING COST	(100RS)	151509	140370
NET OPERATING INCOME	(100RS)	36790	44498
INTEREST	(100RS)	44831	94831
SPECIAL ITEMS	(100RS)		
NET INCOME BEFORE TAX	(100RS)	-54051	-50335
INCOME TAX	(100RS)		
NET INCOME AFTER INT. & TAX	(100RS)	-54051	-50335

INTERNAL RATE OF RETURN (FINANCIAL)										(UNIT= 1000\$)
YEAR	INVESTMENT	NET OPERATING INCOME	SPECIAL ITEMS	INCOME TAX AT 100% EQUITY	DEPRECIATION	REPAIRS	RECLAIMING WORKING CAPITAL	NET CASH INFLOW	DISCOUNT FACTOR	PRESENT VALUE OF NET CASH INFLOW
0	366167	0	0	0	0	0	0	-366167	1.00000	-366167
1	9000	-9999	0	0	97803	0	0	12804	0.98944	12669
2	9000	-5678	0	0	29874	0	0	14990	0.97899	14681
3	7000	-863	0	0	27647	0	0	19784	0.96865	19164
4	0	5207	0	0	25190	0	0	30397	0.95842	29133
5	0	11360	0	0	22475	0	0	34435	0.94830	32653
6	0	16059	0	0	20481	0	0	37040	0.93829	34754
7	0	22711	0	0	19183	0	0	41894	0.92838	38894
8	0	29556	0	0	17536	0	0	47112	0.91857	43276
9	0	36780	0	0	16101	0	0	52881	0.90887	48062
10	0	44408	0	0	14763	0	44000	103261	0.89928	92879
										TOTAL=0

INTERNAL RATE OF RETURN = 10.66% X

SALES REVENUE

(YEAR)	0	1	2	3	4	5	6	7	8
(1) BILLET (CSC)									
RATE OF OPERATION									
LOCALITY									
QUANTITY		520	610	670	730	800	890	970	1070
UNIT PRICE		6870	6870	6870	6870	6870	6870	6870	6870
REVENUE		3576	4197	4603	5014	5496	6114	6664	7351
(2) BILLET (CAL)									
RATE OF OPERATION									
LOCALITY									
QUANTITY		120	120	130	150	170	180	190	210
UNIT PRICE		10190	10190	10190	10190	10190	10190	10190	10190
REVENUE		1223	1223	1325	1527	1732	1834	1936	2140
(3) BILLET (CSC)									
RATE OF OPERATION									
LOCALITY									
QUANTITY		1150	1270	1400	1540	1690	1860	2030	2260
UNIT PRICE		9120	9120	9120	9120	9120	9120	9120	9120
REVENUE		10488	11582	12768	14045	15413	16965	18696	20611
(4) BILLET (CAL)									
RATE OF OPERATION									
LOCALITY									
QUANTITY		2000	2000	2200	2420	2670	2920	3220	3550
UNIT PRICE		12070	12070	12070	12070	12070	12070	12070	12070
REVENUE		24140	24140	26556	29209	32227	35244	38865	42849
(5) BILLET (CSC)									
RATE OF OPERATION									
LOCALITY									
QUANTITY		4740	4600	5040	5560	6120	6730	7410	8130
UNIT PRICE		9840	9840	9840	9840	9840	9840	9840	9840
REVENUE		47131	45264	49700	54710	60221	66223	72914	80196
REVENUE FROM PRODUCT		78360	80400	95040	104504	115089	126378	139075	153147
REVENUE (LOCAL)		78360	80400	95040	104504	115089	126378	139075	153147
REVENUE (EXPORT)									
TOTAL REVENUE		78360	80400	95040	104504	115089	126378	139075	153147

S A L E S R E V E N U E

	(YEAR)	9	10
(1) BILLET (SC)			
RATL OF OPERATION			
=LOCALLY=			
QUANTITY	(TON)	1150	1500
UNIT PRICE	(RS)	6870	6670
REVENUE	(100MRS)	8107	8931
(2) RILLET (CAL)			
RATL OF OPERATION			
=LOCALLY=			
QUANTITY	(TON)	240	260
UNIT PRICE	(RS)	10190	10150
REVENUE	(100MRS)	2440	2640
(3) BAR (SC)			
RATL OF OPERATION			
=LOCALLY=			
QUANTITY	(TON)	2480	2720
UNIT PRICE	(RS)	9120	9120
REVENUE	(100MRS)	22678	24806
(4) BAR (CAL)			
RATL OF OPERATION			
=LOCALLY=			
QUANTITY	(TON)	3690	4450
UNIT PRICE	(RS)	12070	14070
REVENUE	(100MRS)	44552	57000
(5) BAR (SUP)			
RATL OF OPERATION			
=LOCALLY=			
QUANTITY	(TON)	8900	9600
UNIT PRICE	(RS)	9860	9860
REVENUE	(100MRS)	88166	97022
REVENUE FROM PRODUCT	(100MRS)	168289	185006
REVENUE (LOCAL)	(100MRS)	168469	185006
REVENUE (EXPORT)	(100MRS)		
TOTAL REVENUE	(100MRS)	168489	185006

FORMER INCORPORATED STATEMENT

(YEAR) 0 1 2 3 4 5 6 7 8

REVENUE

TOTAL REVENUE	78366	86400	95040	104508	115089	126378	139075	153147
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(1) VARIABLE COST

BILLET (500)	170	120	130	150	170	180	190	210
REQUIREMENT	8459	8259	8259	8259	8259	8259	8259	8259
UNIT PRICE	991	991	1074	1237	1404	1487	1569	1734
VALUE	8459	8259	8259	8259	8259	8259	8259	8259
MARKET (500)	1150	1270	1400	1540	1690	1860	2030	2260
REQUIREMENT	7062	7062	7062	7062	7062	7062	7062	7062
UNIT PRICE	8121	8969	9887	10874	11935	13135	14477	15960
VALUE	7062	7062	7062	7062	7062	7062	7062	7062

(2) OPERATING LABOUR (FC)

REQUIREMENT	1910	2000	2200	2420	2670	2920	3220	3550
UNIT PRICE	4258	4258	4258	4258	4258	4258	4258	4258
VALUE	10757	18516	20368	22404	24719	27033	29811	32866
REQUIREMENT	4726	4600	5060	5560	6120	6730	7410	8150
UNIT PRICE	31904	34346	38001	41734	45961	50342	55649	61207
VALUE	6000	6960	7470	7470	7470	9165	9165	9315

(3) DEPRECIATION (FC)

OLD	2077	18743	16911	15262	13774	12434	11227	10134
NEW	4960	5244	5845	5710	5589	5480	5382	5293

(4) OTHER EXPENSE (FC)

OTHER EXPENSE	4000	4000	2000	2000	2000	2000	2000	2000
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TOTAL OPERATING COSTS

TOTAL OPERATING COSTS	94076	97802	103717	109745	115815	124795	133293	143144
NET OPERATING INCOME	-15030	-11402	-8677	-4737	-724	1583	5780	10003

NET INCOME BEFORE TAX

NET INCOME BEFORE TAX	94831	94831	94831	94831	94831	94831	94831	94831
SPECIAL ITEMS	-108681	-106233	-103502	-99366	-95555	-93248	-89051	-84828
INCOME TAX	-102461	-106233	-103502	-99366	-95555	-93248	-89051	-84828
NET INCOME AFTER INT. & TAX	-102461	-106233	-103502	-99366	-95555	-93248	-89051	-84828

P R C P C M M A I N C O R P S T A T E M E N T

(YEAR) 9 10

NET INCOME AFTER INT. & TAX (100RS) 108290 185068

COSTS

(1) VARIABLE COST			
BILLET (SC)	(1TON)	1300	1300
REQUIREMENT	(RS)	6201	6201
UNIT PRICE	(100RS)	7317	8061
VALUE			
BILLET (AL)	(1TON)	450	450
REQUIREMENT	(RS)	859	859
UNIT PRICE	(100RS)	1992	2167
VALUE			
WAR (CSP)	(1TON)	2480	2720
REQUIREMENT	(RS)	7052	7062
UNIT PRICE	(100RS)	17514	19209
VALUE			
BAR (AL)	(1TON)	1890	4280
REQUIREMENT	(RS)	9258	9258
UNIT PRICE	(100RS)	36014	39826
VALUE			
VARIABLE COST			
DAN (SUP)	(1TON)	8948	9660
REQUIREMENT	(RS)	7510	7510
UNIT PRICE	(100RS)	67290	74049
VALUE			
(2) OPERATING LABOUR (FC)	(100RS)	9315	9315
(3) DEPRECIATION (FC)	(100RS)	9156	8270
OLD	(100RS)	3215	3745
NEW			
(4) OTHER EXPENSE (FC)	(100RS)	2000	2000
TOTAL OPERATING COST	(100RS)	153803	169618
NET OPERATING INCOME	(100RS)	14486	15450
INTEREST	(100RS)	94837	94837
SPECIAL ITEMS	(100RS)		
NET INCOME BEFORE TAX	(100RS)	-80345	-75281
INCOME TAX	(100RS)		
NET INCOME AFTER INT. & TAX	(100RS)	-80345	-75281

YEAR	INVESTMENT	NET OPERATING INCOME	SPECIAL ITEMS	INCOME TAX AT 30%	DEPRECIATION	SALVAGE VALUE	RECLAIMED WORKING CAPITAL	NET CASH INFLOW	DISCOUNT FACTOR	PRESENT VALUE OF NET CASH INFLOW
0	27705	0	0	0	0	0	0	-27705	1.00000	-27705
1	9000	-1350	0	0	4337	0	0	687	1.04731	715
2	9000	-11402	0	0	4237	0	0	1655	1.08434	1773
3	7000	-8077	0	0	20750	0	0	3085	1.12914	5742
4	0	-6735	0	0	18072	0	0	14237	1.17580	10740
5	0	-724	0	0	17363	0	0	10659	1.22438	20373
6	0	1283	0	0	15974	0	0	17697	1.27497	22508
7	0	5740	0	0	14009	0	0	20380	1.32765	27070
8	0	10005	0	0	13627	0	0	23450	1.38250	32392
9	0	14486	0	0	12571	0	0	26857	1.43903	38664
10	0	19250	0	0	11673	0	6600	27663	1.49979	117028
										TOTAL=0

INTERNAL RATE OF RETURN = 13.067 %

6.3.1 Pro Forma Income Statement

The Pro Forma Income Statement for the rehabilitation plan is included in Table 6-8-1. This Pro Forma Income Statement is based on the existing financial situation of SSP (debt equity ratio 96:4) and shows huge deficits annually from the 1st to the 10th year of the rehabilitation plan.

Moreover, even if the debt equity ratio is improved to 30:70 as proposed by SSP, losses would still be sustained from the 1st to the 10th year of the rehabilitation plan as indicated in the Pro Forma Income Statement of Table 6-8-2.

6.3.2 Cash Flow

The cash flow in the rehabilitation plan is as shown in Table 6-8.1. Namely, a substantial insufficiency of cash is certain each year in SSP's cash balance. In addition, even if the debt equity ratio is improved to 30:70, a shortage of cash continues every year with the exception of the 10 year.

6.3.3 Internal Rate of Return (IRR)

The internal rate of return of this rehabilitation plan is -7.174% .

The negative aspect of IRR means that the total capital investment is larger than the total sum of the net cash inflow for the period from the 1st to the 10th year of the rehabilitation plan, or that the invested capital steadily diminishes without the capital ever being recovered entirely.

Sensitivity analysis of IRR was conducted with respect to the following three cases:

- (1) When the selling prices in the rehabilitation plan are increased by 10% (Table 6-9) or decreased by 10% (Table 6-10).
- (2) When the variable costs in the rehabilitation plan are increased by 10% (Table 6-11) or decreased by 10% (Table 6-12), and when the import duties are entirely lifted, meaning the variable costs are decreased by 20% (Table 6-13).

- (3) When the present book value of tangible fixed asset of Rs. 305,567,000 is confined with the additional investment of Rs. 60,600,000. That is when the investment in the zeroth year is Rs. 366,167,000. Fig. 6-3 also indicates where the present book value of tangible fixed asset has been reduced by that of the production facilities of stainless steel plates and sheets, forgings and castings. These facilities have been regarded, in this case, that they would be removed from commission. This is to mean that the investment in the zeroth year is deemed at Rs. 277,705,000.

The changes brought about in IRR were studied for this case.

Fig. 6-1. IRR vs. Selling Price

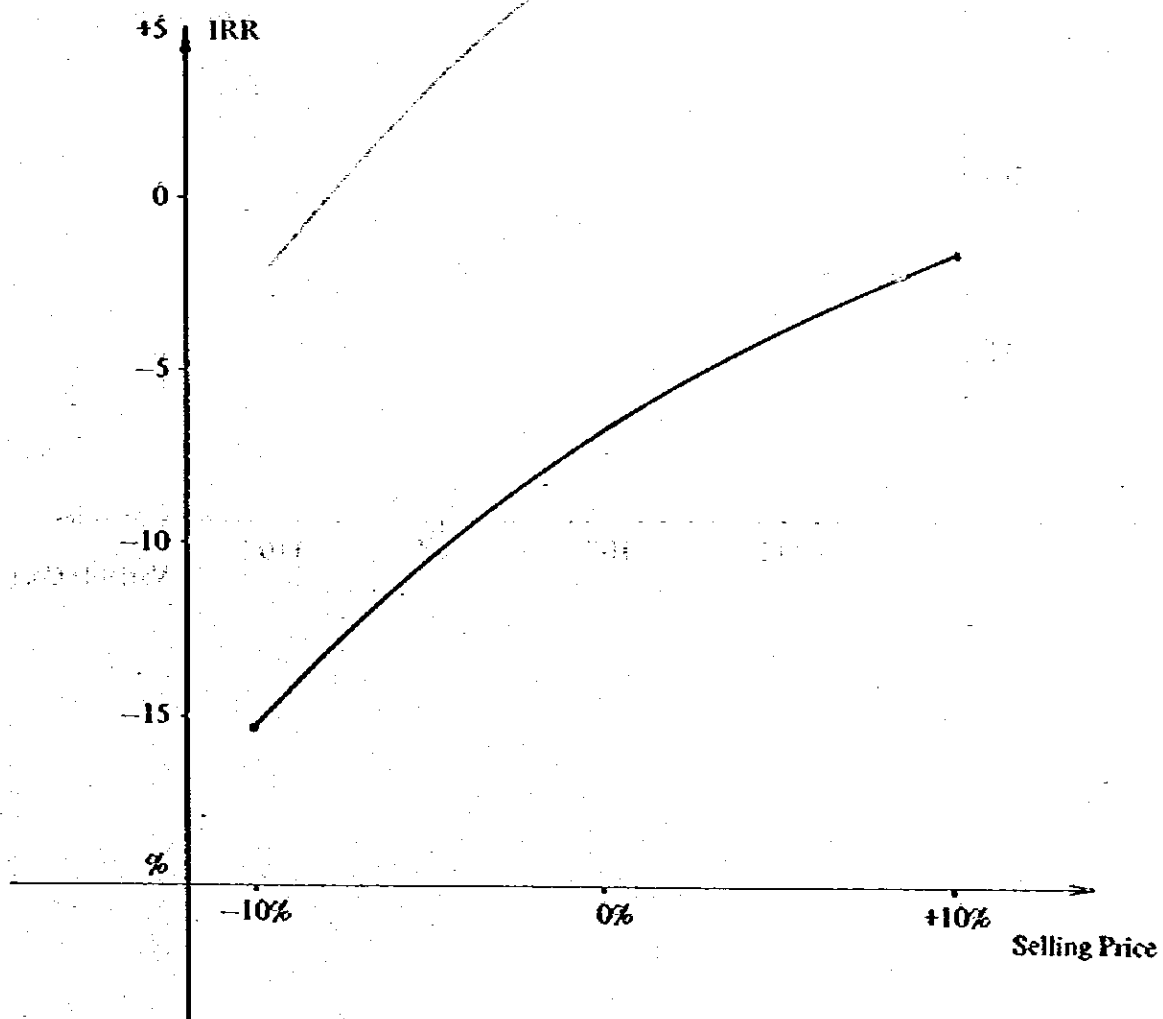


Fig. 6-2. IRR vs. Variable Cost (Raw Material, Utilities, etc.)

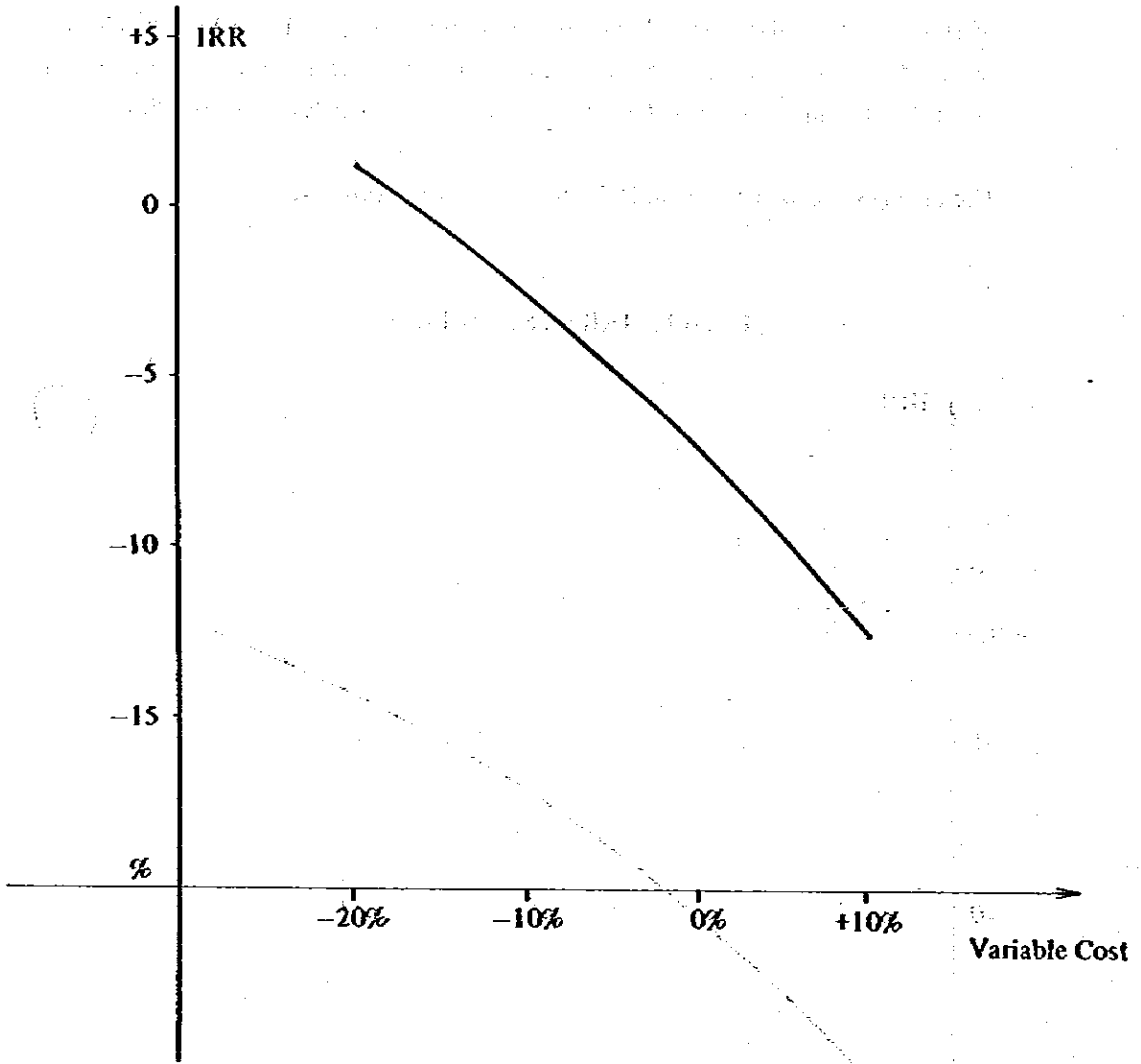
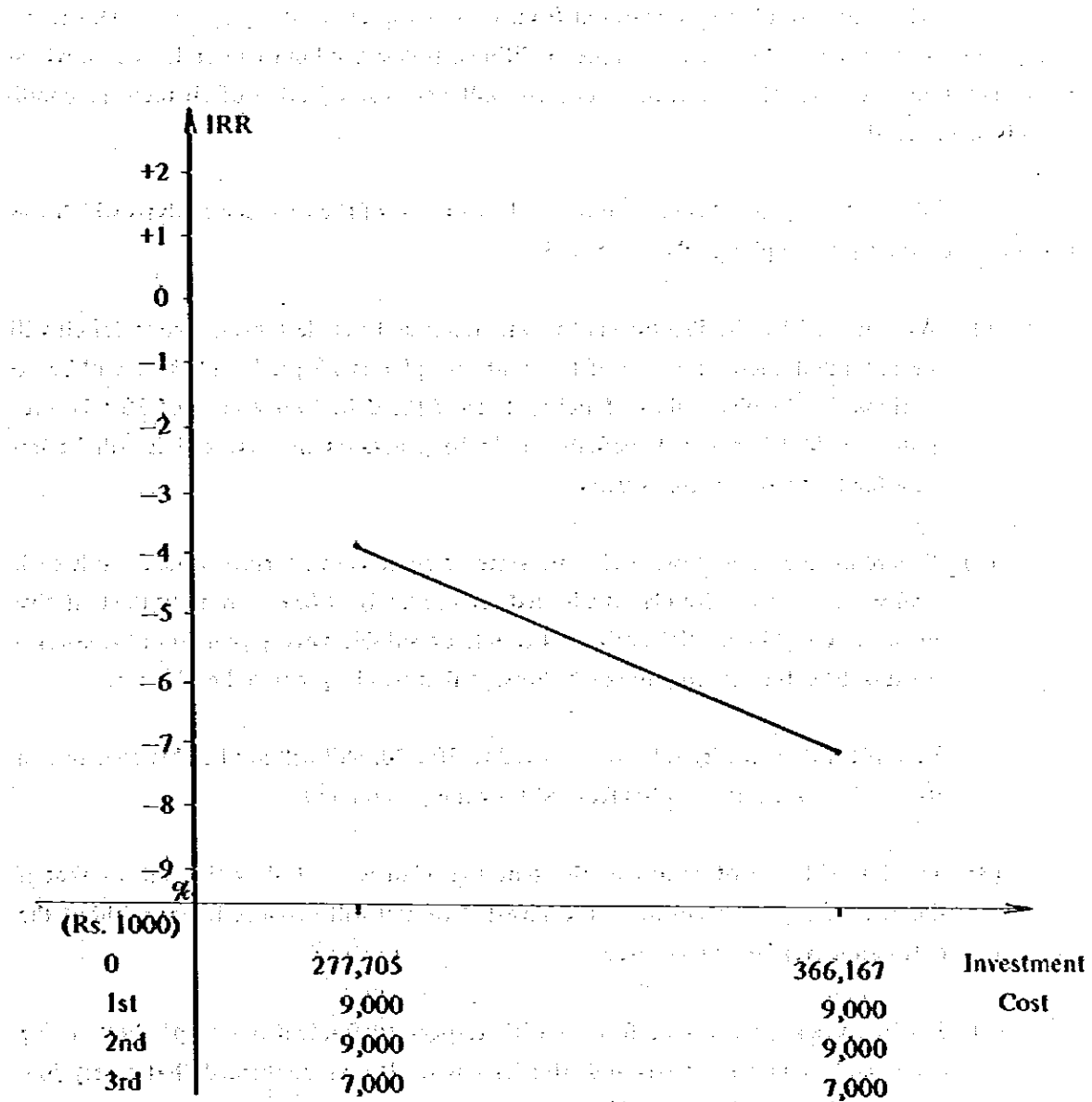


Fig. 6-3. IRR vs. Investment Cost



6.4 Assessment of Results of Analysis

The tentative plan was analyzed from various aspects in Paragraph 6.3. This tentative plan is essentially based on numerous preconditions, as described in Chapter 4, each of which is not satisfied so easily. Moreover, in practice, simultaneous satisfaction of all these preconditions is inconceivable.

The following conclusions are reached as a result of the financial analysis which was performed on the tentative plan in Paragraph 6.3:

- (1) As indicated by the Pro Forma Income Statement (Table 6-8-1), a huge deficit will be generated each year even if this tentative plan is adopted, and there will be no outlook for dissolving these deficits. Even if the debt equity ratio of 30 : 70 proposed by SSP is realized, deficits would be generated likewise and it will be impossible to dissolve these deficits.
- (2) Regarding the cash flow, a chronic state of acute cash shortage would result each year when the tentative plan is adopted. Accordingly, if SSP carries out the tentative plan, there will be no alternative but to rely on subsidies every year from the government or SEC for covering the cash shortage that will be generated each year.

Even if the debt equity ratio is improved to 30 : 70, SSP will not be able to maintain its viability without subsidies from SEC or the government.
- (3) The internal rate of return of the tentative plan is -7.174 , which means that if the tentative plan is adopted, the invested capital will produce ullage without the entire sum ever being recovered.
- (4) Sensitivity analysis was performed with respect to fluctuations in product selling prices and in raw materials and utilities costs. It was confirmed that a very low IRR would be obtained even if these factors are improved to some extent.
- (5) From the results of the above financial analysis it has become clear that the tentative plan will make it impossible for SSP to conduct its corporate management.

CHAPTER 7.
EVALUATION OF TENTATIVE PLAN FROM STANDPOINT
OF GOVERNMENT AND SEC

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DEPARTMENT OF CHEMISTRY
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CHAPTER 7. EVALUATION OF TENTATIVE PLAN FROM STANDPOINT OF GOVERNMENT AND SEC

In Chapter 6, financial analysis of the tentative plan was performed from the standpoint of SSP. In this chapter, the tentative plan is studied from the standpoint of the government and SEC.

7.1 Financial Aid for Coping with SSP's Cash Shortage

Since SSP carries an exceedingly huge deficit, a chronic condition of cash shortage will continue every year from the 1st to the 10th year if this tentative plan is enforced, as indicated by the cash inflow shown in Table 6-8-1. Accordingly, in order to maintain SSP's viability, it will be indispensable for the government or SEC to grant financial aid in the form of subsidies to meet this cash shortage.

Table 7-1 shows the amount of subsidies which the government or SEC would be required to disburse each year, the present values of annual subsidies as of the zeroth year and the total (net) present values of annual subsidies, for the case when the debt equity ratio of SSP remains at 96 : 4.

Since the opportunity cost of capital in Pakistan is estimated at roughly 10% as observed from the prevailing commercial interest rate, a discount rate of 10% was adopted for calculating the present values. As is evident from Table 7-1, the total amount of subsidies which the government or SEC would be required to disburse during the period from the 1st to 10th year will be Rs.766,190,000. In the case of the discount rate of 10% the total present value of subsidy as of the zeroth year would run up to an enormous sum of Rs.481,426,000.

If the debt equity ratio is changed to 30 : 70 as proposed by SSP, and even if it would be assumed that creditors agree to convert a part of their credits into SSP investment capital, relationship among the annual subsidies to be disbursed by the government or SEC in order to meet SSP's cash shortage, the present value of the annual subsidies in the zeroth year and the total of their present values will be shown as Table 7-1.

The total amount of subsidies from the first year to the tenth year would be Rs.115,139,000 and the total amount of the present value of subsidies as of the zeroth year would be Rs.81,420,000.

As described above, an enormous sum of subsidies would have to be disbursed by the government or SEC if the plan for rehabilitation of SSP is enforced, so the plan requires the most serious scrutiny.

Table 7-1. Subsidy from Government or SEC

Unit: Rs.1,000

Year	Subsidy ^{*1} (A)	Subsidy ^{*2} (B)	Discount Rate 10% (C)	Present Value (A) x (C)	Present Value (B) x (C)
0			1.000		
1	85,144	20,039	0.909	77,396	18,215
2	84,196	19,091	0.826	69,546	15,769
3	82,746	17,641	0.751	62,142	13,248
4	80,594	15,489	0.683	55,049	10,580
5	78,192	13,087	0.621	48,557	8,127
6	77,335	12,229	0.564	43,617	6,897
7	74,442	9,337	0.513	38,189	4,790
8	71,401	6,296	0.467	33,344	2,940
9	67,974	2,869	0.424	28,821	1,216
10	64,166	-939	0.386	24,768	-362
Total	766,190	115,139	-	481,426	81,420

*1 Debt Equity Ratio 96 : 4

*2 Debt Equity Ratio 30 : 70

7.2 Examination of Existing Plant

SSP's existing plant is examined here on the assumption that SSP has no outstanding loans and therefore has no interests to pay.

By making a new capital investment of Rs.85,600,000, a total cash inflow of Rs.226,118,000 will be generated by the tentative plan during the period from the zeroth to 10th year.

Therefore, if the total net cash inflow for the period from the zeroth to 10th year is calculated from the new capital investment and cash inflow, it will be Rs.140,555,000.

Table 7-2 shows the relationship among new capital investment, cash inflow, net cash inflow and the present value of net cash inflow in the zeroth year.

Table 7-2. Net Present Value of Return from Existing Plant

Unit: Rs.1,000

Year	Investment	Cash Inflow	Net Cash Inflow	Discount Factor 10%	Present Value
0	60,600		-60,600	1.000	-60,600
1	9,000	9,687	687	0.909	624
2	9,000	10,635	1,635	0.826	1,351
3	7,000	12,085	5,085	0.751	3,819
4		14,235	14,235	0.683	9,748
5		16,639	16,639	0.621	10,339
6		17,496	17,496	0.564	9,868
7		20,389	20,389	0.513	10,460
8		23,480	23,480	0.467	10,942
9		26,857	26,857	0.424	11,387
10		74,665	74,665	0.386	28,820
Total	85,600	226,118	140,555	-	37,758

These calculations have shown that if the tentative plan is enforced and a discount rate of 10% is adopted, then the net present value of return generated by the existing plant would be Rs.37,758,000 in terms of the present value as of the zeroth year. Namely, it was confirmed that the existing plant would generate a value of Rs.37,758,000 in a period of ten years by enforcement of the tentative plan.

Accordingly, if the existing plant can be utilized for over Rs.37,758,000 as by selling off its machinery, equipment and other assets, such a plan may be regarded as being better than this tentative plan.

CHAPTER 8.
CONCLUSION

2 9 11 11 11
11 11 11 11 11

CHAPTER 8. CONCLUSION

In order to study the possibility of rehabilitating SSP, an optimum tentative plan was prepared to improve SSP's management. The production plan of this tentative plan includes manufacture of only special steel rolled products (excluding plates and sheets), and does not include manufacture of steel castings and forgings.

Financial analysis was performed to confirm whether SSP's corporate management can be maintained on the basis of this production plan. The results of the assessment may be summarized as follows, as described in Chapter 6 and Chapter 7;

- (1) A big deficit will be generated every year, and there will be no outlook for dissolving these deficits.
- (2) An acute shortage of cash will be faced every year.
- (3) The internal rate of return will assume a negative value, which means that the capital invested will produce ullage.

The reasons by which the above remarkable situation was brought about:

- (1) First of all, there is only a small total demand for special steels in Pakistan. With respect to this limited demand, only products of limited sizes can be manufactured with SSP's production facilities.

In Pakistan where the heavy industry, a major source of demand for special steels, has not been developed yet, and the transportation machinery manufacturing industry, the biggest consumer of special steels, has just started to develop, the economic circumstances had been unripe for the establishment of a special steel plant. The same can be said even today.

- (2) The transportation machinery industry is the biggest user of special steels in Pakistan, but the larger portion of parts as well as the raw materials for these parts are being imported. These parts and raw materials extend over a wide range of types and sizes, and the most rigid specifications are demanded. In this respect, the technical

level regarding iron and steel is still extremely low in Pakistan for producing these special steels.

- (3) **SSP's extremely high production cost of special steels is a major factor for its deficit management. The cost of raw materials (variable costs) assumes an overly large ratio of the production cost. The cost of raw materials in Pakistan is far higher than in industrially advanced countries, and will be too high even if import duties are excluded.**

The subject of rehabilitation of SSP requires serious study from the standpoint of the government of Pakistan for the following reasons:

If the tentative plan is enforced, the government will have to disburse a large subsidy each year to meet SSP's cash shortage.

Based on the detailed survey and analysis covering a wide range and also the considerations already described in preceding chapters, it has been concluded that the proper rehabilitation plan of SSP could not be unfortunately searched out.

APPENDIX

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in the context of public administration and financial management. The text highlights that records should be kept in a secure, accessible format and should be regularly updated to reflect the most current information.

2. The second part of the document outlines the various methods and tools used for data collection and analysis. It mentions the use of surveys, interviews, and focus groups to gather qualitative data, as well as the application of statistical software for quantitative analysis. The text stresses the need for rigorous methodology and the importance of validating the data to ensure its reliability and validity.

3. The third part of the document focuses on the ethical considerations surrounding data collection and analysis. It discusses the need to obtain informed consent from participants, to protect their privacy, and to use the data responsibly. The text also addresses the potential for bias and the importance of maintaining objectivity throughout the research process.

4. The fourth part of the document discusses the challenges of data management and storage. It highlights the need for secure storage solutions, the importance of data backup, and the need to ensure that data is accessible to those who need it. The text also mentions the importance of data security and the need to protect sensitive information from unauthorized access.

5. The fifth part of the document discusses the importance of data visualization and reporting. It mentions the use of charts, graphs, and tables to present data in a clear and concise manner. The text also discusses the importance of providing context and interpretation for the data, and the need to communicate findings effectively to a wide range of stakeholders.

6. The sixth part of the document discusses the future of data management and analysis. It mentions the growing importance of big data and the need for advanced analytics tools. The text also discusses the potential for artificial intelligence and machine learning to revolutionize data analysis and the need to stay up-to-date on the latest developments in the field.

APPENDIX I. MEMBERS OF MISSION

Mr. Yoshihiro Mitarashi	Project Manager Metallurgical Engineer Japan Consulting Institute
Mr. Mitsuo Nishi	Mechanical Engineer Daido Steel Co., Ltd.
Mr. Kuniyoshi Kazama	Mechanical Engineer Japan Consulting Institute
Mr. Taijo Sato	Techno-Economist Japan Consulting Institute
Mr. Hajime Inagaki	Metallurgical Engineer Daido Steel Co., Ltd.
Mr. Keiji Sasaki	Economist Daido Steel Co., Ltd.
Mr. Yasuji Noda	Economist Japan Consulting Institute
Mr. Hisatoshi Naito	Coordinator Japan International Cooperation Agency

APPENDIX 2. ITINERARY

- March 2 (Sun.)** Departed Tokyo.
- March 3 (Mon.)** Arrived in Karachi. Briefing at Japanese Consulate General. Itinerary adjusted at SSP head office.
- March 4 (Tue.)** Inspected SSP factory. Preliminary meeting with SEC. Discussed method of survey at SSP head office.
- March 5 (Wed.)** Inspected and surveyed demand at Allwin Eng., Pakistan Machine Tool Factory and Javedan Cement. Inspected SSP factory.
- March 6 (Thu.)** Inspected factory of Pakistan Steel Mills Corporation and surveyed the iron and steel situation. Surveyed demand at Siemens, Pakistan Tractors Corp.
- March 7 (Fri.)** Holiday. Arranged data.
- March 8 (Sat.)** Surveyed demand and production situation at Ahmed Investment, Quality Steels, and Hardware Mfg. Co.
- March 9 (Sun.)** Surveyed demand at Trailer Development Corp. and National Motors Ltd. Discussed S/W at SSP head office.
- March 10 (Mon.)** Signing of S/W at SSP head office. Received information from Karachi Branch Bank of Tokyo. Discussed data of Pakistan Automobile Corp.
- March 11 (Tue.)** Departed Karachi and arrived at Islamabad. Briefing at Japanese Embassy. Surveyed demand at Railway Carriage Factory.
- March 12 (Wed.)** Listened to Ministry of Production, Economic Affairs Division, Ministry of Commerce, and Ministry of Finance concerning the Pakistan Government's views of SSP.

March 13 (Thu.)	Surveyed demand at HRF/POF, Heavy Foundry & Forge, and Heavy Mechanical Complex.
March 14 (Fri.)	Holiday.
March 15 (Sat.)	Gathered information at Islamabad. Departed Islamabad and arrived in Lahore.
March 16 (Sun.)	Surveyed demand and production at PECO head office, Badami Bagh factory, and Kot Lakhpat factory.
March 17 (Mon.)	Surveyed demand at Steel Casting Ltd., Starlight Industry, and Babar Industry.
March 18 (Tue.)	Surveyed demand at Chandri Wire Rope Industry, KSB Pump, and Ashraf Engineering Co.
March 19 (Wed.)	Surveyed demand at Punjab Small Industries Center, Surgical Manufacturers & Exporters Association, F.M. Elahi, and HIRBRO.
March 20 (Thu.)	Surveyed demand and production at Pakistan Railway head office, its iron and steel plant and spring plant.
March 21 (Fri.)	Departed Lahore and arrived at Karachi.
March 22 (Sat.)	Gathered factory information at SSP head office.
March 23 (Sun.)	Holiday. Arranged information.
March 24 (Mon.)	Gathered answers to questionnaire of consumers. Prepared interim report.
March 25 (Tue.)	Interim report to SEC. Discussed contents of interim report.
March 26 (Wed.)	Translation of interim report completed. Received answer of questionnaire to SSP.

March 27 (Thu.) Interim report to consul general. Presented report. Presented interim report to SSP. Departed Karachi.

March 28 (Fri.) Arrived in Tokyo.

APPENDIX 3. FINANCIAL STATEMENTS

Ford, Rhodes, Robson, Morrow

Auditors' Report

We have examined the annexed Balance Sheet as at 30th June, 1950 and the annexed Profit and Loss Account for the year ended on that date together with the annexed notes which form part of the accounts of SPECIAL STEELS OF PAKISTAN LIMITED and subject to the various bases on which these Accounts have been prepared as explained in Note-1 and the contents of notes 5 (e) (iv), 10 (a) and (d), 11, 15, 16, and 26 and our disclaimer arising therefrom, we report that -

- (a) We have obtained all the information and explanations which we have required,
- (b) In our opinion, the annexed Balance Sheet and Profit and Loss Account are drawn up in conformity with the law,
- (c) Such Balance Sheet exhibits a true and correct view of the state of affairs of the Company according to the best of our information and the explanations given to us, and as shown by the books of the Company,
- (d) In our opinion, books of account have been kept by the Company for the year under report as required by the Companies Act, 1913.

Karachi -
30th January, 1950.

Ford, Rhodes, Robson, Morrow
Chartered Accountants.

SPECIAL STEELS OF PAKISTAN LIMITED

BALANCE SHEET AS AT 30TH JUNE, 1978

	Notes	1978 Rs.	1977 Rs.		Notes	1978 Rs.	1977 Rs.
SHARE CAPITAL	2	42,570,000	42,570,000	FIXED ASSETS -	11		
DEPOSITS FROM VALIKA GROUP	3	14,234,150	14,234,150	At cost less depreciation as per schedule attached		337,999,156	320,274,126
LONG TERM LOANS AND DEFERRED LIABILITIES				Capital work-in-progress (at cost)		11,897	11,897
Foreign currency loan	4	241,508,355	189,376,517			339,010,053	320,286,023
Interest and other charges		189,917,877	120,643,937	DEFERRED EXPENSES		4,893	4,893
		430,426,232	309,020,454	LONG TERM DEPOSITS		921,150	920,650
Debentures	5	56,617,000	56,517,000	CLAIMS RECEIVABLE	12	3,163,874	3,210,672
Bridge loan	6	2,500,000	2,500,000	CURRENT ASSETS -			
Consortium loan	7	35,610,000	28,710,000	Stores, spares and accessories	13	33,549,672	35,519,551
Deferred custom duty	8	7,590,265	7,590,265	Stocks	14	87,320,335	103,034,477
Provision for gratuity		3,685,400	3,011,950	Goods-in-transit, at cost		1,247,699	2,066,331
		536,428,897	407,454,519	Trade and sundry debtors	15	3,228,585	4,202,900
CURRENT LIABILITIES -				Advances, deposits and prepayments	16	1,647,109	6,363,152
Bank loans and overdrafts	9	190,233,256	150,874,028	Cash and bank balances	17	14,336,133	13,230,797
Temporary advance from State Heavy Engineering and Machine Tool Corporation Limited		5,377,793	4,328,648			141,389,632	165,503,003
Temporary loan		3,000,000	3,000,000	INTANGIBLE ASSETS	1(a)	31,599,999	31,599,999
Creditors provisions and accrued expenses	10	76,405,240	79,556,583	TRIAL PRODUCTION LOSS		59,744,595	59,744,595
Customers advances		13,274,418	11,826,899	PROFIT AND LOSS ACCOUNT - (ADVERSE BALANCE)		305,715,558	132,735,937
		288,316,707	249,688,158				
		Rs. 824,745,604	756,942,677			Rs. 881,609,754	714,005,827

Auditors' report dated 30th January, 1980 is annexed hereto.

These accounts should be read in conjunction with the annexed notes.

Karechi -
30th January, 1980.Ford, Rhodes, Robson, Morrow
Chartered Accountants

Managing Director.

SPECIAL STEELS OF PAKISTAN LIMITED

SCHEDULE OF FIXED ASSETS AS AT 30TH JUNE, 1978

	C O S T			D E P R E C I A T I O N			Written down value as at 30th June, 1978	Rate of Depreciation on written down value %
	As at 30th June, 1977	Additions during the year 77-78	Adjustments during the year	To 30th June, 1977	For the year	To 30th June, 1978		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Leasehold land	59,906	-	-	-	-	-	59,906	Nil
Internal roads	960,736	-	-	48,040	45,638	93,678	867,118	5
Factory buildings	29,801,094	239,220	-	1,490,055	1,427,513	2,917,568	27,122,746	5
Plant, machinery and equipment (see note 3 below)	319,610,887	53,426,855	-	31,961,089	34,107,666	66,068,755	306,968,997	10
Electric and gas installations	2,408,908	-	-	240,891	216,802	457,693	1,951,215	10
Electric equipment	114,635	665	-	31,171	8,433	39,604	75,896	10
Airconditioners	61,925	-	-	14,400	4,753	19,153	42,772	10
Furniture, fixtures & fittings	354,579	5,530	-	68,569	17,495	86,064	274,095	6
Office equipment	197,495	-	-	70,574	19,038	69,612	107,883	15
Workshop equipment and machinery	89,671	-	-	8,967	8,070	17,037	72,634	10
Permanent tools and moulds	49,020	-	-	4,902	4,412	9,314	39,706	10
Laboratory apparatus	12,240	-	-	3,730	846	4,626	7,614	10
Canteen utensils and equipment	39,649	357	-	6,654	3,335	9,989	30,617	10
Fire fighting equipment	84,354	-	-	29,662	5,469	35,131	49,223	10
Motor vehicles	683,043	-	-	368,448	74,919	383,367	299,676	20
Bicycles	666	-	-	459	40	509	157	20
Motorcycles	15,630	-	-	4,283	2,269	6,552	9,078	20
Other assets	29,811	-	-	8,229	2,159	10,388	19,423	10
	Rs. 354,574,309	53,572,837	-	34,300,183	35,918,857	70,249,040	327,998,155	
1977	Rs. 354,246,657	402,652	75,000	381,414	33,918,769	34,300,183	320,274,126	

1. Fixed assets are stated at cost less accumulated depreciation except leasehold land which is stated at cost.
2. Depreciation is provided at a fixed rate per annum on reducing balance method at the rates shown in the above schedule of fixed assets.
3. Addition to plant and machinery of Rs.53,426,855 represents increase in liability of foreign currency loan arising due to the change in exchange rates between Pakistan rupee and Japanese yen.
4. As referred to in the annexed Balance Sheet.

(Signature)
Managing Director,

Ford, Rhodes, Robson, Morrow

SPECIAL STEELS OF PAKISTAN LIMITED

**PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED
30TH JUNE, 1978**

	Notes	1978 Rs.	1977 Rs.
Turnover	18	31,773,918	24,884,315
Cost of goods sold	19	92,445,333	93,235,037
Gross loss		60,555,465	68,350,722
General and administration expenses	21	1,398,293	1,598,081
Selling and distribution expenses	22	459,311	642,190
		1,857,504	2,240,271
Operating loss		62,533,059	70,590,993
Other income	23	(117,863)	(28,654)
		62,415,206	70,562,339
Financial expenses	24	79,443,351	62,174,648
Increase in interst liability due to change in exchange rate		32,169,004	-
		111,623,355	62,174,648
Net loss for the year		124,038,571	132,735,937
Loss brought forward		132,735,937	-
Balance carried to Balance Sheet		Rs. 306,775,558	132,735,937

These accounts should be read in conjunction with the annexed notes.

[Signature]
Managing Director.

SPECIAL STEELS OF PAKISTAN LIMITED

NOTES TO THE ACCOUNTS FOR THE YEAR ENDED
30TH JUNE, 1976

1. BASES OF ACCOUNTING

(a) Intangible Assets:

Expenses incurred on the training of the Company's engineers in Japan amounting to Rs.2,532,995 and the start-up and trial production losses incurred during the year ended 30th June, 1975 amounting to Rs.29,067,004, have been capitalised as it is considered that the company would derive enduring benefit from such training and the experience gained during the trial production.

(b) Claims Receivable:

The realisability of certain claims and debtors referred to in notes 12 and 15 amounting to Rs.2,636,302 and Rs.1,222,075 respectively depends upon the outcome of the legal proceedings instituted, appeals preferred and other actions taken by the company. It is therefore not possible to express an opinion as to the outcome of such proceedings and the realisability of the above sums.

(c) Stores, Spares and Accessories:

Consumption

The following bases have been used to record consumption of stores, spares etc.

General stores and accessories - Closing stock as per statement prepared by the Company has been deducted from opening stock plus additions during the year and the resultant figure has been taken as consumed.

Spares - Twenty per cent of the value comprising opening stock and addition during the year has been treated as consumed.

Valuation

General stores and accessories - At estimated values.

Spares - At written down value after writing off twenty per cent thereof.

(d) Stocks:

(i) Valuations

Raw Materials	Average cost.
Returnable scrap carbon	Average cost of carbon steel scrap.
Stainless and alloy steel scrap	Estimated cost.
Work-in-Process	Selling price as adjusted by the stage of completion of the products.
Finished Goods	Estimated net realisable value.

(ii) The stocks include provision for customs duty and sales tax on the value of goods placed in customs bonded warehouse. During the current and previous years stocks and accessories in custom bonded warehouse were withdrawn on which customs duty should have been paid by the Company. The delay in payment is due to the acute financial difficulties being faced by the company.

The provision set up for customs duty and sales tax remains unadjusted and the liability as at the balance Sheet date remains undetermined.

(iii) It is felt that the cost of raw materials and finished goods are overstated in these accounts as they may not fetch the cost at which they have been valued. It is not possible to quantify the exact amount of such overstatement.

(iv) In the absence of information, the market value of raw materials could not be ascertained.

(v) The company does not undertake physical inventory of stocks due to the bulky nature of the same and the necessity of organising handling facilities on a large scale.

(vi) Reliance has been placed on estimates with regard to the quantity of returnable scrap, work-in-process and finished goods shown as closing stock in these accounts.

(vii) In subsequent years, the company's production has been low and not in accordance with the designed product mix and therefore consumption of high priced ferro alloys have been insignificant. However, these items have been retained at cost.

(viii) Included in the value of raw materials is high carbon ferro chrome amounting to Rs.4,580,636. In the accounts for the year ended 31st June, 1975 it was noted that a sampling test revealed the material to be of a different specification and of sub-standard quality. However, during the year under review high carbon ferro chrome amounting to Rs.384,656 has been shown as consumed in these accounts. Pending further investigation this material has been shown at cost.

(ix) The clearing charges included in the cost of the raw materials up to January, 1977 have been incorporated in these accounts on ad hoc basis and are yet to be reconciled and settled with the clearing agent. The Company appointed a new firm of clearing agents in December, 1976.

(x) Raw materials consumed as per store records and shown in the accounts do not agree with the consumption shown by heat sheet records. The heat sheet records show an excess consumption of Rs.3,925,535, which is not reflected in the accounts.

(e) fixed assets:

(i) As stated in the attached schedule of fixed assets, addition to plant and machinery of Rs.53,426,865 represents increase in liability

of foreign currency loan arising due to the change in exchange rate between Pakistan rupee and Japanese Yen.

(ii) The company does not maintain a register of fixed assets.

(iii) The company has not registered one bedford truck.

(f) Advances and deposits:

All the advances and deposits remain unconfirmed.

(g) Long term and other loans:

The following balances remain unconfirmed -

	Rs.
Foreign currency loan and interest thereon	430,425,232
Consortium loan	21,290,000
Bank loans and overdrafts	41,971,652

(h) Confirmation of creditors, debtors and customers advances:

It is not the practice of the Company to seek confirmation of balances with the above parties.

(i) Going Concern:

These accounts have been prepared on going concern basis although the workers were laid off in December, 1979 and other circumstances facing the Company.

2. SHARE CAPITAL

	<u>1978</u>	<u>1977</u>
	Rs.	Rs.
Authorized -		
10,000,000 Ordinary Shares of Rs.10/- each	100,000,000	100,000,000
Issued, Subscribed and Paid-up -		
4,257,000 Ordinary Shares of Rs.10/- each	42,570,000	42,570,000

The shares of the company are held by the following public sector Corporations:

	<u>No. of Shares</u>	<u>Amount</u>
		Rs.
State Heavy Engineering and Machine Tool Corporation Limited -		
Acquired by the federal Government from former shareholders	27,500	275,000
Fully paid in cash by the federal Government	4,100,000	41,000,000
Fully paid in cash by the Corporation	41,000	410,000
Carried forward	<u>4,169,500</u>	<u>41,695,000</u>

	No. of Shares	Amount Rs.
Brought forward	4,158,500	41,685,000
Pakistan Automobile Corporation Limited - fully paid in cash	40,500	405,000
Federal Light Engineering Corporation Limited - fully paid in cash	40,500	405,000
Acquired by the Federal Government from former shareholders pending transfer to State Heavy Engineering and Machine Tool Corporation Limited	7,500	75,000
	<u>4,257,000</u>	<u>42,570,000</u>

The company is a subsidiary of State Heavy Engineering and Machine Tool Corporation Limited.

3. DEPOSITS FOR SHARES FROM VALIKA GROUP

Deposits were made by the following companies of the Valika Group

	1978	1977
	Rs.	Rs.
Messrs. Valibhai Kazroddin	12,902,150	12,902,150
Messrs. Valibhai Kazroddin (Sind) Limited	400,000	400,000
Messrs. Valika Properties Limited	605,000	605,000
Messrs. Valika Investment Corporation	318,000	318,000
	<u>14,224,150</u>	<u>14,224,150</u>

(a) The above stated amounts were built up for preparation of the accounts at the time of take-over.

(b) It was decided by the Government on 28th May, 1979 that the Company should issue debentures to the Valika Group redeemable in fifteen years with a grace period of five years carrying interest at 1% above bank rate to satisfy the above debt. The Valika Group, on the other hand, is claiming interest on debentures with effect from 1972.

Later the Government constituted a high powered committee to go through all related issues of receivable/payable, compensation bonds and overdue income-tax in respect of the nationalised industries and to settle these with the ex-owners.

The committee in its meeting held on 2nd October, 1979 decided that the consent of the Controller of Capital Issues be sought in order to issue the debentures amounting to Rs. 14,24 lacs by the company in favour of the Valika Group.

4. FOREIGN CURRENCY LOAN

The salient features and terms of the above loan are given below

(a) The Government of Pakistan agreed in 1968 to finance the foreign currency cost of the project amounting to Japanese Yen 5,310,770,243 by

providing loans out of the fourth, fifth, eighth, ninth and tenth Yen credits from the Export Import Bank of Japan, Tokyo and twelve other private Japanese banks through the Government of Japan.

- (b) Although the Yen credits had been made available to the Company as early as December, 1968 and at regular intervals thereafter, the company entered into a formal agreement with the President of Pakistan in August, 1971, which Inter alia appointed PICIC as the agent of the President of Pakistan to administer and control the loan. However, according to PICIC, with effect from 1st July, 1976 it is not administering the yen credit.

- (c) The loan bears interest, special service charge and commitment charge as follows:

<u>Line of Credit</u>	<u>Rate</u>	<u>Due date of payment</u>
Fourth and fifth -		
Interest	7½ p.a.	First day of February and August each year on outstanding amount of loan.
Service charge	½ p.a.	- do -
Eighth, Ninth and Tenth -		
Interest	8½ p.a.	First day of February and August each year on outstanding amount of loan.
Service charge	½ p.a.	- do -
All Commitment charges	1½ p.a.	First day of February and August and November each year on the highest undisbursed amount during the preceding quarter.

The obligation for repayment of the principal amount of the loan, interest, special service and commitment charges thereon is to be computed and stated in Japanese Yen and converted into Pakistan currency at the official rate of exchange as determined by the State Bank of Pakistan, on the date of such repayment.

- (d) The loan is secured by:
- (i) a first legal mortgage on the company's present and future immovable properties wherever situated including all buildings, fixed plants, machinery and fixtures (including trade fixtures thereon);
 - (ii) a first mortgage by way of hypothecation in respect of all the machinery of the company both present and future;
 - (iii) a first floating charge on all the other assets of the company, both present and future, subject only to the hypothecation or charge on inventories and commercial goods, created in favour of the Company's bankers to secure short term indebtedness;

(iv) a personal guarantee executed jointly and severally by all the sponsoring directors of the company and the then managing agents undertaking to repay the loan and the exchange risk as if they were the principal debtors; provided that in case of the sponsoring directors, their liability shall be to the extent of their shareholding in the company's capital;

(v) Assignment by the company, by way of mortgage of the benefits of its contracts with the suppliers of plant and machinery.

(e) The loan has been sanctioned and utilized in the following amounts up to 30th June, 1978 -

Line of Credit	Sanctioned	Utilized	No. of Instalments	Payment schedule	
	J. Yen	J. Yen		First	Last
Fourth	574,765,400	574,765,400	26	Feb. 1, 1970	Aug. 1, 1982
Fifth	2,131,200,000	2,131,200,000	26	Aug. 1, 1971	Feb. 1, 1984
Eighth	653,400,000	653,400,000	26	Feb. 1, 1974	Aug. 1, 1986
Ninth	1,477,440,000	1,477,439,938	26	Feb. 1, 1975	Aug. 1, 1987
Tenth	481,963,843	481,948,870	35	Jan. 20, 1980	July 20, 1997
	<u>5,318,770,240</u>	<u>5,318,755,268</u>			
	Rs. 243,533,435	243,532,750	@	J. Yen 21.84 = Re 1/-	

(f) The movement in the above account is as under:

	1978	1977
	J. Yen	J. Yen
Balance brought forward	5,274,542,468	5,254,593,598
Disbursement during the year	-	19,948,870
	<u>5,274,542,468</u>	<u>5,274,542,468</u>
	Rs. 241,506,355	188,376,517
Converted at	JY 21.84 = Re. 1	JY 28 = Re. 1

(g) The position of over due instalments and those falling due for payment with a year of the date of these accounts is as under:

	1978		1977	
	J. Yen	Rs.	J. Yen	Rs.
Balance brought forward	1,731,128,950	79,264,146	1,359,055,130	49,537,583
Instalments which fell due during the year	<u>372,073,820</u>	<u>17,035,347</u>	<u>372,073,820</u>	<u>13,282,351</u>
Instalments Payable within one year	<u>2,103,202,770</u>	<u>96,300,493</u>	<u>1,731,128,950</u>	<u>61,820,034</u>
	<u>372,073,820</u>	<u>17,035,347</u>	<u>372,073,820</u>	<u>13,282,351</u>
	<u>2,475,276,590</u>	<u>113,335,840</u>	<u>2,103,202,770</u>	<u>75,102,385</u>
Converted at	J.Y. 21.84 = Re 1		J.Y. 28 = Re 1	

- (h) The details of interest and other charges due but remaining unpaid on the above loan are given below:

	1 9 7 8	1 9 7 7
	Rs.	Rs.
Interest	126,295,073	82,523,674
Service charges	3,139,245	2,412,123
Commitment charges	3,257,986	2,607,157
Penal interest	56,214,714	33,095,025
Others	10,858	10,858
	<u>Rs. 189,917,877</u>	<u>120,649,837</u>
	*****	*****

Penal interest has been provided in accordance with clauses g(ii) and g(iii) of section 3.06 of the Agreement with the President of Pakistan and PICIC at the rate of 2% per annum on delayed redemption of principal amount and at 11½% per annum on delayed payment of interest, service and commitment charges.

- (i) The overdue and current portion of instalments of foreign currency loan and outstanding interest and charges thereon amounting to Rs. 302,254,717 have not been included under current liabilities.

5. DEBENTURES

	1 9 7 8	1 9 7 7
	Rs.	Rs.
ICP Syndicate (See note (a) below)	24,710,000	24,710,000
State Life Insurance Corporation (See note (b) below)	10,000,000	10,000,000
National Development Finance Corporation (See note (c) below)	2,500,000	2,500,000
National Investment Trust (See note (d) below)	2,000,000	2,000,000
ICP Second Syndicate (See note (e) below)	17,407,000	17,407,000
	<u>Rs. 56,617,000</u>	<u>56,617,000</u>
	*****	*****

(a) Investment Corporation of Pakistan Syndicates

The Debentures:

- (i) have been issued to a syndicate headed by Investment Corporation of Pakistan, and includes nationalised banks.
- (ii) carry interest at:
 - 10½% per annum payable half yearly on 30th December and 31th June.
 - 12½% per annum on unpaid instalment of principal and interest from the due date of payment to actual date of payment.
- (iii) are redeemable at par in ten half yearly instalments commencing from 30th December, 1975.
- (iv) are secured by a Trust Deed executed between the company and Habib Executors and Trustees Company Limited creating -

- a first fixed mortgage on the company's present and future immoveable properties wherever situated including all titles and interest in land, building, fixed plant, machinery and equipment;
- a first floating charge on the company's undertaking and its present and future assets and property including uncalled capital.

(b) State Life Insurance Corporation of Pakistan

The Debentures:

(i) carry interest at:

2½ per annum above the bank rate payable half yearly on 30th June and 30th December,

4½ per annum above the bank rate on unpaid instalment of principal and interest from the due date of payment or actual date of payment.

(ii) are redeemable at par in ten equal half yearly instalments commencing from 30th June, 1976.

(iii) are secured by a guarantee issued by Government of Pakistan in favour of the lender, and a Trust Deed executed between the Company and Habib Executors and Trustee Company Limited creating -

- a first fixed mortgage on the company's present and future immoveable properties wherever situated including all titles and interest in land, building, fixed plant, machinery and equipment;
- a first floating charge on the Company's undertaking and all its present and future assets and property including uncalled capital.

(c) National Development Finance Corporation

The Debentures:

(i) carry interest at:

3½ per annum above the bank rate payable half yearly on 30th June and 30th December.

5½ per annum above the bank rate on unpaid instalment of principal and interest from the due date of payment to actual date of payment.

(ii) are redeemable at par in ten equal half yearly instalments commencing from 30th December, 1977.

(iii) are secured by a Trust Deed executed between the company and Habib Executors and Trustee Company Limited creating -

- a first fixed mortgage on the Company's present and future immoveable properties wherever situated including all titles and interest in land, building, fixed plant, machinery and equipment;
- a first floating charge on the company's undertaking and all its present and future assets and property including uncalled capital.

(d) National Investment Trust Limited:

The Debentures:

- (i) carry interest at:
 - 4½ per annum above the bank rate payable half yearly on 30th June and 30th December.
 - 6½ per annum above the bank rate on unpaid instalments of principal from the due date of payment to actual date of payment.
 - 4½ per annum above the bank rate on unpaid interest from the due date of payment to actual date of payment.
- (ii) are redeemable at par in ten equal half yearly instalments commencing from 1st April, 1978.
- (iii) are secured by a Trust Deed executed between the Company and Habib Executors and Trustee Company Limited creating -
 - a first fixed mortgage on the company's present and future immoveable properties including all titles and interest in land, building, fixed plant, machinery and equipment.
 - a first floating charge on the Company's undertaking and all its present and future assets and property including uncalled capital.

(e) Investment Corporation of Pakistan Second Syndicate:

- (i) The debentures have been subscribed by a syndicate comprising of various nationalised banks.
- (ii) The Controller of Capital Issues has accorded his consent to the issue of non-convertible debentures of Rs.17,407,000 carrying interest at 2½ above bank rate which is payable half yearly. Debentures are redeemable within a period of five years after a grace period of three years.
- (iii) Debenture allotment letters have been issued by the company to the various banks.
- (iv) The following formalities with regard to the above issue of debentures remain to be completed:
 - renewal of the consent order of the Controller of Capital Issues for issue of debentures as the original permission expired in April, 1976. The Company has applied to the Controller for the extension of the date.

- printing and issue of definitive debenture certificates duly secured by the guarantee of the President of Pakistan in exchange of allotment letters,
- execution of the Trust Deed.

(v) The company has not been able to complete the above formalities as it is facing acute financial difficulties.

(f) General

The above mortgages and charges created in favour of Investment Corporation of Pakistan Syndicate, State Life Insurance Corporation of Pakistan, National Development Finance Corporation and National Investment Trust Limited shall rank pari passu with the mortgages and charges created in favour of each of them and those created in favour of Pakistan Industrial Credit and Investment Corporation (PICIC) to secure foreign currency loan.

The following instalments of debentures loans overdue and due for repayment within one year of the date of these accounts have not been included in current liabilities as the Company intends to obtain a moratorium for such repayments;

	1978	1977
	Rs.	Rs.
Investment Corporation of Pakistan Syndicate	19,715,000	14,745,000
State Life Insurance Corporation of Pakistan	7,000,000	5,000,000
National Investment Trust	600,000	200,000
National Development Finance Corporation	1,000,000	500,000
	Rs. 28,315,000	20,445,000

6. BRIDGE LOAN

National Development Finance Corporation	2,500,000	2,500,000
--	-----------	-----------

National Development Finance Corporation has provided the above bridge loan towards their commitment of underwriting the public issue of shares of the company of Rs.2,500,000. The loan is secured by a credit agreement to create one or more mortgages, first floating charge and hypothecation on company's moveable and immovable properties, assets, book debts, business and undertaking. The loan bears interest at 4% p.a. above the bank rate with a minimum of 12% p.a. payable at quarterly rests.

7. CONSORTIUM LOAN

	1978	1977
	Rs.	Rs.
	35,610,000	28,710,000

The loans

- (i) has been granted to the Company by a consortium of five nationalised commercial banks.
- (ii) has been disbursed to the extent of the above amount out of a total commitment of Rs.49 million.
- (iii) carries interest at:
 - (a) 2½ per cent above the bank rate with a minimum of 12½ per cent annum payable half yearly on 30th June and 30th December.
 - (b) 2½ per cent in addition to interest mentioned in (a) above, on unpaid instalment of principal and interest from the due date of payment to actual date of payment.
- (iv) is repayable in ten equal half yearly instalments commencing from 30th June, 1978.
- (v) is guaranteed by a continuing guarantee furnished by the President of Pakistan for repayment of principal amount not exceeding the sum of Rs.49,000,000 and all interest thereon and other dues.
- (vi) The overdue instalment and those falling due for repayment within one year of the date of these accounts amount to Rs.10,553,000.

8. DEFERRED CUSTOMS DUTY

- (a) The Company has issued redeemable debentures to the Collector of Customs, Karachi towards deferred element of customs duty on imported machinery payable to Government of Pakistan.
- (b) These debentures rank pari passu with each other and are redeemable over the period from 19th August, 1974 to 5th December, 1979 and carry interest at 1½ per cent above the bank rate.
- (c) These debentures have been secured in pursuance of an undertaking of the company whereby no particular property is specifically charged by the company, but the company has agreed inter alia to maintain its existing property and assets in proper order.
- (d) The repayment position of debentures is as under:

Due 1977-78	7,455,024
Due within one year	135,241
	Rs. 7,590,265

The Company has furnished to the Collector of Customs a proposal for rescheduling of the entire deferred customs duty during the period from 1st January, 1979 to 1st January, 1984. The request is pending finalisation from the Collector of Customs. It is considered appropriate not to transfer the amount of Rs.7,590,265 to current liabilities.

9. BANK LOANS AND OVERDRAFTS

	1978	1977
	Rs.	Rs.
(a) Habib Bank Limited -		
(i) Loan secured by hypothecation of machinery and stock-in-trade	5,622,852	5,224,385
(ii) Loan secured by effective pledge of imported raw materials	137,957,935	104,651,738
(b) Allied Bank of Pakistan Limited -		
Overdraft secured by an agreement to create subsequent registered mortgage on property and machinery	4,680,031	4,140,790
(c) National Bank of Pakistan -		
Cash credit secured by hypothecation of machinery and stock-in-trade	5,723,765	4,951,228
(d) United Bank Limited -		
(i) Overdraft secured by an agreement to create second mortgage on plot of land, buildings, machinery and other equipment and spare parts, etc.	35,247,976	31,589,502
(ii) Overdrawn account	6,776	246,285
	Rs. 150,239,255	150,874,028

10. CREDITORS, PROVISION AND ACCRUED EXPENSES**Creditors -**Nissho Iwai Company Limited, Tokyo
(See (a) below) -Reshipment charges of cargo abandoned during December, 1971 war

887,238

692,045

Interest, warehousing and reconditioning charges on delayed shipments

944,263

644,429

Others

4,734

4,734

1,836,235

1,541,208

Interest payable (see note (b) below)

32,440,671

18,585,708

Unclaimed wages

52,503

58,971

Sales tax payable (see (d) below)

379,751

391,297

For expenses and supplies

17,409,554

13,645,261

Trustees of employees provident fund

1,246,800

739,421

53,365,524

35,415,865

Provisions -

War Risks Insurance Premium (see (a) below)

3,339,113

3,339,113

Workers' Children Education Cess (see (f) below)

547,000

452,600

Customs Duty and Sales Tax on Imported Raw Materials placed in the Customs' Bonded Warehouse at the Company's Premises (see (g) below)

18,843,338

22,462,622

Letter of credit expenses

65,518

18,171,812

22,795,959

44,426,147

Carried forward

76,161,493

79,442,013

Ap-23

	1978	1977
	Rs.	Rs.
Brought forward	76,161,493	79,442,013
Accrued Expenses -		
Interest on Deferred Customs Duty	214,385	199,770
Others	29,362	14,800
	243,747	214,570
	Rs. 76,405,240	79,656,583
	*****	*****

(a) The company has made a claim of JY - 10,045,976 (Rs. 450,026) for short supply of spares and accessories and certain other claims against the supplier's Nissho - Iwai Co., Ltd. Pending the acceptance of the claims by the supplier, the company has (i) withheld the amount of Rs. 1,835,235 payable to the supplier and (ii) has not deducted the goods short supplied from spares and accessories resulting in its overstatement by Rs. 450,026.

(b) Interest Payable -

	1978	1977
	Rs.	Rs.
I.C.P. Syndicate Debentures	10,894,919	7,213,837
I.C.P. Second Syndicate Debentures	6,392,024	3,648,653
M.D.F.C. - Debentures	554,250	594,673
M.D.F.C. - Bridge Loan	1,015,882	890,949
S.L.I.C. - Debentures	4,260,401	2,585,828
M.I.I. - Debentures	921,610	559,340
Deferred Customs Duty	2,845,375	2,025,064
Consortium Loan	5,408,837	1,010,858
BIN - Loan (see note (c) below)	137,363	55,507
	Rs. 32,440,671	18,585,708
	*****	*****

(c) Interest on BIN loan is calculated at 13% whereas BIN letters of October, 1977 state the interest rate at 13½%.

(d) Sales-tax Payable -

Balance brought forward	394,297	241,416
Sales-tax deducted from certain invoices (see note below)	47,819	226,634
	442,116	468,050
Less: Sales-tax paid on gases used for manufacture of goods	(31,873)	(73,753)
Other adjustments	(30,492)	-
	Rs. 379,751	394,297
	*****	*****

The above amount remains unverified.

(e) Provisions has been made in these accounts in respect of war risks insurance premium, surcharge and interest on unpaid premium on the basis of the assessment order framed in November, 1976 by the Enquiry Officer appointed under the War Risks Insurance Ordinance.

	1 9 7 8	1 9 7 7
	Rs.	Rs.
War Risk Insurance Premium -		
Factory Building	330,290	330,290
Plant and Machinery	1,940,101	1,940,101
	<u>2,270,391</u>	<u>2,270,391</u>
20% Surcharge on above	454,078	454,078
Interest on unpaid premium	614,544	614,644
	<u>Rs. 3,339,113</u>	<u>3,339,113</u>
	*****	*****

The company has preferred an appeal before the Federal Government against the above assessment.

- (f) Workers' education class has been provided on the basis of highest number of workers employed at any time during the year.
- (g) The company obtained a licence from the Collector of Customs, Karachi for the storage of machinery, equipment spare parts and accessories, steel scrap, raw materials and chemicals without payment of customs duty etc. on the first importation of these goods at the Mill's premises which was declared as a private bonded warehouse.

11. FIXED ASSETS

Leasehold Land - Rs. 59,906 -

The lease deed between M/s. Valibhai Kusruddin (Sind) Limited and the company dated 25th February, 1971 provided a payment of rent on 62.8 acres of land at Rs. 950 per acre per annum with effect from 1st March, 1971. A sum of Rs. 52,202 representing the rent for the period from 1st March, 1971, to 15th January, 1972 was capitalised and is included in the cost of the land. Rent for the period prior to 1st March, 1971 has not been provided, as the amount if any has not been covered by the lease deed or any other agreement.

The above land sub-leased to the company by Valibhai Kusruddin (Sind) Limited has been leased to them by Deputy Commissioner, Karachi.

The company represented in August, 1976 to the Deputy Commissioner (West) Karachi that since the management and ownership of the company was taken over by the Federal Government from Valika Group, the sub-leased land should be mutated in the name of the Company. Consequently, the Deputy Commissioner (West) Karachi mutated on 17th October, 1976 the above land and a further chunk of 30.55 acres in the name of the Company in the Records of Rights with effect from 1972-73 on payment of lease money and other impositions.

In respect of land there are two amounts of Rs. 1,500,000 and Rs. 335,000 which seem to be in some way related to land. In the absence of any documentary evidence these amounts have been dealt with as stated below -

(i) Rs. 1,500,000:

The only document is a letter from Messrs. Valibhai Kusruddin (Sind) Limited asserting that an amount of Rs. 1,500,000 be paid to them by the Company for this land. The amount does not appear in these accounts.

(11) A.306,000:

The above amount was paid to Valibhai Kharuddin (Sind) Limited on 4th June, 1970. So far it could be ascertained, this payment was towards the cost of chunk of 51 acres freehold land adjacent to and in the vicinity of the leasehold land of the Company. Previously this payment was debited to the loan account of Valibhai Kharuddin (Sind) Limited. The payment appears under advances pending final determination. (See note 16).

12. CLAIMS RECEIVABLE

	<u>1976</u>	<u>1977</u>
	Rs.	Rs.
Customs Duty and Sales Tax (see (a) below)	698,053	698,053
Insurance (see (b) below)	702,545	738,625
National Shipping Corporation (see (c) below)	1,523,000	1,523,000
Excess baggage charges recoverable from company's engineering personnel sent for training to Japan (see (d) below)	87,450	87,450
Others (see (e) below)	242,815	283,534
	<u>Rs. 3,163,874</u>	<u>3,210,672</u>

- (a) Included in the amount of customs duty and sales tax is a sum of Rs.594,346 which represents a claim for refund of sales-tax, defence surcharge and rehabilitation tax on a consignment of structural steel received per S.S. Sipsah in 1968. The company has filed a claim for refund which is pending with the Collector of Customs, Karachi.
- (b) Included in insurance claim is Rs.197,162 relating to a short landed consignment which was rejected by the carrier's agent on the ground of its having become time barred. The National Insurance Corporation also repudiated the claim because of the expiry of the date of file a suit against the carrier. The company has instituted legal proceedings against both of them for recovery of the claim.
- (c) Arrangements were made with National Shipping Corporation to load a consignment of 4,700 metric tons carbon steel scrap at Jeddah on S.S. KAURUALLI, which sailed off after loading only 2,082 metric tons scrap. The National Shipping Corporation did not give the delivery order to the company for lifting the goods unless the payment of sum of Rs.1,523,000 on account of charter party demurrage and dead freight was made. In the absence of a charter party agreement the company was unable to determine its rights and obligation, but in order to avoid the imposition of heavy demurrage by the Karachi Port Trust, the company made the payment under protest. The company has filed a suit, inter alia for the recovery of the above sum against National Shipping Corporation in the High Court of Sind.

(d) Messrs. Nissho Iwai Co. Limited, Tokyo through whom the training of company's engineering personnel in Japan was arranged paid the excess baggage charges at the time of trainees departure to Karachi out of the company's fund held by them. In the absence of any contractual obligations of the company to bear these charges the same are recoverable from the trainees. Recoveries for Rs.87,450 are pending because of stay order issued by a court of law on a suit brought by the trainees against the company. The suit is yet to be adjudicated.

(e) The company has instituted legal proceedings against the concerned parties for the recovery of the sum of Rs.45,400.

13. STORES, SPARES AND ACCESSORIES

	<u>1978</u>	<u>1977</u>
	Rs.	Rs.
General stores including local accessories etc.	2,357,351	2,167,013
Spare and Accessories	31,192,321	34,352,938
	<u>Rs. 33,549,672</u>	<u>36,519,951</u>
	*****	*****

14. STOCKS

Raw Materials	57,001,485	62,369,183
Work-in-Process	11,027,850	15,049,423
Finished Goods	13,325,016	13,396,722
Returnable Scrap	5,165,922	12,277,549
	<u>Rs. 87,320,335</u>	<u>103,094,877</u>
	*****	*****

15. TRADE AND SUNDRY DEBTORS

(a) This is comprised of -

Trade debtors (see (b) below)	1,650,691	2,994,001
Sundry debtors (see (c) below)	1,557,994	1,208,659
	<u>Rs. 3,228,685</u>	<u>4,202,900</u>
	*****	*****

(b) Trade debtors:

Out of the total receivables of Rs.1,650,691 the company has subsequently received Rs.1,368,621. The Company is making efforts to recover the outstanding balance of Rs.292,070.

(c) Sundry debtors:

The above includes -

(i) An amount of Rs.524,779 due from Heavy Foundry and Forge Limited which is outstanding since 30th June, 1977. Efforts are being made to recover this amount due from Hf.

(ii) A sum of Rs.394,102 is due by Synthetic Chemicals Limited which is reported to be under liquidation. The full recovery of this sum is therefore doubtful.

(iii) A sum of Rs.4,260 which was reported to be due from staff in the previous year's accounts still remains uncleared.

(iv) Bank interest amounting to Rs.4,463 which remains unrealised.

16. ADVANCES, DEPOSITS AND PREPAYMENTS

	<u>1978</u>	<u>1977</u>
	Rs.	Rs.
Advances:		
Nissho Iwai Company Ltd.	-	811,055
Local Suppliers for goods and services (see (c) below)	388,719	629,844
Import Permit Fee (considered doubtful)	2,140	2,140
Valibhai Kasmuddin (Sind) Ltd. for purchase of 51 Acres of Land (note 11(ii))	306,000	306,000
Margin on Letter of Guarantee	375,000	217,950
Letters of Credit Margin and Expenses	29,065	3,096,845
Staff (see (b) below)	150,950	721,688
	<u>1,251,905</u>	<u>5,784,522</u>
Deposits:		
Security	1,680	1,680
Bank charges and Insurance with PICIC	15,422	15,422
Marine Insurance Premium with PIC	51,672	51,672
Octroi (see (c) below)	310,255	459,278
	<u>379,029</u>	<u>551,052</u>
Prepayments:		
Rent	-	24,933
Insurance	15,528	21,179
Subscription	647	465
	<u>16,175</u>	<u>46,577</u>
	<u>Rs. 1,647,109</u>	<u>6,388,152</u>

(a)(i) The advance to local suppliers include an amount of Rs.30,000 paid to Cine Colour Laboratory for making a documentary film, the total cost of which was settled at Rs.95,000. As the company did not make payment of any further instalments, the film has not been delivered to it as yet.

(ii) Certain advances in respect of previous years amounting to Rs.302,272 remain unadjusted due to non-availability of certain records. Efforts are being made to obtain the records to clear these advances.

(b) Advances to staff comprises of the following:

<u>Nature</u>	<u>1978</u>	<u>Subsequent Clearance</u>
	Rs.	Rs.
For Expenses	111,105	18,481
Carried forward	111,105	18,481

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<u>Nature</u>	<u>1978</u>	<u>Subsequent</u>
	<u>Rs.</u>	<u>Clearance</u>
		<u>Rs.</u>
Brought forward	111,106	18,481
Old Advance (after writing off Rs.551,735)	17,914	17,914
for Travelling	6,480	4,483
Against Salaries	15,460	13,285
	<u>Rs. 150,960</u>	<u>54,163</u>
	*****	*****

Certificates in respect of the above amount due from staff are not available.

- (c) Detrol deposits were lodged with the Karachi Municipal Corporation for transportation of the imported goods from docks to Mills' premises through municipal limits. These deposits which are refundable were made in the following years.

<u>Year</u>	<u>Amount of</u>	<u>Subsequent</u>
	<u>Deposit</u>	<u>Refund</u>
	<u>Rs.</u>	<u>Rs.</u>
1972-73	826	-
1973-74	101,855	-
1974-75	165,017	48,633
1975-76	7,051	-
1976-77	5,998	744
1977-78	26,468	23,100
	<u>Rs. 310,255</u>	<u>72,477</u>
	*****	*****

Efforts are being made to recover these deposits from the Karachi Metropolitan Corporation.

- (d) All the advances and deposits remain unconfined.

17. CASH AND BANK BALANCES

	<u>1978</u>	<u>1977</u>
	<u>Rs.</u>	<u>Rs.</u>
In Hand	9,022	12,238
At Banks on Current Account	1,053,351	218,977
At Banks on Short Term Deposits	13,333,750	12,980,182
	<u>Rs. 14,396,133</u>	<u>13,230,797</u>
	*****	*****

18. TURNOVER

	<u>1978</u>	<u>1977</u>
	<u>Rs.</u>	<u>Rs.</u>
Sales	28,492,653	24,453,732
Services	3,287,055	433,583
	<u>Rs. 31,779,708</u>	<u>24,887,315</u>
	*****	*****

19. COST OF GOODS SOLD

	<u>1 9 7 8</u>	<u>1 9 7 7</u>
	\$.	\$.
Opening Stock:		
Raw Materials	62,369,183	63,908,697
Returnable Scrap	12,277,549	13,651,355
	<u>74,646,732</u>	<u>77,560,043</u>
Purchases	4,719,195	18,725,081
	<u>79,425,928</u>	<u>95,285,124</u>
Less: Transferred to general stores	-	695,179
Cost of raw material sold	<u>326,150</u>	<u>6,523</u>
	<u>79,099,778</u>	<u>95,583,422</u>
Less: Closing Stock:		
Raw Materials	<u>57,001,485</u>	<u>62,369,183</u>
Returnable Scrap	<u>5,165,922</u>	<u>12,277,549</u>
	<u>62,167,407</u>	<u>74,646,732</u>
Materials consumed	16,932,371	20,935,690
Manufacturing Expenses (Note 20)	72,217,795	79,955,483
Total Manufacturing Cost	89,150,166	91,932,173
Add: Work-In-Process - Opening Inventory	15,049,423	14,864,246
	<u>104,199,589</u>	<u>106,796,421</u>
Less: Work-In-Process - Closing Inventory	<u>11,827,850</u>	<u>15,049,423</u>
Cost of Goods Manufactured	92,371,739	91,746,998
Add: Finished Goods - Opening Inventory	13,398,722	14,916,761
	<u>105,770,461</u>	<u>106,663,759</u>
Less: Finished Goods - Closing Inventory	<u>13,325,078</u>	<u>13,398,722</u>
Cost of Goods Sold	\$ 92,445,383	93,265,037

20. MANUFACTURING EXPENSES

Gas, fuel and Power	4,948,976	5,810,865
Salaries and Wages and Other Benefits	17,472,598	17,305,765
Ed Advances written off	551,736	-
Travel and Sundry	62,949	42,060
Entertainment Expenses	17,210	10,660
Rent, Rates and Property Taxes	37,504	49,504
Water Charges	308,096	217,411
Books and Magazines	7,791	2,297
Legal and Professional Services	29,508	58,734
Repairs and Maintenance	142,443	144,359
Postage, Telegrams and Telephones	55,059	33,397
	<u>23,626,270</u>	<u>23,655,043</u>
Carried forward		

Ford, Rhodes, Robson, Morrow

	<u>1 9 7 8</u>	<u>1 9 7 7</u>
	Rs.	Rs.
Brought forward	23,626,270	23,655,043
Printing, Stationery and Supplies less sale of tender documents Rs.11,050	43,989	45,390
Freight, Demurrage and forwarding Charges	111,154	65,143
Motor Running Expenses	104,699	95,414
Fork Lifter and Crane Running Expenses	1,531	3,942
Miscellaneous	62,134	58,643
Education Cess	108,700	117,200
General stores, spares and accessories	12,020,393	12,878,161
Advertising	39,405	29,221
Scrap Cutting Charges	189,683	132,368
Depreciation	<u>35,909,837</u>	<u>33,873,938</u>
	Rs. 72,217,795	70,965,483
	*****	*****

21. GENERAL AND ADMINISTRATION EXPENSES

Salaries and Wages including other benefits	740,130	672,658
Education Cess	2,650	3,600
Travel and Sundry	22,433	21,642
Entertainment	13,406	10,742
Books and Magazines	1,020	5,027
Legal and Professional Services	109,098	143,865
Rent, Rates and Property Taxes	33,750	33,750
Electricity	8,873	3,486
Repairs and Maintenance	2,714	11,920
Postage, Telegrams and Telephones	26,868	19,167
Insurance	23,170	14,115
Printing, Stationery and Office Supplies	25,227	20,758
Miscellaneous	551	48,159
Share in Administration Expenses of S.M.E & MTC	292,140	479,602
Advertising	1,510	392
Motor Running Expenses	42,183	47,356
Audit Fees	22,500	22,500
Depreciation	<u>29,850</u>	<u>39,393</u>
	Rs. 1,390,293	1,598,081
	*****	*****

22. SELLING AND DISTRIBUTION EXPENSES

Salaries and Wages including other Benefits	344,165	350,187
Education Cess	-	1,109
Travel and Sundry	8,539	10,512
Personnel Training	300	-
Entertainment	5,591	3,775
Books and Magazines	<u>3,152</u>	<u>2,705</u>
Carried forward	361,747	368,579

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	<u>1 9 7 8</u>	<u>1 9 7 7</u>
	Rs.	Rs.
Brought forward	361,747	368,519
Export Registration	-	50
Rent, Rates and Property Taxes	26,640	26,640
Repairs and Maintenance	309	511
Electricity	983	372
Postage, Telegrams and Telephones	13,535	7,393
Export Insurance	-	16,584
Printing, Stationery and Office Supplies	6,713	7,485
Freight and Forwarding Charges	-	157,287
Motor Running Expenses	24,902	14,332
Miscellaneous	83	251
Advertising, Sales Production and Supplies	24,975	3,029
Packing Materials	265	25,100
Commission	-	3,043
Depreciation	9,158	5,528
	<u>Rs. 459,311</u>	<u>642,190</u>
	=====	=====

23. OTHER INCOME

Profit on sale of raw material :		
Sales	484,114	16,000
Cost of raw material	326,153	6,523
	<u>157,964</u>	<u>9,477</u>
Registration fee	6,900	12,600
Sale of unserviceable stores by auction	231,950	-
Miscellaneous receipt	127	6,577
Miscellaneous charges	(279,078)	-
	<u>Rs. 117,863</u>	<u>28,654</u>
	=====	=====

24. FINANCIAL EXPENSES

Bank Interest, Commission and other charges		
Less Interest Income Rs.571,945	5,570,692	4,639,319
Interest on Bridge Loan	549,131	456,192
Interest on S&E & MIC Loan	553,044	873,557
Interest on Consortium Loan	4,358,105	1,461,392
Interest on BIN Loan	380,027	375,855
Interest and other charges on PICIC Loan	35,089,035	27,939,651
Interest and other charges on LHM	21,725,133	17,359,155
Interest on Debentures	9,703,045	7,327,592
Interest on unpaid balance of Provident Fund Contribution	108,439	31,731
Trusteeship Commission and other Charges	27,295	27,210
Bill of Exchange and Discounting Charges	339,425	662,615
Letter of Credit Expenses	-	1,268
	<u>Rs. 77,443,361</u>	<u>62,174,648</u>
	=====	=====

25. CONTINGENT LIABILITIES AND COMMITMENTS

	<u>1 9 7 6</u>	<u>1 9 7 7</u>
	¥.	¥.
(a) (i) Claims not acknowledged as debts	2,552,384	1,973,589
(ii) Demand for short recovery of customs duty and sales tax on machinery and spares and accessories imported during 1972 to 1974	4,054,328	4,001,573
(iii) Counter guarantees issued to Rabib Bank Limited for bank guarantees issued on behalf of company	1,355,456	1,355,456
(iv) Claim of Valika Group re interest on debentures (see note 3(b))-		
Interest	11,352,500	9,075,000
Stamp duty	430,000	430,000
(v) Stamp duty 2nd Syndicate Debentures (provision not made)	450,000	450,000
	<u>¥. 20,245,658</u>	<u>17,293,618</u>
	*****	*****

- (b) The company's fixed assets (except vehicles), stocks, store etc. are not insured against calamities such as fire, flood, earthquake, blasts etc.

The Company is unable to pay the insurance premiums due to financial difficulties.

(c) Commitment for letters of credit	¥. 206,300	1,255,000
	*****	*****
(d) Pending lawsuits against the Company	¥. 2,500,000	-
	*****	*****

26. INTERNAL CONTROL

Internal control in a company of this size and operations requires strengthening particularly in areas such as stocks, stores, spares, fixed assets, wages, etc. which suffer from certain deficiencies. This is due to the depletion in the personnel of the accounts and stores departments of the company.

27. G E N E R A L(a) Gratuity

The company operates an unfunded gratuity scheme for the benefit of the workers and officers. It is the practice of the company to provide gratuity for workers in accordance with the settlement with the Collective Bargaining Agent and policy laid down for the officers.

(b) Rate of Exchange

- (i) The Japanese Yen has been converted into Pak Rupee at the following rates:

	Pak Rupee 1/- equivalent to Japanese Yen	
	1978	1977
(a) Loan disbursed and out- standing as at 30th June	21.84	28
(b) Amount due to Nissho Iwai Co. Ltd. Tokyo	21.84	28
(c) Interest, service and commitment charges on foreign currency loan outstanding and accrued	21.84	At rates notified by PICIC in various demand notes.
(d) Penal interest on Unpaid principal, interest, service and commitment charges	JY. 21.84	JY. 26.93

The rate of JY. 21.84 = Rs 1 was ruling as at 30th June, 1979. This rate has been used to obviate foreign currency adjustments in the accounts for the year ended 30th June, 1979.

(c) Costs

Accounts are prepared on historical cost convention.

(d) Comparative figures

Figures of the previous year have been re-arranged wherever necessary to facilitate comparison.


Managing Director.

APPENDIX 4. SECOND MISSION AND ITINERARY

1) MEMBERS

Mr. Yoshihiro Mitarashi **Project Manager**
Metallurgical Engineer
Japan Consulting Institute

Mr. Mitsuo Nishi **Mechanical Engineer**
Daido Steel Co., Ltd.

Mr. Taijo Sato **Techno-Economist**
Japan Consulting Institute

Mr. Yasuji Noda **Economist**
Japan Consulting Institute

2) ITINERARY

October 27 (Mon.) Departed Tokyo. Arrived at Karachi.

October 28 (Tue.) Briefing at Japanese Consulate General.
Discussion of the Report with SEC and SSP at SEC Chairman Room.

October 29 (Wed.) Discussion of the Report with SEC and SSP at SSP's Head Office.

October 30 (Thu.) Discussion of the Report with SEC and SSP at SSP's Head Office.

October 31 (Fri.) Holiday. Departed Karachi. Arrived at Islamabad.

November 1 (Sat.) Briefing at Japanese Embassy.

- November 2 (Sun.)** Discussion of the Report with Joint Secretary of MOP and SEC at MOP's Office.
Briefing at Economic Affairs Division.
- November 3 (Mon.)** Departed Islamabad. Arrived at Karachi.
- November 4 (Tue.)** Final Discussion of the Report with SEC's Chairman and SSP's Managing Director at SSP's Head Office.
Briefing at Japanese Consulate General.
- November 5 (Wed.)** Departed Karachi. Arrived at Tokyo.

APPENDIX 5. BILLETS ABOVE 91 mm SQUARE

The billet shear at a blooming mill can cut the ones measuring 100 to 120mm square when the temperature of billets is high. Nevertheless, the shear must always be employed within its capacity as designed.

If billet products are shipped as they are rolled without cutting off the defective portions at the billet top and bottom, the user will be unable to find the pipe position and the sand inclusion mark at the billet top and the segregation position at the bottom.

Accordingly, from the maintenance of the quality of special steel, it is not desirable to ship billet products without cutting off their defective portions.

**APPENDIX 6. ADDITIONAL REASONS FOR SUSPENDING PRODUCTION
OF STAINLESS STEEL SHEETS**

The following figures, which are shown in Table 3-11 and Table 4-14, indicate the demand for stainless steel sheets of above 0.77mm:

1979 - 80: 2,880 tons/year
1984 - 85: 3,330 tons/year

These figures correspond to about 40% of the whole demand for the stainless steel sheet, and the majority of which can be produced by SSP so far as the sheet thickness is concerned.

However, as was mentioned in Chapter 4.2.2 (1), pp. 4-3 and 4-4, second-class or scrap-like stainless steel sheets are being imported at a very low price. Therefore, it may be impossible for SSP's products to compete with such imports. In view of this, the production of stainless steel sheets has been omitted from the rehabilitation plan.

Here is an additional explanation on the price:

The selling price of the imports, which compete with SSP's products, is basically composed of cost and freight. When calculated on that basis, the selling price of the imports will become as follows:

Unit: Rs/t

Year	C&F (Karachi)	Sales Cost*
1976/77	9,888	18,491
1977/78	13,516	25,491
1978/79	12,483	33,343
1979/Jan. 80	13,024	24,355

Remarks: * C&F + Import Duty (70%) + Handling Charge (10%)

The "Cost of production per metric ton finished at 50% capacity utilization", which is shown as SSP's budgetary manufacturing cost in SSP's data, was recalculated according to the new unit price list of raw material, which SSP presented on October 30, 1980. The following is the result of recalculation of the total cost of production per metric ton without interest:

Cost of Production per Metric Ton Finished at 50% Capacity Utilization

Unit: Rs./t

	Sheet Stainless Steel C. R.		Sheet Stainless Steel H. R.	
	SSP Data	Amend Data	SSP Data	Amend Data
Material Cost	15,067	13,843	13,089	13,022
Accessories	3,210	13,843	2,882	13,022
General and Consumable Stores	530	13,843	300	13,022
Electricity	2,943	13,843	2,041	13,022
Fuel Gas	1,400	13,843	1,014	13,022
Oxygen Gas	110	13,843	104	13,022
Water	70	13,843	50	13,022
Labour Cost	4,447	13,843	2,539	13,022
Employees Other Benefits	1,426	13,843	876	13,022
Other Production Expenses	423	13,843	262	13,022
Depreciation Charge	5,580	13,843	3,913	13,022
Total Cost of Production per M/Ton without interest	35,205	33,982	27,070	27,003

The recalculated cost shown in this Table is higher by about 40% over the selling price of imported cold roll sheets and about 11% over hot roll sheets.

APPENDIX 7. DEMAND FOR STEEL BALLS BY CEMENT INDUSTRY

I. Estimation was made on the following basis:

- a) The production of cement is expected to increase at an average of 13.75% per annum during the Fifth Five Year Plan over 3,070,000 tons in 1979/80.
- b) In the case of the forged steel ball, it is expected to be consumed at 400g/cement ton, while in the case of stainless cast steel ball, 40g/cement ton.

According to the Javedan Cement Company, the forged ball is being replaced gradually by the stainless cast steel ball. It is assumed that 10% of the cement production is being switched over each year to the cast steel ball which has lower consumption unit.

- c) According to the Javedan Cement Company, forged balls, that come from Italy and other European countries as well as domestic products such as HFF, are being used. At present, 30% of the forged balls are being imported, but it is assumed that domestic products will come to cover 100% in the future.

2. Result of Estimation

	Cement Production (10,000 t/y)					Consumption of Ball (t/y)		
	Total Production	Total Production of Forged Balls		Total Production of Cast Steel Balls		Total	Forged Ball	Cast Steel Balls
	A	B	C	D	E	F+G	F	G
1979/80	307	90%	276	10%	31	1,117	1,105 ^{*1}	12 ^{*3}
1980/81	350	80%	343	20%	70	1,400	1,372	28
1981/82	400	70%	280	30%	120	1,168	1,120	48
1982/83	450	60%	270	40%	180	1,152	1,080	72
1983/84	510	50%	255	50%	255	1,122	1,020	102
1984/85	580	40%	232	60%	348	1,067	928 ^{*2}	139 ^{*4}

Remarks:

1. $A \times \frac{B}{100} = C, \quad C \times 400\text{g/t of cement} = F$

Tonnage of the domestic products been used, is described on Table 3-2 in page 3-4, as follows calculation;

$F \times (1979/80) 0.7 = 774\text{t}^{*1} = \text{about } 750\text{t}$

$F \times (1984/85) 1.0 = 928\text{t}^{*2} = \text{about } 950\text{t}$

2. $A \times \frac{D}{100} = E, \quad E \times 40\text{g/t of cement} = G$

12t^{*3}

139t^{*4}

} Described on Page 3-18, Table 3-15

APPENDIX 8. ARRANGEMENT OF PERSONNEL IN 5TH YEAR

Section	Chief of Section	Engineer	Clerk	Foreman	Worker	Total	Remark
Steel Making	1	6	1	13	104	125	10t fce x 1 3t fce x 1 Including Raw Material Handling
Rolling	1					1	
Blooming Mill		3	1	2	28	34	1 shift
Bar Mill		3	1	2	92	98	2 shifts
Inspection & Conditioning	1	6	3	3	55	68	Including Quality Control
Repairing & Maintenance	1	5	2	2 ^{*1}	29 ^{*1}	39	Mechanical: 18 ^{*1} Electrical: 10 Crane: 3
Transportation & Storage	1 ^{*2}	1 ^{*2}	3		13	18	
Technical Control	1	4	1			6	
Production Control	1 ^{*2}	4	1			6	
General Affair	1 ^{*2}	2 ^{*2}	4	3 ^{*3}	18 ^{*3}	28	Guards ^{*3}
Others	General Manager: 1 Deputy General Manager: 2 Secretary: 2					5	
Grand Total						428	

- Remarks: 1) ^{*2}: Clerk
2) Workers are expected to do more than one assignment at various places.

APPENDIX 9. FINANCIAL ANALYSIS

At the request made by SEC and SSP in the meeting held between SEC and SSP and JICA's mission on November 4, 1980, the financial analysis was performed. The following shows how the analysis was made and the result thus obtained.



Cable: ALLOYSTEEL
Telex: 33643 NTC PK



Special Steels OF PAKISTAN LTD.

Manufacturers of Stainless and other Special Alloy Steels

Ref. No. SSP-22-JM/80/

Date 30th October, '80.

MANAGING DIRECTOR

Dear Mr. Mitarashi,

This is with reference to our discussion held on 29th October, 1980 on the Draft Report prepared by JICA Mission. On page 1-9, Table 1-3 the purchase prices of raw materials as given by SSP were not the prices at which the material was purchased by SSP in the past but were the prevailing prices of the materials at that time i.e., around October, 1979. This was the misunderstanding on our part.

These prices correctly indicate the actual prices used in our accounting for the purpose of calculating production cost.

With regards,

Yours sincerely,

(S.M.S. ZAFFAR)

Mr. Yoshihiro Mitarashi,
Project Manager,
Japan International Co-operation Agency,
2-1, Nishi Shinjuku-ku,
Tokyo,
Japan.

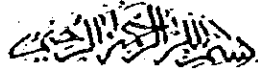
Encl. List of prices.



COMMERCIAL DIVISION: 5th Floor, FIDC House, Feroz Road, F-7/1, Islamabad. Phone: 512221, 513173
FACTORY: Jinnah Road, Durgapuri, Daska, F-7/1, Islamabad. Phone: 41025, 411411

C&F VALUE AND LANDED COST PER METRIC TON

S.No.	Material	C&F U.S.\$	C&F Rs.	Landed cost Rs.
1.	Stainless steel scrap - local purchase	-	-	4475
2.	Carbon steel scrap	137	1360	2170
3.	Pig Iron	239	2376	3286
4.	Fe-Si	1330	13229	13510
5.	Fe. Mn. H.C.	435	4358	6382
6.	Fe Mn. L.C.	833	8286	12392
7.	Silicon Manganese L.C.	743	7385	11045
8.	Fe-Cr. H.C.	619	6156	7285
9.	Fe-Cr. L.C.	1385	13776	20495
10.	Ferro Nickel (78.2% Ni)	3959	39375	54122
11.	Electro Nickel (100% Ni)	5063	50352	69210
12.	Chrome Silicóné	1619	16100	22233
13.	Calcium Silicóné	1055	10494	14365
14.	Hot top bricks	11	110	195
15.	Graphite electrodes	1073	10673	15930
16.	Calcined Pet Coke (Coke Breeze)	254	2530	3382.



Cable: ALLOYSTEEL
Telex: 23643 NICPK



Special Steels

OF PAKISTAN LTD.

Manufacturers of Stainless and other Special Alloy Steels

Ref. No. SSP-MD-JM/80

Date 30th October '80.

MANAGING DIRECTOR

Dear Mr. Hitarashi,

Kindly refer to the discussions we had in connection with the Draft Report on Rehabilitation on SSP to-day the 29th October, 1980. We feel that a Financial Analysis of SSP's Tentative Plan, be also worked out on the following basis :-

i) Debt/Equity ratio:

The debt equity ratio be taken as 30:70.

ii) Depreciations:

- (a) The depreciation on plant and machinery of stainless steel sheet mill, casting and forging shops etc., should be excluded from the calculations on account of their non-utilization of these shops for the present Tentative Plan.
- (b) The annual rate of depreciation on plant and machinery may be taken as 6% as was recommended by the supplier of the plant i.e., M/s. Nissho-Iwai.
- (c) These depreciation charges of 6% per annum are to be further reduced by the capacity utilization factor of the plant.

iii) Interest:

The value of debt may be worked out in accordance with 30:70 debt/equity ratio and ignoring all accrued interest on loans, customs' advances, etc. This debt portion would comprise foreign loans and bank debentures which bear average interest rate of 9 to 10%.

Contd'...P.2.



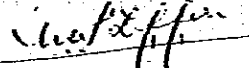
COMMERCIAL DIVISION: 5th Floor, 1100 H-2, Feroz-I-Elahi, Lahore. Phone: 51235, 51173
FACTORY: Jinnah Road, Ferozpur, Ferozpur. Phone: 41935, 41411

iv) IRR

IRR may be worked out over the project life of 16 years (according to depreciation rate of 6%)

With regards,

Yours sincerely,


(S.M.S. ZAFFAR)

Mr. Yoshihiro Mitarashi,
Project Manager,
Japan International co-operation Agency,
21-1 Nishi Shinjuku-ku,
Tokyo,
Japan.

Production Schedule

Unit: Tonne

Year	1	2	3	4	5	6	7	8	9	10	11	12 - 16
Billet												
SC	550	610	670	730	800	890	970	1,070	1,180	1,300	1,430	-
AL	110	120	130	150	170	180	190	210	240	260	290	-
Bar												
SC	1,150	1,270	1,400	1,540	1,690	1,860	2,050	2,260	2,480	2,720	2,990	3,290
AL	1,810	2,000	2,200	2,420	2,670	2,920	3,220	3,550	3,890	4,980	4,710	5,180
SUP	4,180	4,600	5,060	5,560	6,120	6,730	7,410	8,150	8,960	9,860	10,850	11,940

Variable Cost Data in Steel Making

	Unit Price Rs./t	SC		AL		SUP	
		U.C (t)	Value (Rs.)	U.C (t)	Value (Rs.)	U.C (t)	Value (Rs.)
Purchased Steel Scrap	2,170	0.700	1,519	0.752	1,632	0.750	1,628
Pig Iron	3,286	0.056	184				
Steel Scrap Generated							
SC	2,196	0.234	514				
AL	2,706			0.220	595		
SUP	2,207					0.220	486
Fe-Si	13,510	0.0032	43	0.0039	53	0.0217	293
Fe-Mn (H)	6,382	0.0033	21	0.0035	22		
Fe-Mn (L)	12,392	0.001	12	0.0012	15		
Si-Mn (L)	11,045	0.0027	30			0.0076	84
Fe-Cr (H)	7,285			0.0087	63		
Fe-Cr (L)	20,495			0.0010	21		
Fe-Mo	53,700			0.0025	134		
Fe-Ni (78.2%)	54,122			0.0060	325		
Melting Material (Rs.)			131		135		162
Fuel (Nm ³)	0.36	9.5*	3	9.5*	3	9.5*	3
Electrode	15,930	0.0062	99	0.0067	107	0.0062	99
Power (kwh)	0.55	646*	355	665*	366	646*	355
Refractories (Rs.)			533		533		533
Others for Steel Making (Rs.)			208		208		208
Total			3,652		4,212		3,851

Remark: U.C - Unit Consumption per tonne

Variable Cost of Products

Unit: Rs./t

	Billet		Bar		
	SC	AL	SC	AL	SUP
Steel Making	5,533	6,382	5,890	6,794	6,211
Blooming	250	250	178	178	178
Conditioning & Inspection of Billet	167	167	187	187	187
Bar Rolling			502	502	502
Conditioning & Inspection of Bar			26	26	26
Industrial Water	45	45	45	45	45
Recovery of Steel Scrap	Δ 448	Δ 552	Δ 501	Δ 503	Δ 617
Variable Cost	5,547	6,292	6,327	7,229	6,532

Unit Selling Price and Variable Cost of Product

Unit: Rs./t

	Billet		Bar		
	SC	AL	SC	AL	SUP
Unit Selling Price	6,870	10,190	9,120	12,070	9,840
Variable Cost	5,547	6,292	6,327	7,229	6,532

Annual Interest Calculation

Capital & Liabilities, 30th June 1979

Rs.

Item	Value
Share Capital	43,570,000
Deposits from Valika Group	14,294,150
Foreign Currency Loan	241,508,355
Debentures	56,617,000
Bridge Loan	25,000,000
Consortium Loan	35,610,000
Bank Loan and Overdraft	216,841,784
Others*	359,768,265
Total	992,209,554

$$(992,209,554 - 359,768,265) \times 30\% \times 10\% = 18,973,238$$

* Others are ignored for interest calculator.

Annual Labour Cost

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
No. of Labour	406	464	498	498	498	611	611	621	621	621	710	710	710	710	710	710
Total Labour Cost	6,090	6,960	7,470	7,470	7,470	9,165	9,165	9,315	9,315	9,315	10,650	10,650	10,650	10,650	10,650	10,650

Depreciation Schedule

Unit: Rs. 1,000

	Book Value (30th June 1979)	Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
Leasehold Land	60	0																
Internal Roads	824	5	43	41	39	37	35	34	32	30	29	27	26	24	23	22	21	20
Factory Building	25,767	5	1,288	1,224	1,163	1,105	1,049	997	947	900	855	812	772	733	696	662	628	597
Plant, Machinery & Equipment	191,678*	6	11,501	10,811	10,162	9,553	8,989	8,440	7,934	7,458	7,011	6,590	6,194	5,823	5,473	5,145	4,836	4,546
Electric and Gas Installation	1,220	6	73	69	65	61	57	54	50	47	44	42	39	37	34	32	30	28
Vehicle	319	20	64	51	41	33	26	21	17	13	10	8	7	5	4	3	3	2
Furniture Fixed	302	6	18	17	16	15	14	13	12	12	11	11	10	9	9	8	8	7
Office Equipment	92	15	14	12	10	8	7	6	5	4	3	3	2	2	2	2	1	1
Other	340	10	34	31	28	25	22	20	18	16	14	13	12	10	9	9	8	7
Sub-Total	220,602*		13,035	12,256	11,524	10,837	10,189	9,585	9,015	8,480	7,977	7,506	7,062	6,643	6,250	5,883	5,535	5,208
Machinery and Equipment	16,600	6	996	936	880	827	778	687	646	607	571	536	504	474	445	419	394	370
Amotization	25,000	900	1,800	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	1,800	700					
Sub-Total			2,796	3,436	3,380	3,327	3,378	3,187	3,146	3,107	3,071	2,336	1,204	474	445	419	394	370
Grand Total			15,831	15,692	14,904	14,164	13,467	12,772	12,161	11,587	11,048	9,842	8,266	7,117	6,695	6,302	5,929	5,578

* Value do not include value of Stainless Steel, Casting and Forging Plant.

S A L E S R E V E N U E

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) BILLET (SC)								
RATE OF OPERATION								
=LOCALITY								
QUANTITY	530	410	670	730	810	890	970	1070
UNIT PRICE	4870	4870	4870	4870	4870	4870	4870	4870
REVENUE	2571	1997	3253	3545	3943	4303	4703	5171
(2) BILLET (AL)								
RATE OF OPERATION								
=LOCALITY								
QUANTITY	110	120	130	150	170	180	190	210
UNIT PRICE	10000	10000	10000	10000	10000	10000	10000	10000
REVENUE	1100	1200	1300	1500	1700	1800	1900	2100
(3) PAR (SC)								
RATE OF OPERATION								
=LOCALITY								
QUANTITY	1150	1270	1400	1540	1680	1820	1960	2100
UNIT PRICE	9120	9120	9120	9120	9120	9120	9120	9120
REVENUE	10487	11582	12768	14028	15413	16663	18066	20079
(4) PAR (AL)								
RATE OF OPERATION								
=LOCALITY								
QUANTITY	1410	2000	2200	2420	2670	2920	3220	3550
UNIT PRICE	12070	12070	12070	12070	12070	12070	12070	12070
REVENUE	17027	24140	26554	29200	32229	35244	38865	42840
(5) PAR (SUB)								
RATE OF OPERATION								
=LOCALITY								
QUANTITY	4780	4800	5040	5540	6100	6730	7410	8150
UNIT PRICE	9860	9860	9860	9860	9860	9860	9860	9860
REVENUE	47131	47328	49708	54600	60130	66378	73014	80194
REVENUE FROM PRODUCT	78360	86400	95040	104508	115000	126378	138075	150167
REVENUE (LOCAL)								
REVENUE (EXPORT)								
TOTAL REVENUE	78360	86400	95040	104508	115000	126378	138075	150167

S A L E S R E V E N U E

(YEAR)	9	10	11	12	13	14	15	16
(1) BILLET (CS)								
RATE OF OPERATION								
==LOCALLY==								
QUANTITY	1140	1300	1430	1470	1470	1470	1470	1470
UNIT PRICE	6870	6870	6870	6870	6870	6870	6870	6870
REVENUE	7858	8971	9824	10095	10095	10095	10095	10095
(2) BILLET (CAL)								
RATE OF OPERATION								
==LOCALLY==								
QUANTITY	240	240	290	290	290	290	290	290
UNIT PRICE	10190	10190	10190	10190	10190	10190	10190	10190
REVENUE	2446	2446	2955	2955	2955	2955	2955	2955
(3) BAR (CS)								
RATE OF OPERATION								
==LOCALLY==								
QUANTITY	240	2720	2900	2900	2900	2900	2900	2900
UNIT PRICE	9120	9120	9120	9120	9120	9120	9120	9120
REVENUE	2189	24806	26480	26480	26480	26480	26480	26480
(4) BAR (CAL)								
RATE OF OPERATION								
==LOCALLY==								
QUANTITY	3800	4280	4700	4700	4700	4700	4700	4700
UNIT PRICE	12070	12070	12070	12070	12070	12070	12070	12070
REVENUE	45826	51600	56700	56700	56700	56700	56700	56700
(5) BAR (SUP)								
RATE OF OPERATION								
==LOCALLY==								
QUANTITY	8060	9840	10830	11040	11040	11040	11040	11040
UNIT PRICE	9840	9840	9840	9840	9840	9840	9840	9840
REVENUE	79298	96836	106362	108768	108768	108768	108768	108768
REVENUE FROM PRODUCT	148280	185088	203662	210078	210078	210078	210078	210078
REVENUE (LOCAL)	148280	185088	203662	210078	210078	210078	210078	210078
REVENUE (EXPORT)	148280	185088	203662	210078	210078	210078	210078	210078
TOTAL REVENUE	296560	370176	407324	420156	420156	420156	420156	420156

	0	1	2	3	4	5	6	7	8
P R O F O R M A I N C O M E S T A T E M E N T									
(YEAR)									
(1000RS)									
TOTAL REVENUE	78500	86000	95040	104500	126378	139075	153167		
====COST====									
(1) VARIABLE COST									
BILLET (SC)	550	610	670	730	800	870	970	1070	
EQUIPMENT (RS)	5547	5547	5547	5547	5547	5547	5547	5547	
UNIT PRICE (1000RS)	3051	3846	3716	4040	4037	4581	4581	4581	
VALUE (1000RS)	110	120	130	150	180	190	210	210	
EQUIPMENT (RS)	4202	6202	4202	4202	4202	4202	4202	4202	
UNIT PRICE (1000RS)	602	755	618	664	1135	1195	1527	1527	
VALUE (1000RS)	1150	1270	1400	1560	1800	2050	2200	2200	
EQUIPMENT (RS)	4327	4327	4327	4327	4327	4327	4327	4327	
UNIT PRICE (1000RS)	7276	8035	8358	9766	11748	12070	14290	14290	
VALUE (1000RS)	1810	2000	2200	2420	2670	2920	3350	3350	
EQUIPMENT (RS)	7227	7227	7227	7227	7227	7227	7227	7227	
UNIT PRICE (1000RS)	13084	14458	15906	17406	21700	25277	25463	25463	
VALUE (1000RS)	4180	4600	5080	5800	6730	7470	8150	8150	
EQUIPMENT (RS)	6332	6332	6332	6332	6332	6332	6332	6332	
UNIT PRICE (1000RS)	27506	30047	33052	38178	45960	48402	53234	53234	
VALUE (1000RS)	6090	6960	7470	7470	9165	9165	9165	9165	
(2) OPERATING LABOUR (FC)									
DEPRECIATION (FC)									
OLD	13035	12254	11524	10837	9585	8015	6480		
NEW	2760	3656	3580	3427	3187	3146	3107		
OTHER EXPENSE (FC)	2000	2000	2000	2000	2000	2000	2000		
TOTAL OPERATING COST	25328	28331	24722	27183	30644	31451	32334		
NET OPERATING INCOME	5322	5669	6318	7267	9734	10824	12033		
INTEREST	14975	14975	14975	14975	14975	14975	14975		
SPECIAL ITEMS									
NET INCOME BEFORE TAX	-15235	-15904	-10655	-6648	561	5551	10488		
INCOME TAX									
NET INCOME AFTER INT. & TAX	-15035	-15904	-10655	-6449	561	5551	10488		

P R O F O R M A I N C O M E S T A T E M E N T

(YEAR) 9 10 11 12 13 14 15 16

NET INCOME AFTER INT. & TAX (1000RS) 168280 185068 203662 210018 210018 210018 210018 210018

TOTAL REVENUE (1000RS) 5547 5547 5547 5547 5547 5547 5547 5547

*****COST*****

	9	10	11	12	13	14	15	16
(1) VARIABLE COST								
PILETT (SC)	1180	1300	1620	5547	5547	5547	5547	5547
REQUIREMENT	5347	5347	5347	5347	5347	5347	5347	5347
UNIT PRICE	4345	7211	7932					
VALUE								
PILETT (AL)	240	200	200	4202	4202	4202	4202	4202
REQUIREMENT	4202	4202	4202					
UNIT PRICE	1510	1825	1825					
VALUE								
MAP (SC)	2440	2000	2000	3200	3200	3200	3200	3200
REQUIREMENT	4327	4327	4327	4327	4327	4327	4327	4327
UNIT PRICE	15601	17200	18018	20816	20816	20816	20816	20816
VALUE								
MAP (AL)	3800	4280	4710	5180	5180	5180	5180	5180
REQUIREMENT	7220	7220	7220	7220	7220	7220	7220	7220
UNIT PRICE	28121	30060	34060	37444	37444	37444	37444	37444
VALUE								
(2) OPERATING LABOUR								
VARIABLE COST								
MAP (SUP)	8000	10450	10450	11040	11040	11040	11040	11040
REQUIREMENT	6332	6332	6332	6332	6332	6332	6332	6332
UNIT PRICE	58527	64400	70872	77002	77002	77002	77002	77002
VALUE								
(3) DEPRECIATION								
MACHINERY	7077	7500	7062	6643	6643	6643	6643	6643
BUILDING	1071	2330	1204	674	674	674	674	674
OTHER EXPENSE	2000	2000	2000	2000	2000	2000	2000	2000
TOTAL OPERATING COST	132757	142530	146302	156020	156020	156020	156020	156020
NET OPERATING INCOME	35532	42509	60150	54007	54007	54007	54007	54007
OLD	18073	18073	18073	18073	18073	18073	18073	18073
NEW	16530	23330	30177	35324	35324	35324	35324	35324
NET INCOME BEFORE TAX	16530	30177	30177	35324	35324	35324	35324	35324
INCOME TAX	16530	30177	30177	35324	35324	35324	35324	35324
NET INCOME AFTER INT. & TAX	16530	30177	30177	35324	35324	35324	35324	35324

YEAR	INVESTMENT	NET OPERATING INCOME	SPECIAL ITEMS	INCOME TAX AT 10% EQUIV	DEPRECIATION	SALVAGE VALUE	RECLAIMED WORKING CAPITAL	NET CASH INFLOW	DISCOUNT FACTOR	PRESENT VALUE OF NET CASH INFLOW
0	281202	0	0	0	0	0	0	-281202	1.00000	-281202
1	9000	3038	0	0	15831	0	0	9000	0.91135	8204
2	9000	4040	0	0	15692	0	0	11741	0.83036	9768
3	7000	4318	0	0	14906	0	0	12270	0.75696	9278
4	0	12324	0	0	14164	0	0	14280	0.68986	9827
5	0	14674	0	0	13447	0	0	15141	0.62869	9550
6	0	19534	0	0	12772	0	0	16304	0.57200	9350
7	0	24524	0	0	12141	0	0	17445	0.52017	9154
8	0	29791	0	0	11547	0	0	18578	0.47288	8961
9	0	35337	0	0	11006	0	0	19704	0.43000	8780
10	0	42300	0	0	9842	0	0	20922	0.39125	8612
11	0	49750	0	0	8804	0	0	22241	0.35622	8456
12	0	53097	0	0	7917	0	0	23662	0.32428	8312
13	0	56670	0	0	6995	0	0	25184	0.29508	8178
14	0	54812	0	0	6302	0	0	26804	0.27200	8054
15	0	55188	0	0	5920	0	0	28527	0.25460	7937
16	0	55536	0	0	5574	0	6000	31414	0.24264	7825
										TOTAL=0

INTERNAL RATE OF RETURN = 9.726 %

JICA