Chapter 11 Financial Analysis

The profitability of the project is evaluated taking into consideration cost estimates, the production cost estimates, other relevation conditions described in the preceding Chapters, and necessary financial conditions.

Financial analysis includes

- ° Analyses based on financial statements,
- ° Evaluation of investment efficiency based on the D.C.F. method, and
- ° Sensitivity analysis of major cost factors on internal rate of return.

The above analyses and evaluation cover 17 years of the project period.

Case study of the financial analysis includes

- ° Study based on the prevailing price levels as of March, 1979,
- ° Study based on the prevailing price levels as of March, 1979 and giving consideration to inflation factors and import duty for raw materials,
- ° Study of the above item where raw material are exempted from import duty, and
- ° Study of the plan recommended by JICA.

And sensitivity analysis of major cost factors on internal rate of return includes

- ° Analysis of the case where delay occurs in the established construction schedule,
- ° Analysis of the case where the initially estimated construction cost is exceeded,
- ° Analysis of the case where output fails to meet the target volume, and
- ° Analysis of the case where the initially estimated production cost is exceeded.

The above sensitivity analyses are based on import duty exemption with raw materials.

11.1 Initial Investment Fund Requirement

The fund required for the project comprises:

(1) Capital investment fund.

(2) Fund required during a period from establishing a new company until the start-up of operation (including training cost, etc.).

(3) Interests to be paid during construction period.

(4) Initial working capital required for procurement of raw materials, etc. to be provided by the time of start-up.

(5) Additional working capital required after start-up of production.

The following paragraphs will describe the demand for each type of fund.

11.1.1 Capital Investment Fund

The capital investment fund required by the project has already been dealt with in Chapter 9. In this paragraph, however, the capital investment fund that has to be paid in each year in line with the construction schedule described in Chapter 7 is estimated as shown in Tables 11.1 and 11.2.

Table 11.1 Estimated capital investment funds payment schedule
(Base Case)

(In US$1,000)

Item	Total / Year	-4	-3	-2	-1
Engineering fee	30,800	9,800	7,600	6,250	7,150
Equipment cost	257,510		42,625	194,695	20,190
Installation	48,830			13,650	35,180
Civil work	152,800	4,940	47,430	84,285	16,145
Contingency	45,000	1,354	8,969	27,451	7,226
Total	534,940	16,094	106,623	326,332	85,891

Note 1: The engineering fee is included in the capital investment.

Note 2: The contingency is distributed on a yearly basis proportionally to each capital investment funds items other than contingency.

Note 3: The training fee included in the engineering fee given in Chapter 9 is deleted from the engineering fee and added to the pre-production expenses.

Table 11.2 Estimated capital investment payment schedule (Escalation Case)

(In US$1,000)

Item	Total / Year	-4	-3	-2	-1
Engineering fee	36,214	10,485	8,700	7,655	9,374
Equipment cost	313,760		48,805	238,515	26,440
Installation	67,860			18,315	49,545
Civil work	194,350	5,430	56,965	109,185	22,770
Contingency	55,100	1,433	10,303	33,632	9,732
Total	667,284	17,348	124,773	407,302	117,861

Note: Same with notes in Table 11.1

11.1.2 Pre-production Expenses

Tables 11.3 and 11.4 show the required pre-production expenses derived from estimation of the various kinds of expenses arising during a period from establishing a new company until the start up of production.

It is assumed that the pre-production expenses be

amortized as a deferred asset on an annual equal instalment basis for a period of five (5) years from the start-up of production.

Table 11.3 Preproduction expenses
(Base Case)

(In US$1,000)

Item	Total / Year	-4	-3	-2	-1
Technical assistance fee before start-up	1,980			990	990
Training service fee before start-up	3,200				3,200
Salaries and wages	3,616	238	478	653	2,247
Technical assistance fee (to be commenced half-a-year before start-up)	3,585				3,585
Other expenses	1,468	532	458	216	262
Total	13,849	770	936	1,859	10,284

Note 1: It is assumed that the technical assistance service before start-up will be conducted for a period of one (1) year from the latter half of the -2nd year to the first half of the -1 year, and that the subsequent technical assistance service scheduled for a period of six (6) years after start-up will be started in the latter half of the -1st year.

Note 2: The figure of "Salaries and wages" for the -1st year includes wages for the works staff assigned for start-up preparations and training courses.

Note 3: The respective figures in the column of "Other expenses" include office, communication, personal transportation and miscellaneous expenses, and the commitment fee for the loan 2.

Table 11.4 Pre-production expenses
(Escalation Case)

(In US$1,000)

Item	Total / Year	-4	-3	-2	-1
Technical assistance fee before start-up	2,596			1,298	1,298
Training service fee before start-up	4,592				4,592
Salaries and wages	5,246	275	615	916	3,440
Technical assistance fee (to be commenced half-a-year before start-up)	4,768				4,768
Other expenses	1,692	557	432	302	401
Total	18,894	832	1,047	2,516	14,499

Note: Same with notes in Table 11.3

11.1.3 Interests to Be Paid During Construction Period

It is assumed that the interests to be paid during the construction period for the long-term loans be amortized as a deferred asset, similar to the case with the pre-production expenses, on a yearly equal instalment basis for a period of five (5) years from the start-up.

The total is US$25,870,000 for the Base Case and US$29,403,000 for the Escalation Case (see paragraph 11.2.2 "Loans").

11.1.4 Working Capital for Procurement of Raw Materials, Etc. Before Start-up of Production

In order to ensure the safety for raising the required funds, it is assumed that the minimum working capital required at the full production stage be included in the total amount of investment in the project and that such working capital be financed in long-term loans. The minimum constant working capital required is derived on the basis of the following assumptions.

(1) Accounts receivable

All the sales credit for bar and rod shall be recovered upon their shipment, following the present bar and rod sales practice in Egypt. Accordingly, there shall be no accounts receivable at any time.

(2) Inventory of raw materials

The stock of raw materials on hand at the end of the year shall be corresponding to the 2.5-month consumption of the following year.

(3) Semi-finished products

The quantities of semi-finished products at

the end of the year shall be kept at the level of 0.5-month output of the same year.

(4) Inventory of finished products

The stocks of bar, rod and billets for sale on hand at the end of the year shall be kept each at the level of 0.5-month output of the same year.

(5) Accounts payable

All raw materials purchased shall be paid off in cash upon their purchase. Accordingly, there shall be no outstanding purchase debit for any materials and services at any time.

The minimum required working capital for each year based on the assumptions above can be summarized as shown in Tables 11.5, 11.6 and 11.7. The level of the minimum constant working capital included in the total investment is derived from that of the required working capital for the fourth year when the steelworks achieve its full operation and the levels of the minimum working capital become stabilized.

Table 11.5 Minimum required working capital
(Base Case)

(In US$1,000)

Year	1	2	3	4	5
Current Assets					
Accounts receivable	0	0	0	0	0
Inventories	19,409	25,958	26,427	26,960	26,962
Raw materials	13,554	15,405	15,183	15,750	15,750
Semi-finished products	2,434	4,265	4,565	4,548	4,550
Finished products	3,421	6,288	6,679	6,662	6,662
Total current asset	19,409	25,958	26,427	26,960	26,962
Current Liabilities					
Accounts payable	0	0	0	0	0
Minimum required working capital	19,409	25,958	26,427	26,960	26,962
Change		6,549	469	533	2

Based on the above table, US$26,960,000 is appropriated to the -1st year as the minimum constant working capital for the Base Case.

Table 11.6 Minimum required working capital
(Escalation Case: Import duty imposed)

(In US$1,000)

Year	1	2	3	4	5
Current Assets					
Accounts receivable	0	0	0	0	0
Inventories	29,992	40,055	40,731	41,560	41,564
Raw materials	21,122	24,029	23,664	24,547	24,547
Semi-finished products	3,747	6,562	7,016	6,989	6,993
Finished products	5,123	9,464	10,051	10,024	10,024
Total current asset	29,992	40,055	40,731	41,560	41,564
Current Liabilities					
Accounts payable	0	0	0	0	0
Minimum required working capital	29,992	40,055	40,731	41,560	41,564
Change		10,063	676	829	4

Based on the above table, US$41,560,000 is appropriated to the -1st year as the minimum constant working capital for the Escalation Case where import taxes are imposed.

Table 11.7 Minimum required working capital
(Escalation Case: Import duty exempted)

(In US$1,000)

Year	1	2	3	4	5
Current Assets					
Accounts receivable	0	0	0	0	0
Inventories	27,743	37,161	37,849	38,613	38,616
Raw materials	19,334	21,984	21,671	22,483	22,483
Semi-finished products	3,508	6,147	6,581	6,557	6,560
Finished products	4,901	9,030	9,597	9,573	9,573
Total current asset	27,743	37,161	37,849	38,613	38,616
Current Liabilities					
Accounts payable	0	0	0	0	0
Minimum required working capital	27,743	37,161	37,849	38,613	38,616
Change		9,418	688	764	3

Based on the above table, US$38,613,000 is appropriated to the -1st year as the minimum constant working capital for the Escalation Case where import duty are exempted.

11.1.5 Additional Working Capital

It is assumed that additional working capital necessary other than the minimum constant working capital be financed in short term loan whenever required after start-up.

11.1.6 Total Amount of Investment

Apart from "additional working capital," the total amount of investment for the project will be:

- US$601,619,000 (Base Case)
- US$757,141,000 (Escalation Case with import duty imposed)
- US$754,194,000 (Escalation Case with import duty exempted)

11.2 Raising of Funds

With a view to the management structure of the project, it is assumed that a joint-stock company duly based on applicable Egyptian laws be organized and that the funds are raised in the form of equity capital and loans.

11.2.1 Equity Capital

It is assumed that 30% of the total amount of investment be covered by the equity capital which covers more than half the civil work cost, part of the erection work cost and the equipment cost,

part of the engineering fee, and the pre-production expenses and part of the interests payable during the construction period.

The payment schedule conceivable in compliance with the demand timing and raising of funds will be as shown in Tables 11.11 to 11.13. The capital stock for each Case comprises:

US$180,486,000 for the Base Case

US$227,143,000 for the Escalation Case with import duty imposed

US$226,259,000 for the Escalation Case with import taxes exempted

11.2.2 Loans

The balance resulting from subtracting the equity capital from the total amount of investment will be financed by a loan. The balance includes a majority of the equipment cost, part of the engineering fee, part of the civil work cost, part of the interests payable during the construction period, and the minimum constant working capital.

All the loans necessary for the investment are considered to be financed by long-term loans, and the following four types of loans are assumed in each case.

Table 11.8 Type, amount and borrowing condition of long-term loans (1) (Base Case)

(In US$1,000)

Type of Loan	Amount	Borrowing Condition		
		Annual interest	Period	Grace period
Loan 1	150,000	3.5%	30 years	10 years
Loan 2	75,000	10.0	15	4
Loan 3	94,941	8.0	10	3
Loan 4	101,192	12.0	6	0
Total	421,133	7.7		

Note: The weighted average of interest rates for the Base Case is 7.7% per annum.

Table 11.9 Type, amount and borrowing condition on long-term loans (2) (Escalation Case: With import duty)

(In US$1,000)

Type of Loan	Amount	Borrowing Condition		
		Annual interest	Period	Grace period
Loan 1	180,000	3.5%	30 years	10 years
Loan 2	75,000	10.0	15	4
Loan 3	117,460	8.0	10	3
Loan 4	157,538	12.0	6	0
Total	529,998	7.9		

Note: The weighted average of interest rates for the Escalation Case with import duty is 7.9% per annum.

Table 11.10 Type, amount and borrowing condition of long-term loans (3) (Escalation Case with import duty exemption)

(In US$1,000)

Type of Loan	Amount	Borrowing Condition		
		Annual interest	Period	Grace period
Loan 1	180,000	3.5%	30 years	10 years
Loan 2	75,000	10.0	15	4
Loan 3	117,460	8.0	10	3
Loan 4	155,475	12.0	6	0
Total	527,935	7.9		

Note: The weighted average of interest rates for the Escalation Case with import duty exemption is 7.9% per annum.

As the total amount of investment for the Escalation Case will be considerably higher than that of the Base Case, the Loan 1 which forms a significant portion of the long-term loan is increased to US$180,000,000.

It is assumed that the Loan 3 be financed by "institutional loan" for procurement of facilities and equipment, and that the Loan 4 be financed by the Eurodollar and other international financial resources through commerical banks on an ordinary long-term basis.

It is assumed that interests for the loan be paid annually, starting from the next year following

the year in which loans are borrowed, and that the loan be repaid annually on an equal instalment basis. (See Tables 11.30, 34, 38.)

11.2.3 Demand And Supply of Investment Funds

Combining the demand for funds described in section 11.1 with the sources of funds described above, the demand and supply of funds as detailed in Tables 11.11 to 11.13 is assumed.

Table 11.11 Demand and supply of investment funds (1)
(Base Case)

(In US$1,000)

	Item	Year / Total	-4	-3	-2	-1
Demand for funds	Capital investment fund	534,940	16,094	106,623	326,332	85,891
	Pre-production expenses	13,849	770	936	1,859	10,284
	Minimum constant working capital	26,960				26,910
	Interests payable during construction period	25,870		343	6,356	19,171
	Total	601,619	16,864	107,902	334,547	142,306
Supply of funds	Capital stock	180,486	7,064	26,457	122,136	24,829
	Loan 1	150,000	9,800	32,800	104,570	2,830
	Loan 2	75,000		48,645	26,355	
	Loan 3	94,941			81,486	13,455
	Loan 4	101,192				101,192
	Total	601,619	16,864	107,902	334,547	142,306
Outstanding long-term loans			9,800	91,245	303,656	421,133

Table 11.12 Demand and supply of investment funds (2)
(Escalation Case: Import duty imposed)

(In US$1,000)

	Item	Year / Total	-4	-3	-2	-1
Demand for funds	Capital investment fund	667,284	17,348	124,773	407,302	117,861
	Pre-production expense	18,894	832	1,047	2,516	14,499
	Minimum constant working capital	41,560				41,560
	Interests payable during construct-ion period	29,403		367	7,378	21,658
	Total	757,141	18,180	126,187	417,196	195,578
Supply of funds	Capital stock	227,143	7,695	31,672	171,061	16,715
	Loan 1	180,000	10,485	37,550	128,260	3,705
	Loan 2	75,000		56,965	18,035	
	Loan 3	117,460			99,840	17,620
	Loan 4	157,538				157,538
	Total	757,141	18,180	126,187	417,196	195,578
Outstanding long-term loans			10,485	105,000	351,135	529,998

Table 11.13 Demand and supply of investment funds (3)
(Escalation Case: Import duty exempted)

(In US$1,000)

	Item	Year / Total	-4	-3	-2	-1
Demand for funds	Capital investment fund	667,284	17,348	124,773	407,302	117,861
	Pre-production expenses	18,894	832	1,047	2,516	14,499
	Minimum constant working capital	38,613				38,613
	Interests payable during construct-ion period	29,403		367	7,378	21,658
	Total	754,194	18,180	126,187	417,196	192,631
Supply of funds	Capital stock	226,259	7,695	31,672	171,061	15,831
	Loan 1	180,000	10,485	37,550	128,260	3,705
	Loan 2	75,000		56,965	18,035	
	Loan 3				99,840	17,620
	Loan 4	155,475				155,475
	Total	754,194	18,180	126,187	417,196	192,631
Outstanding long-term loans			10,485	105,000	351,135	527,935

11.3 Production and Sales Plan

Based on the start-up plan and production plan which have been described in Chapter 4, this paragraph deals with the production/sales inventory plan centering on the sales plan which forms a prerequisite for the estimation of profit and loss.

It is assumed that the stocks of bar and rod products and billet for sale at all times stand at the level of 0.5 months of the monthly output. As the start-up of the steelmaking plant is to precede that of the rolling mill by three months, sale of billet is possible for the first two years. Table 11.14 shows the production/sales/inventory plan with coverage up to the fourth year when the steelworks operation becomes stable.

Table 11.14 Production/Sales/Inventory Plan

(Ton/year)

	Year / Type of product	1	2	3	4
Production plan	Billet for sale	110,000	76,490	0	0
	Bar and rod	231,200	600,850	723,330	723,330
	Total	341,200	677,340	723,330	723,330
Sales plan	Billet for sale	105,420	77,880	3,190	0
	Bar and rod	221,560	585,450	718,220	723,330
	Total	326,980	663,330	721,410	723,330
Inventory plan	Billet for sale	4,580	3,190	0	0
	Bar and rod	9,640	25,040	30,150	30,150

11.4 Estimation of Profit and Loss

11.4.1 Prerequisite for Profit and Loss Estimation

(1) Sales Prices

As was detailed in Chapter 3, based on the assumption that the net sales price of bar and rod product be equal to international market price, the net sales price averages US$350/ton as of March, 1979 for the Base Case of the feasibility study. The net sales price of the billet is assumed to be US$220/ton based on the prevailing Egyptian import price.

For the Escalation Case, the net sales price of bar and rod (US$468/ton) is obtained by applying to the Base Case price the annual inflation rate of 6% for a period of five years from March, 1979 to the year of the start-up of operation. The same inflation rate is applied to the price of billet for sale. The said inflation rate of 6% per annum is somewhat conservative against the world's general inflation rate of estimated 7% per annum.

In addition, as the sales price of bar, rod and billet for the first three years will be weighted average prices, the price will go up from US$308/ton (1st year) to US$334/ton (2nd year) and US$349/ton (3rd year) for the Base Case, and US$412/ton, $447/ton and $467/ton respectively for the Escalation Case.

(2) Cost of Products Sold

The cost of products sold of bar and rod comes from the annual bar and rod production cost given in Chapter 10, and that of billet for sale comes from the billet production

cost of the continuous casting machines.

Sales of products from the inventory is based on the first-in first-out method, so the cost of products sold of an inventory carried forward from the previous year comes from the production cost of the previous year.

(3) Sales Expenses

The prevailing sales practice of bar and rod by the state-owned steelworks of Egypt is such that customers provide transportation means up to the product stock-yard of the steelworks. In this feasibility study, too, the same sales practice is assumed. Accordingly, the transportation cost from the steelworks to the customer is assumed to be borne by the latter. As for product warehouse, it is assumed that no warehouse be used outside of steelworks, but only a warehouse within the steelworks compound be used. The cost of the on-site warehouse is included in the rolling mill cost, so no sales expenses occur.

(4) General Administrative Expenses

Estimated expenses belonging to the head office account, i.e., salaries of the head office, property tax, Cairo liaison office expenses, and other miscellaneous expenses are included collectively in the general administrative expenses.

It is assumed that the steelworks' land be used on a lease basis. The rent is set at US$2/m^2 (total: US$2,000,000/year) as proposed by the S.C. and included in the general administrative expenses.

In order that the established production level be secured in line with the planned operation rate, and satisfactory business activities be maintained, it is considered that a technical assistance service will be necessary, so the corresponding service fee covering a period of six years from the start-up is included in the general administrative expenses. This technical assistance service fee is gradually decreased in line with the number of persons despatched under the said service contract. The 6-year service

fee will total US$56,077,000 for the Base Case and US$80,045,000 for the Escalation Case.

Based on the above concept, the total amount of general administrative expenses for the Base Case is gradually decreased from US$16,689,000 in the 1st year to US$6,651,000 in the 6th year and further down to US$2,358,000 in the 7th year onward, and for the Excalation Case, US$23,661,000 in the 1st year, US$9,347,000 in the 6th year, and US$3,212,000 in the 7th year onward.

(5) Depreciation Cost

Depreciation cost is not included in the plants' production cost, but is summed up collectively in the item "Depreciation cost" on the profit and loss statement (see paragraph 10.1.11, Chapter 10).

(6) Interests

The interests payable during the construction period are as referred to in paragraph 11.1.3. The interests payable after start-up are summed up in non-operating expenses and the

details are shown in Table 11.30, 34, 38 "Loan Repayment Schedule."

(7) Amortization of Deferred Assets

It is assumed that the pre-production expenses (see paragraph 11.1.2) and the interests payable during the construction period (see paragraph 11.1.3) are the deferred assets and be amortized on an equal instalment basis for a period of five years after start-up. They will amount to US$7,943,000 per annum for the Base Case and US$9,659,000 for the Escalation Case.

(8) Total Costs and Expenses

Summing up the cost of products sold, the general administrative expenses, the amortization cost, and the non-operating expenses (interests, deferred assets amortization, etc.), the total costs and expenses are obtained as shown in Table 11.15 through 11.17 (coverage: up to the 8th year).

Table 11.15 Evolution of the total costs and expenses per ton basis (Base Case)

(US$/ton)

Item \ Year	1	2	3	4	5	6	7	8
Cost of products sold	241	223	222	221	221	219	219	219
General administrative expenses	51	24	16	16	11	9	3	3
Amortization cost	100	49	45	45	45	45	45	45
Non-operating expenses	124	65	57	49	41	24	19	16
Total costs and expenses	516	361	340	331	318	297	286	283

Note: The respective costs of products sold in the 1st to the 3rd year are the weighted average costs of bar, rod and billet sold.

Table 11.16 Evolution of the total costs and expenses per ton basis (Escalation Case: Import duty imposed)

(US$/ton)

Item \ Year	1	2	3	4	5	6	7	8
Cost of products sold	360	336	334	333	333	331	331	331
General administrative expenses	72	34	23	22	15	13	4	4
Amortization cost	125	62	57	57	57	57	57	57
Non-operating expenses	158	87	81	76	71	53	45	36
Total costs and expenses	715	519	495	488	476	454	437	428

Note: Same as Table 11.15

Table 11.17 Evolution of the total costs and expenses per ton basis (Escalation Case: Import duty exempted)

(US$/ton)

Item \ Year	1	2	3	4	5	6	7	8
Cost of products sold	345	320	318	318	318	316	316	316
General administrative expenses	72	34	23	22	15	13	4	4
Amortization cost	125	62	57	57	57	57	57	57
Non-operating expenses	158	85	77	71	64	42	32	23
Total costs and expenses	700	501	475	468	454	428	409	400

Note: Same as Table 11.15

11.4.2 Corporate Tax

The Egyptian corporate tax comprises five items, and the total tax rate is 39.7% uniformly regardless of the profit level. The following shows the detailed composition of the corporate tax.

Egyptian corporate tax

(1)	Basic tax	17%
(2)	National defense tax	10.5%
(3)	Security tax	8%
(4)	War tax	2.5%
(5)	Municipal tax	1.7%
	Total corporate tax	39.7%

The Egyptian corporate tax is imposed on the amount

of profit after dividend is paid. In other words, dividend comes first, and the tax comes next. The movable property income tax (tax rate: 40.55%) is levied on the dividend.

Maximum three years are permitted for carrying over of deficit.

In addition, Article 16 of the Investment Law 43 (1974/1977) of Egypt stipulates that any project under the control of Investment Law will be exempted from corporate tax for a period of five years after start-up, and upon expiration of the said period, it is possible that further three years of grace period be granted, after the review of the project by the Government.

In this feasibility study, based on the concept that this project is applicable to the Investment Law, a period of corporate tax exemption is assumed to be five years after start-up. It is assumed that corporate tax be paid in the year that follows.

11.4.3 Dividend

As was described in the preceding paragraph, Egyptian corporate tax is imposed on the profit after the dividend is deducted, so an amount of corporate

tax will vary if an amount of dividends fluctuates. In this feasibility study, therefore, it is assumed that 85% of each year's profit before tax be appropriated to dividends. The corporate tax of 39.7% will then be levied on the remaining 15% of profit. In order to secure as much working capital as possible, the payment of dividend is assumed to begin from the 6th year after start-up when the tax exemption period is expired. Dividend is assumed to be paid in the year that follows.

11.4.4 Profit & Loss Outlook

Profit and loss are calculated based on the preceding conditions. Table 11.27, 37, 35 show the results of the calculation. Tables 11.18 through 11.20 give a summary of the resultant profit and loss, in which the evolution of the profit and loss before tax for eight years from the 1st year is shown in terms of the total amount of money as well as per ton basis. The result of each Case is as outlined in the subsequent paragraphs.

(1) Base Case

As the 1st year is the start-up year of the production, both output and sales quantity stay at low levels. This is the largest

factor causing a deficit of US$68,000,000. After the 2nd year on, the profit and loss status improves rapidly as output and sales quantity increase. In the 3rd year, profit and loss is balanced and in the 4th year onward the profit and loss status continues to improve due to the decreased general administrative expenses, the decreased interest burden resulting from the progressive repayment of long-term loans, and the decreased interest burden resulting from the decreased short-term loans effected by the favorable cash flow. Thus, a profit of US$13,000,000 comes in the 4th year, and US$48,000,000 in the 8th year, and so on.

(2) Escalation Case with Import Duty Imposed

In the start-up year of the production comes deficit of US$99,500,000. In the 2nd year, however, the deficit goes down to US$47,000,000, and US$20,000,000 in the 3rd year, US$14,500,000 in the 4th year as the operation rate increases. After the 4th year on, the profit and loss status continues to improve as a result of

decreased general administrative expenses and non-operating expenses. The year when the surplus comes for the first time is the 6th year after the start-up. Even if no dividend is distributed, the accumulated deficit becomes zero in as late as the 13th year after start-up.

As the profitability of this case is very low due to high cost compared with the sales price, working capital falls short, resulting in a huge amount of short-term loan and the total interest to be paid reaches US$24/ton at the highest, causing considerably heavy interest burden.

(3) Escalation Case with Import Duty Exempted

When the import duty of raw materials is exempted, the cost is reduced by approximately US$15/ton compared with the case in the preceding paragraph (2), and the profit improves favorably by US$14,000,000 in the 4th year, US$20,000,000 in the 8th year than in the case in the paragraph (2) above. Also, profit and loss status turns into a surplus is in the 4th year. If no dividend is distributed,

the accumulated deficit becomes zero in the 10th year, showing that profitability considerably improves as compared with the case where import duty is imposed.

Table 11.18 Summary of profit and loss (1)
(Base Case)

Item \ Year	1		2		3		4	
Quantity of products sold	326,980 T		663,330 T		721,410 T		723,330 T	
Net sales	US$100,711,000	$308/T	US221,553,000	$334/T	US$251,773,000	$349/T	US$253,165,000	$350/T
Cost of products sold	78,688,000	241	148,040,000	223	159,896,000	222	159,903,000	221
Gross profit before depreciation	22,023,000	67	73,513,000	111	91,877,000	127	93,262,000	129
General administrative expenses	16,689,000	51	15,767,000	24	11,875,000	16	11,465,000	16
Depreciation	32,613,000	100	32,613,000	49	32,613,000	45	32,613,000	45
Operating profit	-27,279,000	-84	25,133,000	38	47,389,000	66	49,184,000	68
Non-operating expenses	40,431,000	124	42,783,000	65	40,820,000	57	35,776,000	49
Current profit before tax	-67,710,000	-208	-17,650,000	-27	6,569,000	9	13,408,000	19

Table 11.18 Summary of profit and loss (2)
(Base Case)

Item \ Year	5		6		7		8	
Quantity of products sold	723,330 T		723,330 T		723,330 T		723,330 T	
Net sales	US$253,165,000	$350/T	US$253,165,000	$350/T	US$253,165,000	$350/T	US$253,165,000	$350/T
Cost of products sold	159,886,000	221	158,516,000	219	158,456,000	219	158,456,000	219
Gross profit before depreciation	93,279,000	129	94,649,000	131	94,709,000	131	94,709,000	131
General administrative expenses	7,778,000	11	6,651,000	9	2,358,000	3	2,358,000	3
Depreciation	32,613,000	45	32,613,000	45	32,613,000	45	32,613,000	45
Operating profit	52,888,000	73	55,385,000	77	59,738,000	83	59,738,000	83
Non-operating expenses	30,044,000	41	17,462,000	24	13,671,000	19	11,904,000	16
Current profit before tax	22,844,000	32	37,923,000	53	46,067,000	64	47,834,000	67

Table 11.19 Summary of profit and loss (1)
(Escalation Case: Import duty imposed)

Item \ Year	1		2		3		4	
Quantity of products sold	326,980 T		663,330 T		721,410 T		723,330 T	
Net sales	US$134,717,000	$412/T	US$296,510,000	$447/T	US$336,900,000	$467/T	US$338,518,000	$468/T
Cost of products sold	117,839,000	360	222,800,000	336	240,630,000	334	240,608,000	333
Gross profit before depreciation	16,878,000	52	73,710,000	111	96,270,000	133	97,910,000	135
General administrative expenses	23,661,000	72	22,347,000	34	16,796,000	23	16,212,000	22
Depreciation	40,968,000	125	40,968,000	62	40,968,000	57	40,968,000	57
Operating profit	-47,751,000	-145	10,395,000	15	38,506,000	53	40,730,000	56
Non-operating expenses	51,761,000	158	57,439,000	87	58,216,000	81	55,260,000	76
Current profit before tax	-99,512,000	-303	-47,044,000	-72	-19,710,000	-28	-14,530,000	-20

Table 11.19 Summary of profit and loss (2)
(Escalation Case: Import duty imposed)

Item \ Year	5		6		7		8	
Quantity of products sold	723,330 T		723,330 T		723,330 T		723,330 T	
Net sales	US$338,518,000	$468/T	US$338,518,000	$468/T	US$338,518,000	$468/T	US$338,518,000	$468/T
Cost of products sold	240,582,000	333	239,212,000	331	239,152,000	331	239,152,000	331
Gross profit before depreciation	97,936,000	135	99,306,000	137	99,366,000	137	99,366,000	137
General administrative expenses	10,954,000	15	9,347,000	13	3,212,000	4	3,212,000	4
Depreciation	40,968,000	57	40,757,000	57	40,757,000	57	40,757,000	57
Operating profit	46,014,000	63	49,202,000	67	55,397,000	76	55,397,000	76
Non-operating expenses	51,837,000	71	38,072,000	53	32,645,000	45	25,832,000	36
Current profit before tax	-5,823,000	-8	11,130,000	14	22,752,000	31	29,565,000	40

Table 11.20 Summary of profit and loss (1)
(Escalation Case: Import duty exempted)

Item \ Year	1		2		3		4	
Quantity of products sold	326,980 T		663,330 T		721,410 T		723,330 T	
Net sales	US$134,717,000	$412/T	US$296,510,000	$447/T	US$336,900,000	$467/T	US$338,518,000	$468/T
Cost of products sold	112,714,000	345	212,596,000	320	229,752,000	318	229,785,000	318
Gross profit before depreciation	22,003,000	67	83,914,000	127	107,148,000	149	108,733,000	150
General administrative expenses	23,661,000	72	22,347,000	34	16,796,000	23	16,212,000	22
Depreciation	40,968,000	125	40,968,000	62	40,968,000	57	40,968,000	57
Operating profit	-42,626,000	-130	20,599,000	31	49,384,000	69	51,553,000	71
Non-operating expenses	51,513,000	158	56,630,000	85	56,009,000	77	51,485,000	71
Current profit before tax	-94,139,000	-288	-36,031,000	-54	-6,625,000	-8	68,000	0

Table 11.20 Summary of profit and loss (2)
(Escalation Case: Import duty exempted)

Item \ Year	5		6		7		8	
Quantity of products sold	723,330 T		723,330 T		723,330 T		723,330 T	
Net sales	US$338,518,000	$468/T	US$338,518,000	$468/T	US$338,518,000	$468/T	US$338,518,000	$468/T
Cost of products sold	229,762,000	318	228,392,000	316	228,332,000	316	228,332,000	316
Gross profit before depreciation	108,756,000	150	110,126,000	152	110,186,000	152	110,186,000	152
General administrative expenses	10,954,000	15	9,347,000	13	3,212,000	4	3,212,000	4
Depreciation	40,968,000	57	40,757,000	57	40,757,000	57	40,757,000	57
Operating profit	56,834,000	78	60,022,000	82	66,217,000	91	66,217,000	91
Non-operating expenses	46,301,000	64	30,573,000	42	22,949,000	32	16,677,000	23
Current profit before tax	10,533,000	14	29,449,000	40	43,268,000	59	49,540,000	68

11.5 Cash Flow

The cash flow for each Case is as shown in Table 11.28, 32, 36. It is assumed that the interest rate for the short-term loan for working capital is 12% per annum, and the interest be paid in the following year. The principal also is repaid in the next year following the year during which it was financed.

The following paragraphs describe the summary of each Case.

(1) Base Case

In the -1st year, the minimum constant working capital has a surplus of US$8,710,000. As repayment of the long-term loan (Loan 4 - US$17,000,000) begins, and the total interest is as large as US$32,000,000 in the 1st year, working capital falls short of US$36,000,000 though the surplus fund of the previous year is added, and it is necessary to have a short-term loan finance to cover that shortage.

(Note: In the olumn of "Surplus/Deficit" in the table of cash flow, [-8,710] for the first year means that the surplus fund of [8,710] in the -1st year is all spent in the 1st year.)

Short-term loan is decreased from the 3rd year; US$7,000,000 in the 4th year, and zero in the 5th year. After the 5th year, fund surplus will increase.

In the Base Case, there is a short-term loan finance of US$36,000,000 to $37,000,000 during the first two years, but there would be no significant problem involving the cash flow. Table 11.21 shows long-term debt-service coverage of 1.46 in the 4th year and 1.60 in the 5th year.

(2) Escalation Case with Import Duty Imposed

As the interest (US$42,000,000) for the long-term loan must be paid in the 1st year together with repayment of the Loan 4 (US$26,000,000), it is necessary to borrow a short-term loan of US$74,000,000. In this Escalation Case, since profitability is low it is difficult to have sufficient working capital. Also, as the short-term loan must be repaid in the following year, working capital necessary for the repayment of the short-term loan and its interest becomes a large pressing factor, and therefore it

becomes necessary to borrow another short-term loan of US$106,000,000. Further, a short-term loan of US$122,000,000 occurs in the 3rd year, US$136,000,000 in the 4th year and US$145,000,000 in the 5th year at the highest. After the 5th year, working capital shortage gradually decreases along with progressive repayment of the long-term loan; being US$76,000,000 in the 8th year, US$25,000,000 in the 10th year, and finally zero in the 11th year.

In this Escalation Case, there is an annual shortage of working capital exceeding US$100,000,000 for a period of six years from the 2nd to the 7th year. This is a very serious situation. Also, long-term debt-service coverage stands very low, ranging from -0.12 to 1.28 for a period of six years until the 6th year when the Loan 4 is completely repaid. After all, the significant factors that adversely affect the profit and loss and the cash flow for this Escalation Case derives from the facts that the escalation rate of sales price is set conservatively,

that imposition of import duty on raw materials makes cost higher, resulting in low profitability, and that during the construction period, the Loan 4 whose interest rate is the highest of all, reaches as much as US$158,000,000 in the -1st year.

(3) Escalation Case with Import Duty Exempted.

In this Escalation Case, the cost is US$15/ton less compared with the preceding Escalation Case, which corresponds to the amount of exempted import duty, and this eases cash flow so much: the short-term loan in the 1st year is US$69,000,000, US$89,000,000 in the 2nd year, finally peaks at US$91,000,000 in the 3rd year, after which follows decrease until the 9th year when no short-term loan becomes necessary.

Although long-term debt-service coverage is somewhat better (Table 11.21) than in the Case with import duty imposed, there is the same serious problem as described in the preceding Case.

Table 11.21 Long-term debt-service coverage

Case \ Year	1	2	3	4	5	6	7	8
Base Case	0.09	1.08	1.30	1.30	1.46	1.60	2.71	2.82
Escalation Case (Import duty imposed)	-0.12	0.63	0.97	1.00	1.15	1.28	2.46	2.56
Escalation Case (Import duty exempted)	-0.05	0.81	1.11	1.14	1.30	1.44	2.74	2.85

Note: Ratio of 1.5 or more of the long-term debt-service coverage are generally acceptable.

11.6 Balance Sheet

Balance sheet forecast is shown on Table 11.29, 33, 37. The current ratio for each Case until the 8th year is as shown below.

Table 11.22 Current ratio for each case

Case \ Year	1	2	3	4	5	6	7	8
Base case	0.53	0.70	1.14	3.82	∞	2.30	2.46	2.78
Escalation Case (Import duty imposed)	0.41	0.38	0.33	0.30	0.29	0.29	0.34	0.41
Escalation Case (Import duty exempted)	0.41	0.42	0.41	0.42	0.46	0.44	0.58	0.85

In the Escalation Cases, the levels of inventory are low, while the levels of short-term loan are high, resulting in the considerably low current ratios. This would indicate the same problem pointed out in the section "Cash flow."

11.7 Evaluation of Invested Capital Efficiency with DCF Method.

Through comparison of the internal rates of return on equity as well as on investment by using the discounted cash flow method (DCF method), evaluation of invested capital efficiencies for three Cases is made as follows.

It was assumed that the project year consists of 4 years for construction and 17 years after start-up, and that the fixed assets can be sold at some remaining book values at the end of the project year. (See Table 11.23 for comparison and see "Note" for the definition of the DCF method.)

(1) Base Case

Based on these assumptions, the internal rate of return on equity (ROE) for Base Case is 12.49% and the internal rate of return on

investment (ROI) is 9.21%.

The level of the 9.21% ROI is somewhat exceeding the weighted average interest of 7.7% on the long-term loans, and in this respect the 9.21% ROI is considered to be passable. But if we consider that the averaged 7.7% is lower than general level of interest rates due to soft loans like Loan 1, ROI=9.21% (ROE=12.49%) cannot be considered to be a satisfactory level for the project.

(2) Escalation Case with Import Duty Imposed

In this Case, ROE becomes 6.12% and ROI 5.70%. The latter considerably falls short of the weighted average interest rate of 7.9% on the long-term loans showing that the project is financially infeasible. The unsatisfactory internal rates of return in this Case sufficiently support the descriptions given in paragraph 11.4.4 "Summary of Profit and Loss" and paragraph 11.5 "Cash Flow."

(3) Escalation Case with Import Duty Exempted

In this Case, 9.46% ROE and 7.53% ROI shows that the internal rates of return considerably

turns favorable if the import duty on raw materials is exempted. However, this Case itself is not considered to be a feasible one because, like the Case in (2) above, ROI falls short of the weighted average interest rate of 7.9% on the long-term loans.

Note: Definition of the DCF method

The general formula of the DCF method can be expressed as follows:

$$\Sigma \frac{I_n}{(1+i)^n} = \Sigma \frac{C_n}{(1+i)^n}$$

Where i is the internal rate of return on equity or investment. A rate of interest (i) is found to make both side of equation equal making the present value of all cash flow equals zero.

Where, in the case of ROE,

I_n: amount of equity capital invested in the year n.

C_n: cash flow in the year n.

(Cash flow means profit after tax but before dividend + Depreciation cost + Amortization cost of deferred asset - Repaid loan)

Where, in the case of ROI,

I_n: total amount of investment in the year n (Equity capital + Long-term loan).

C_n: cash flow in the year n (Cash flow means profit after tax but before dividend + Depreciation cost + Amortization cost of deferred asset + Paid interest on long-term loan)

11.8 Study of Financial Feasibility

In order that the project may be judged financially feasible, it is desirable that ROE should be 15% or more and ROI 10% or more. The following study deals with both the sales price aspect and cost aspect to secure the satisfactory level of IRR.

11.8.1 Study of Sales Price Aspect

The study of the satisfactory sales price level necessary to secure the above mentioned requirements (ROE 15% or more and ROI 10% or more) and the viability of the price level has resulted as follows:

a) In the Base Case, when the current sales price of US$350/ton is raised to US$362/ton, requirements above can be met. The sales price of US$362/ton seems viable judging from the gradually escalating trend of bar and rod price in the past. (See Fig.35-1, Chapter 3.)

b) In the Escalation Case where import duty is imposed, the current sales price of US$468/ton has to be raised to US$518/ton resulting the annual price escalation rate of 8.2%, instead of 6%.

c) In the Escalation Case where import duty is exempted, the sales price has to be US$502/ton. This means the annual price escalation of 7.5%.

These annual sales price escalation rates of 8.2% (item b) and 7.5% (item c) can be considered viable like in the case with item a) when judging them from the past bar & rod sales price evolution.

11.8.2 Study of Cost Aspect

By revising assumptions for the cost accounting, the above mentioned requirements can also be met. Controllable factors include the prices of natural gas, electricity and water, rent of land, import duty on raw materials, and extension of the period of corporate tax holiday from 5 to 8 years. But the following two conditions are examined here.

The price of natural gas used in this feasibility study is set at a very high level (see paragraph 10.1.12). If this price is replaced by the incentive rate prevailing as of March, 1979, the cost of natural gas per ton of product becomes US$35/ton lower from US$46/ton to US$11/ton in the Escalation Case.

Also, if raw materials are exempted from import duty, the cost becomes lower by US$15/ton (see paragraph 10.2.3). Therefore, if we put the two conditions together, the cost decreases by US$50 ton, and assuming that sales price escalation is 6% as established initially, 15.22% ROE and 10.79% ROI can be secured. Also, if we apply these two conditions to the Base Case, 17.19% ROE and 11.63% ROI are obtained.

11.8.3 Proposal from JICA

As was mentioned above, 6% or more of the price escalation is possible, judging from the past price trend.

However, considering that the objective of the project is to supply construction material for low cost housing at the prices as low as possible, we propose to Egyptian Government to adopt the policy of supplying natural gas at lowest possible price, and granting import duty exemption for raw materials of this project, in order to make this project financially feasible, rather than resorting simply to higher sales prices.

From this viewpoint, the result of financial analysis based on incentive natural gas price and import duty exemption for raw materials, is presented in Table 11.39 through 11.48 as "JICA's recommended Case".

Table 11.23 Comparison of internal rate of return for each Case

Case	Sales price	IRR (%)	
		ROE	ROI
Base Case	US$350/T	12.49	9.21
Escalation Case with import duty imposed	468	6.12	5.70
Escalation Case with import duty exempted	468	9.46	7.53
Base Case (To find sales price with which to achieve ROE 15%)	362	14.91	10.47
Escalation Case with import duty imposed (To find sales prices with which to achieve ROE 15%)	518	14.97	10.65
Escalation Case with import duty exempted (To find sales price with which to achieve ROE 15%)	502	14.95	10.64
Escalation Case with import duty imposed (Natural gas incentive rate)	468	12.81	9.45
Escalation Case with import duty exempted (Natural gas incentive rate)	468	15.22	10.79
Base Case (Natural gas incentive rate)	350	17.19	11.63

11.9 Sensitivity Analysis

Effects of changes in the following conditions on the values of ROE and ROI for each Case are examined; where (1) capital cost increases, (2) production cost increases, (3) quantity of products sold decreases, (4) production is concentrated on small-size products (6mm and 8mm in diameter), and (5) construction period is extended for a period of 1 year (from 4 years to 5 years).

Comparison is based on the Escalation Case with import duty exempted and on the ROE of 15%.

Table 11.24 shows the result. The summary of each Case is as outlined below.

(1) Where capital cost increases: The direct effect resulting from increased capital cost and the effect resulting from increased amortization cost are reflected.

(2) Where production cost increases: Amortization cost, general administrative expenses, etc. are not included.

(3) Where quantity of products sold decreases:

In the case of the quantity of products sold decreasing by 5%, the blend ratio of scrap drops from 25% to 20%, resulting in some decrease in cost. But the effect of decreased total marginal profit accompanied by decreased quantity of products sold is greater, causing the ROE to drop from 14.95% to 14.12%.

A decrease of 10% of the quantity of products sold means final product of 651,000 tons, and the blending ratio of scrap becomes as low as 16%. By the same reason as in the case with 5% decreases, profitability further decreases.

(4) Where production is concentrated on small-size products: In the case of production being concentrated on small-size items of 6 and 8mm in diameter, output decreases to about 650,000 to 644,000 tons/year, which is nearly the same level as in the case having a 10% decrease in the quantity sold. Consequently, lower cost occurs due to a decreased blend ratio of scrap

and the sales price increases (US$4 to 8/ton) due to the size extra resulting from the production concentrated on small-sized items. On the other hand, however, the effect of a decrease in the marginal profit is greater, resulting after all ROE drops from 14.95% to 13.79%.

(5) Where construction period is extended for 1 year: Extension of the construction period for 1 year brings about a increase of 11.7% in the total investment, negative effect on cash flow, resulting in a drop of ROE from 14.95% to 12.15%.

Table 11.24 Sensitivity analysis based on DCF

Case		IRR (%) ROE	IRR (%) ROI	Remarks
Increase in capital cost	10%	12.76	9.64	
	15%	11.61	9.09	
	20%	10.69	8.55	
Increase in production cost	10%	9.64	7.60	
	15%	6.19	5.69	
Decrease in quantity sold	5%	14.12	10.18	
	10%	13.27	9.72	
Production concentrated on small-sized items		13.79	10.01	
Construction period extended for 1 year		12.15	9.38	
(Comparison basis) Escalation Case with import duty exempted: Sales price = US$502/ton		14.95	10.64	

11.10 Foreign Currency Balance

Based on future supply and demand forecast, it is considered that all products from the project will be directed to domestic consumption. As the project itself, since it will have no foreign currency income because of no export, and a great amount of foreign currency is to be expended for the import

of equipment, machines and raw materials, the balance of foreign exchange will be in the red.

But from the national point of view, however, through the attainment of the project, it can be expected that the present and future import of bars and rods to be decreased largely as a result of import substitution. Therefore, with consideration given to the effect of foreign currency saving attained by not importing bars and rods, the project will greatly contribute to improving foreign exchange balance on national basis.

Tables 11.25 and 11.26 show the status of foreign balance of the project for the Base Case and the Escalation Cases. The result shows net foreign exchange balance is largely in the black if we include foreign exchange saving by import substitution. It is apparent that the project will contribute for the improvement of Egyptian foreign exchange account.

Table 11-25 Foreign Currency Cash Flow (Base Case)

(Unit: US$1,000)

Item \ Year	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Foreign currency inflow																					
Financial resources total	13,100	80,950	281,169	104,543	36,467	36,976	23,249	7,065	0	0	0	0	0	0	0	0	0	0	0	0	0
Export sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total FC inflow	13,100	80,950	281,169	104,543	36,467	36,976	23,249	7,065	0	0	0	0	0	0	0	0	0	0	0	0	0
Foreign currency outflow																					
Construction cost	13,100	80,607	257,786	65,002	0	0	0	0	3,860	0	0	0	0	3,860	0	0	0	0	0	0	0
Operating cost	0	0	0	16,503	63,102	111,705	110,861	110,503	106,651	104,190	100,263	100,263	100,263	100,263	100,263	100,263	100,263	100,263	100,263	100,261	100,263
Interest - long term	0	343	5,366	17,653	28,741	27,089	25,436	22,499	19,217	15,934	12,652	11,021	9,374	7,669	6,713	5,907	5,099	4,292	3,839	3,577	3,315
- short term	0	0	0	0	0	4,376	4,437	2,790	848	0	0	0	0	0	0	0	0	0	0	0	0
Payment - long term	0	0	0	0	13,768	13,768	29,831	34,149	34,149	34,149	20,381	20,871	22,486	16,074	14,293	14,293	14,293	9,871	7,475	7,475	7,475
short term	0	0	0	0	0	36,467	36,976	23,249	7,065	0	0	0	0	0	0	0	0	0	0	0	0
Dividend	0	0	0	0	0	0	0	0	0	0	4,835	5,874	6,099	6,326	6,561	7,793	7,913	8,033	8,154	8,218	8,251
Total FC outflow	13,100	80,950	281,152	99,158	105,611	193,405	207,541	193,190	171,790	154,273	138,131	138,029	138,222	134,192	127,830	128,256	127,568	122,459	123,591	119,533	119,304
Surplus/Deficit	0	0	17	5,385	-69,144	-156,429	-184,292	-186,125	-171,790	-154,273	-138,131	-138,029	-138,222	-134,192	-127,830	-128,256	-127,568	-122,459	-123,591	-119,533	-119,304
Cumulative FC balance	0	0	17	5,402	-63,742	-220,171	-404,463	-590,588	-762,378	-916,651	-1,054,782	-1,192,811	-1,331,033	-1,465,225	-1,593,055	-1,721,311	-1,848,879	-1,971,338	-2,094,929	-2,214,462	-2,333,766
(Import substitution)	0	0	0	0	98,095	215,583	245,281	246,655	246,655	246,655	246,655	246,655	246,655	246,655	246,655	246,655	246,655	246,655	246,655	246,655	246,655
(Net FC balance)	0	0	17	5,385	28,951	59,154	60,989	60,530	74,865	92,382	108,524	108,626	108,433	112,463	118,825	118,399	119,087	124,196	123,064	127,122	127,351
(Cumulative net FC balance)	0	0	17	5,402	34,353	93,507	154,496	215,026	289,891	382,273	490,797	599,423	707,856	820,319	939,144	1,057,543	1,176,630	1,300,826	1,423,890	1,551,012	1,678,363

Table 11-26 Foreign Currency Cash Flow (Escalation Case: Tariff)

(Unit: US$1,000)

Item \ Year	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Foreign currency inflow																					
Financial resources total	13,968	94,515	344,445	135,964	73,571	106,306	121,761	136,349	145,263	143,170	103,260	76,399	51,942	25,002	0	0	0	0	0	0	0
Export sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total FC inflow	13,968	94,515	344,445	135,964	73,571	106,306	121,761	136,349	145,263	143,170	103,260	76,399	51,942	25,002	0	0	0	0	0	0	0
Foreign currency outflow																					
Construction cost	13,968	92,019	338,207	85,227																	
Operating cost				23,154	86,977	154,520	153,274	152,770	147,366	144,490	138,980	138,980	138,980	138,980	138,980	138,980	138,980	138,980	138,980	138,980	138,980
Interest - long term		367	6,238	20,157	34,545	32,403	30,262	26,565	22,537	18,507	14,478	12,590	10,684	8,712	7,657	6,796	5,936	5,075	4,629	4,314	3,999
- short term						8,829	12,757	14,611	16,362	17,432	17,180	12,391	9,168	6,233	3,000	0	0	0	0	0	0
Repayment - long term					17,844	17,844	37,285	41,442	41,442	41,442	23,598	24,122	26,000	18,150	15,818	15,818	15,818	10,640	9,000	9,000	9,000
- short term						73,571	106,306	121,761	136,349	145,263	143,170	103,260	76,399	51,942	25,002	0	0	0	0	0	0
Dividend												2,901	3,770	4,441	5,084	7,028	7,538	7,665	7,792	7,853	7,893
Total FC outflow	13,968	92,386	344,445	128,538	139,366	287,167	339,884	357,149	364,056	367,134	337,406	294,244	265,001	228,458	195,541	168,622	168,272	162,360	160,401	160,147	159,872
Surplus/Deficit	0	2,129	0	7,426	-65,795	-180,861	-218,123	-220,800	-218,793	-223,964	-234,146	-217,845	-213,059	-203,456	-195,541	-168,622	-168,272	-162,360	-160,401	-160,147	-159,872
Cumulative FC balance		2,129	2,129	9,555	-56,240	-237,101	-455,224	-676,024	-894,817	-1,118,781	-1,352,927	-1,570,772	-1,783,831	-1,987,287	-2,182,828	-2,351,450	-2,519,722	-2,682,082	-2,842,483	-3,002,630	-3,162,502
(Import substitution)	0	0	0	0	131,120	288,550	328,243	329,838	329,838	329,838	329,838	329,838	329,838	329,838	329,838	329,838	329,838	329,838	329,838	329,838	329,838
(Net FC balance)	0	2,129	0	7,426	65,325	107,689	110,120	109,038	111,045	105,874	95,692	111,993	116,779	126,382	134,297	161,216	161,566	169,478	169,437	169,691	169,966
(Cumulative net FC balance)	0	2,129	2,129	9,555	74,880	182,569	292,689	401,727	512,772	618,646	714,338	826,331	943,110	1,069,492	1,203,789	1,365,005	1,526,571	1,694,049	1,863,486	2,033,177	2,203,143

Table 11-27

PROFIT AND LOSS STATEMENT (BASE CASE)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	-4 (1)	-3 (2)	-2 (3)	-1 (4)	1 (5)	2 (6)	3 (7)	4 (8)	5 (9)	6 (10)
<SALES>										
QUANTITY (1000TON)	0.00	0.00	0.00	0.00	326.98	663.33	721.41	723.33	723.33	723.33
AVERAGE UNIT SALES PRICE	0.000	0.000	0.000	0.000	0.308	0.334	0.349	0.350	0.350	0.350
REVENUE	0	0	0	0	100711	221553	251773	253165	253165	253165
<COST OF PRODUCTS SOLD>	0	0	0	0	78688	148040	159896	159903	159886	158516
** GROSS PROFIT	0	0	0	0	22023	73513	91877	93262	93279	94649
<SELLING & ADMINIST. EXP.>										
SELLING EXPENSES	0	0	0	0	0	0	0	0	0	0
GENERAL & ADMINIST. EXP.	0	0	0	0	16689	15767	11875	11465	7778	6651
<DEPRECIATION>	0	0	0	0	32613	32613	32613	32613	32613	32613
** OPERATING PROFIT	0	0	0	0	-27279	25133	47389	49184	52888	55385
<NON-OPERATING EXPENSES>										
INTEREST LONG-TERM	0	0	0	0	32486	30464	28440	25043	21253	17462
SHORT-TERM	0	0	0	0	0	4376	4437	2790	848	0
AMORT. OF PRE-PROD. EXP.	0	0	0	0	7943	7943	7943	7943	7943	0
OTHERS	0	0	0	0	0	0	0	0	0	0
** PROFIT BEFORE TAX	0	0	0	0	-67710	-17650	6569	13408	22844	37923
<DIVIDEND>	0	0	0	0	0	0	0	0	0	32235
<TAX>	0	0	0	0	0	0	0	0	0	2258
** NET PROFIT AFTER TAX	0	0	0	0	-67710	-17651	6568	13408	22844	35665
** RETAINED PROFIT	0	0	0	0	-67710	-17651	6568	13408	22844	3430
ACCUMULATED RETAINED PROFIT	0	0	0	0	-67710	-85362	-78794	-65386	-42542	-39112

PROFIT AND LOSS STATEMENT (BASE CASE)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	7 (11)	8 (12)	9 (13)	10 (14)	11 (15)	12 (16)	13 (17)	14 (18)	15 (19)	16 (20)
<SALES>										
QUANTITY (1000TON)	723.33	723.33	723.33	723.33	723.33	723.33	723.33	723.33	723.33	723.33
AVERAGE UNIT SALES PRICE	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350
REVENUE	253165	253165	253165	253165	253165	253165	253165	253165	253165	253165
<COST OF PRODUCTS SOLD>	158456	158456	158456	158456	158456	158456	158456	158456	158456	158456
** GROSS PROFIT	94709	94709	94709	94709	94709	94709	94709	94709	94709	94709
<SELLING & ADMINIST. EXP.>										
SELLING EXPENSES	0	0	0	0	0	0	0	0	0	0
GENERAL & ADMINIST. EXP.	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358
<DEPRECIATION>	32613	32613	32613	32613	24048	24048	24048	24048	24048	24048
** OPERATING PROFIT	59738	59738	59738	59738	68303	68303	68303	68303	68303	68303
<NON-OPERATING EXPENSES>										
INTEREST LONG-TERM	13671	11904	10120	8279	7186	6241	5297	4353	3851	3588
SHORT-TERM	0	0	0	0	0	0	0	0	0	0
AMORT. OF PRE-PROD. EXP.	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
** PROFIT BEFORE TAX	46067	47834	49618	51459	61117	62062	63006	63950	64452	64715
<DIVIDEND>	39157	40659	42175	43740	51950	52752	53555	54358	54784	55008
<TAX>	2743	2848	2955	3064	3640	3696	3752	3808	3838	3854
** NET PROFIT AFTER TAX	43324	44986	46663	48394	57478	58365	59254	60142	60614	60861
** RETAINED PROFIT	4167	4327	4488	4654	5528	5613	5699	5784	5830	5853
ACCUMULATED RETAINED PROFIT	-34945	-30618	-26130	-21476	-15948	-10334	-4636	1149	6978	12832

PROFIT AND LOSS STATEMENT (BASE CASE)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	17 (21)	18 (22)
<SALES>		
QUANTITY (1000TON)	723.33	723.33
AVERAGE UNIT SALES PRICE	0.350	0.350
REVENUE	253165	253165
<COST OF PRODUCTS SOLD>	158456	158456
** GROSS PROFIT	94709	94709
<SELLING & ADMINIST. EXP.>		
SELLING EXPENSES	0	0
GENERAL & ADMINIST. EXP.	2358	2358
<DEPRECIATION>	24048	3830
** OPERATING PROFIT	68303	88521
<NON-OPERATING EXPENSES>		
INTEREST LONG-TERM	3326	3063
SHORT-TERM	0	0
AMORT. OF PRE-PROD. EXP.	0	0
OTHERS	0	0
** PROFIT BEFORE TAX	64977	85458
<DIVIDEND>	55231	72639
<TAX>	3869	5089
** NET PROFIT AFTER TAX	61108	80369
** RETAINED PROFIT	5877	7730
ACCUMULATED RETAINED PROFIT	18769	26499

Table 11-28

CASH - FLOW PROJECTION (BASE CASE)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	-4 (1)	-3 (2)	-2 (3)	-1 (4)	1 (5)	2 (6)	3 (7)	4 (8)	5 (9)	6 (10)
<CASH INFLOW>										
FINANCIAL RESOURCES TOTAL	16864	107902	334547	142306	36467	36976	23249	7065	0	0
SALES REVENUE	0	0	0	0	100711	221553	251773	253165	253165	253165
* TOTAL CASH INFLOW	16864	107902	334547	142306	137178	258529	275022	260230	253165	253165
<CASH OUTFLOW>										
CONSTRUCTION COSTS	16864	107559	328191	96175	0	0	0	0	3860	0
OPERATING COSTS	0	0	0	18251	96535	170355	172240	171901	167666	165107
INTEREST LONG-TERM	0	343	6355	19170	32488	30464	28440	25043	21253	17462
SHORT-TERM	0	0	0	0	0	4376	4437	2790	848	0
REPAYMENT LONG-TERM	0	0	0	0	16865	16865	32928	37246	37246	37246
SHORT-TERM	0	0	0	0	0	36467	36976	23249	7065	0
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
TAX	0	0	0	0	0	0	0	0	0	0
* TOTAL CASH OUTFLOW	16864	107902	334546	133596	145888	258527	275021	260229	237938	219815
SURPLUS / DEFICIT	0	0	1	8710	-8710	2	1	1	15227	33350
CUMULATIVE CASH BALANCE	0	0	1	8711	1	3	4	5	15232	48582

CASH - FLOW PROJECTION (BASE CASE)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	7 (11)	8 (12)	9 (13)	10 (14)	11 (15)	12 (16)	13 (17)	14 (18)	15 (19)	16 (20)
<CASH INFLOW>										
FINANCIAL RESOURCES TOTAL	0	0	0	0	0	0	0	0	0	0
SALES REVENUE	253165	253165	253165	253165	253165	253165	253165	253165	253165	253165
* TOTAL CASH INFLOW	253165	253165	253165	253165	253165	253165	253165	253165	253165	253165
<CASH OUTFLOW>										
CONSTRUCTION COSTS	0	0	0	3860	0	0	0	0	3860	0
OPERATING COSTS	160814	160814	160814	160814	160814	160814	160814	160814	160814	160814
INTEREST LONG-TERM	13671	11904	10120	8279	7186	6241	5297	4353	3851	3588
SHORT-TERM	0	0	0	0	0	0	0	0	0	0
REPAYMENT LONG-TERM	20381	20871	22511	16099	14318	14318	14318	9896	7500	7500
SHORT-TERM	0	0	0	0	0	0	0	0	0	0
DIVIDENDS	32235	39157	40659	42175	43746	51950	52752	53555	54358	54784
TAX	2258	2743	2848	2955	3064	3640	3696	3752	3808	3838
* TOTAL CASH OUTFLOW	229359	235489	236952	234182	229122	236963	236877	232370	234191	230524
SURPLUS / DEFICIT	23806	17676	16213	18983	24043	16202	16288	20795	18974	22641
CUMULATIVE CASH BALANCE	72388	90064	106277	125260	149303	165505	181793	202588	221562	244203

CASH - FLOW PROJECTION (BASE CASE)

UNIT : 1,000DOLLARS

TAX(%) : 39.7% DIVIDEND(%) : 85.00

***** PERIOD *****	17 (21)	18 (22)
<CASH INFLOW>		
FINANCIAL RESOURCES TOTAL	0	0
SALES REVENUE	253165	253165
* TOTAL CASH INFLOW	253165	253165
<CASH OUTFLOW>		
CONSTRUCTION COSTS	0	0
OPERATING COSTS	160814	160814
INTEREST LONG-TERM	3326	3063
SHORT-TERM	0	0
REPAYMENT LONG-TERM	7500	7500
SHORT-TERM	0	0
DIVIDENDS	55068	55231
TAX	3854	3869
* TOTAL CASH OUTFLOW	230502	230477
SURPLUS / DEFICIT	22663	22688
CUMULATIVE CASH BALANCE	266866	289554

Table 11-29

BALANCE SHEET (BASE CASE)

UNIT : 1,000 DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	-4 (1)	-3 (2)	-2 (3)	-1 (4)	1 (5)	2 (6)	3 (7)	4 (8)	5 (9)	6 (10)
<<ASSETS>>	16864	124766	459313	601619	553511	519506	479420	439398	417931	418608
<CURRENT ASSETS>	0	0	1	26962	19410	25961	26431	26965	42194	75484
CASH	0	0	1	8711	1	3	4	5	15232	48582
ACCOUNTS RECEIVABLE	0	0	0	0	0	0	0	0	0	0
INVENTORY	0	0	0	18251	19409	25958	26427	26960	26962	26902
RAW MATERIAL	0	0	0	18251	13554	15405	15183	15750	15750	15750
SEMI-PRODUCTS	0	0	0	0	2434	4265	4565	4548	4550	4550
PRODUCTS	0	0	0	0	3421	6288	6679	6662	6662	6602
<FIXED ASSETS>	16864	124766	459312	574657	534101	493545	452989	412433	375737	343124
LAND	0	0	0	0	0	0	0	0	0	0
NET BUILDINGS & EQUIPMENTS	16094	122717	449049	534940	502327	469714	437101	404488	375735	343122
BUILDINGS & EQUIPMENTS	16094	122717	449049	534940	534940	534940	534940	534940	538800	538800
ACCUMULATED DEPRECIATION	0	0	0	0	32613	65226	97839	130452	163065	195678
NET PRE-PRODUCTION EXPENSES	770	2049	10263	39717	31774	23831	15888	7945	2	2
PRE-PRODUCTION EXPENSES	770	2049	10263	39717	39717	39717	39717	39717	39717	39717
ACCUMULATED AMORTIZATION	0	0	0	0	7943	15886	23829	31772	39715	39715

B A L A N C E S H E E T (BASE CASE)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	-4 (1)	-3 (2)	-2 (3)	-1 (4)	1 (5)	2 (6)	3 (7)	4 (8)	5 (9)	6 (10)
<<LIABILITIES & EQUITY>>	16864	124766	459313	601619	553511	519506	479420	439398	417931	418608
<<LIABILITIES>>	9800	91245	303656	421133	440735	424378	377723	324293	279980	277227
<CURRENT LIABILITIES>	0	0	0	0	36467	36976	23249	7065	0	34493
ACCOUNTS PAYABLE	0	0	0	0	0	0	0	0	0	34493
SHORT-TERM LOAN	0	0	0	0	36467	36976	23249	7065	0	0
<FIXED LIABILITIES>	9800	91245	303656	421133	404268	387402	354474	317228	279980	242734
LONG-TERM LOAN	9800	91245	303656	421133	404268	387402	354474	317228	279980	242734
<<EQUITY>>	7064	33521	155657	180486	112776	95124	101692	115106	137944	141374
CAPITAL	7064	33521	155657	180486	180486	180486	180486	180486	180486	180486
ACCUMULATED RETAINED PROFIT	0	0	0	0	-67710	-85362	-78794	-65386	-42542	-39112

B A L A N C E S H E E T (BASE CASE)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	7 (11)	8 (12)	9 (13)	10 (14)	11 (15)	12 (16)	13 (17)	14 (18)	15 (19)	16 (20)
<<ASSETS>>	409801	394864	378464	368694	368690	360844	353084	349831	348617	347210
<CURRENT ASSETS>	99290	116966	133179	152162	176206	192408	208696	229491	248465	271106
CASH	72388	90064	106277	125260	149303	165505	181793	202588	221562	244203
ACCOUNTS RECEIVABLE	0	0	0	0	0	0	0	0	0	0
INVENTORY	26902	26902	26902	26902	26903	26903	26903	26903	26903	26903
RAW MATERIAL	15750	15750	15750	15750	15751	15751	15751	15751	15751	15751
SEMI-PRODUCTS	4550	4550	4550	4550	4550	4550	4550	4550	4550	4550
PRODUCTS	6602	6602	6602	6602	6602	6602	6602	6602	6602	6602
<FIXED ASSETS>	310511	277898	245285	216532	192484	168436	144388	120340	100152	76104
LAND	0	0	0	0	0	0	0	0	0	0
NET BUILDINGS & EQUIPMENTS	310509	277896	245283	216530	192482	168434	144386	120338	100150	76102
BUILDINGS & EQUIPMENTS	538800	538800	538800	542660	542660	542660	542660	542660	546520	546520
ACCUMULATED DEPRECIATION	228291	260904	293517	326130	350178	374226	398274	422322	446370	470418
NET PRE-PRODUCTION EXPENSES	2	2	2	2	2	2	2	2	2	2
PRE-PRODUCTION EXPENSES	39717	39717	39717	39717	39717	39717	39717	39717	39717	39717
ACCUMULATED AMORTIZATION	39715	39715	39715	39715	39715	39715	39715	39715	39715	39715

****
******* B A L A N C E S H E E T (BASE CASE) *******
****

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	7 (11)	8 (12)	9 (13)	10 (14)	11 (15)	12 (16)	13 (17)	14 (18)	15 (19)	16 (20)
<<LIABILITIES & EQUITY>>	409801	394864	378464	368694	368690	360844	353084	349831	348617	347210
<<LIABILITIES>>	264253	244989	224101	209676	204144	190684	177225	168188	161144	153884
<CURRENT LIABILITIES>	41900	43507	45130	46804	55590	56448	57307	58166	58622	58862
ACCOUNTS PAYABLE	41900	43507	45130	46804	55590	56448	57307	58166	58622	58862
SHORT-TERM LOAN	0	0	0	0	0	0	0	0	0	0
<FIXED LIABILITIES>	222353	201482	178971	162872	148554	134236	119918	110022	102522	95022
LONG-TERM LOAN	222353	201482	178971	162872	148554	134236	119918	110022	102522	95022
<<EQUITY>>	145541	149868	154356	159010	164538	170152	175850	181635	187464	193318
CAPITAL	180486	180486	180486	180486	180486	180486	180486	180486	180486	180486
ACCUMULATED RETAINED PROFIT	-34945	-30618	-26130	-21476	-15948	-10334	-4636	1149	6978	12832

****
******* B A L A N C E S H E E T (BASE CASE) *******
****

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	17 (21)	18 (22)
<<ASSETS>>	345825	364683
<CURRENT ASSETS>	293769	316457
CASH	266866	289554
ACCOUNTS RECEIVABLE	0	0
INVENTORY	26903	26903
RAW MATERIAL	15751	15751
SEMI-PRODUCTS	4550	4550
PRODUCTS	6602	6602
<FIXED ASSETS>	52056	48226
LAND	0	0
NET BUILDINGS & EQUIPMENTS	52054	48224
BUILDINGS & EQUIPMENTS	546520	546520
ACCUMULATED DEPRECIATION	494466	498296
NET PRE-PRODUCTION EXPENSES	2	2
PRE-PRODUCTION EXPENSES	39717	39717
ACCUMULATED AMORTIZATION	39715	39715

BALANCE SHEET (BASE CASE)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	17 (21)	18 (22)
<<LIABILITIES & EQUITY>>	345825	364683
<<LIABILITIE..>>	146622	157750
<CURRENT LIABILITIES>	59100	77728
ACCOUNTS PAYABLE	59100	77728
SHORT-TERM LOAN	0	0
<FIXED LIABILITIES>	87522	80022
LONG-TERM LOAN	87522	80022
<<EQUITY>>	199195	206925
CAPITAL	180486	180486
ACCUMULATED RETAINED PROFIT	18709	26439

Table 11-30 LOAN REPAYMENT SCHEDULE (CASE:BASE) UNIT : 1,000DOL

INTEREST(%) LONG-1 : 3.5% LONG-2 : 10.00% LONG-3 : 8.00% LONG-4 : 12.00% SHORT : 12.00%

**** PERIOD ****	1 (-4)	2 (-3)	3 (-2)	4 (-1)	5 (1)	6 (2)	7 (3)	8 (4)	9 (5)	10 (6)
<BORROWING>										
LONG TERM										
LONG-1	9800	32000	104570	2836	0	0	0	0	0	0
LONG-2	0	48645	26355	0	0	0	0	0	0	0
LONG-3	0	0	81486	13455	0	0	0	0	0	0
LONG-4	0	0	0	101192	0	0	0	0	0	0
*** TOTAL (L)	9800	81445	212411	117477	0	0	0	0	0	0
SHORT TERM										
INT.WORK.CAP.	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	36467	36976	23249	7065	0	0
*** TOTAL (S)	0	0	0	0	36467	36976	23249	7065	0	0
*** TOTAL	9800	81445	212411	117477	36467	36976	23249	7065	0	0
<REPAYMENT>										
LONG TERM										
LONG-1	0	0	0	0	0	0	0	0	0	0
LONG-2	0	0	0	0	0	0	4422	6816	6818	6818
LONG-3	0	0	0	0	0	0	11641	13563	13563	13563
LONG-4	0	0	0	0	16865	16865	16865	16865	16865	16865
*** TOTAL (L)	0	0	0	0	16865	16865	32928	37246	37246	37246
SHORT TERM										
INT.WORK.CAP.	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	36467	36976	23249	7065	0
*** TOTAL (S)	0	0	0	0	0	36467	36976	23249	7065	0
*** TOTAL	0	0	0	0	16865	53332	69904	60496	44312	37247
<INTEREST>										
LONG TERM										
LONG-1	0	343	1491	5151	5250	5250	5250	5250	5250	5250
LONG-2	0	0	4864	7500	7500	7500	7500	7656	6376	5694
LONG-3	0	0	0	6519	7595	7595	7595	6664	5579	4494
LONG-4	0	0	0	0	12143	10119	8095	6072	4048	2024
*** TOTAL (L)	0	343	6355	19170	32488	30464	28440	25643	21253	17462
SHORT TERM										
INT.WORK.CAP.	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	4376	4437	2790	848	0
*** TOTAL (S)	0	0	0	0	0	4376	4437	2790	848	0
*** TOTAL	0	343	6355	19170	32488	34840	32878	27633	22101	17462
<BALANCE>										
LONG TERM										
LONG-1	9800	42600	147170	150000	150000	150000	150000	150000	150000	150000
LONG-2	0	48645	75000	75000	75000	75000	70578	63762	56941	50123
LONG-3	0	0	81486	94941	94941	94941	83300	69737	56174	42611
LONG-4	0	0	0	101192	84327	67461	50596	33731	16865	-0
*** TOTAL (L)	9800	91245	303656	421133	404268	387402	354474	317228	279980	242734
SHORT TERM										
INT.WORK.CAP.	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	36467	36976	23249	7065	0	0
*** TOTAL (S)	0	0	0	0	36467	36976	23249	7065	0	0
*** TOTAL	9800	91245	303656	421133	440735	424378	377723	324292	279981	242734

LOAN REPAYMENT SCHEDULE (CASE:BASE) UNIT : 1,000,000

INTEREST(%) LONG-1 : 3.50 LONG-2 : 10.00 LONG-3 : 8.00 LONG-4 : 12.00 SHORT : 12.00

**** PERIOD ****	11 (7)	12 (8)	13 (9)	14 (10)	15 (11)	16 (12)	17 (13)	18 (14)	19 (15)	20 (16)
<BORROWING>										
LONG TERM										
LONG-1	0	0	0	0	0	0	0	0	0	0
LONG-2	0	0	0	0	0	0	0	0	0	0
LONG-3	0	0	0	0	0	0	0	0	0	0
LONG-4	0	0	0	0	0	0	0	0	0	0
*** TOTAL (L)	0	0	0	0	0	0	0	0	0	0
SHORT TERM										
INT.WORK.CAP.	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
*** TOTAL (S)	0	0	0	0	0	0	0	0	0	0
*** TOTAL	0	0	0	0	0	0	0	0	0	0
<REPAYMENT>										
LONG TERM										
LONG-1	0	496	2136	7359	7500	7500	7500	7500	7500	7500
LONG-2	6818	6818	6818	6818	6818	6818	6818	2396	0	0
LONG-3	13563	13563	13563	1922	0	0	0	0	0	0
LONG-4	0	0	0	0	0	0	0	0	0	0
*** TOTAL (L)	20381	20871	22511	16099	14318	14318	14318	9896	7500	7500
SHORT TERM										
INT.WORK.CAP.	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
*** TOTAL (S)	0	0	0	0	0	0	0	0	0	0
*** TOTAL	20381	20871	22511	16099	14318	14318	14318	9896	7500	7500
<INTEREST>										
LONG TERM										
LONG-1	5250	5250	5235	5158	4961	4638	4376	4113	3851	3588
LONG-2	5612	4556	3649	2967	2265	1603	921	240	0	0
LONG-3	3409	2304	1239	154	0	0	0	0	0	0
LONG-4	0	0	0	0	0	0	0	0	0	0
*** TOTAL (L)	13671	11904	10120	8279	7186	6241	5297	4353	3851	3588
SHORT TERM										
INT.WORK.CAP.	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
*** TOTAL (S)	0	0	0	0	0	0	0	0	0	0
*** TOTAL	13671	11904	10120	8279	7186	6241	5297	4353	3851	3588
<BALANCE>										
LONG TERM										
LONG-1	156000	149504	147368	140022	132522	125022	117522	110022	102522	95022
LONG-2	43365	36547	29669	22856	16032	9214	2396	0	0	0
LONG-3	29048	15485	1922	-0	0	0	0	0	0	0
LONG-4	0	0	0	0	0	0	0	0	0	0
*** TOTAL (L)	222353	201482	178971	162872	148554	134236	119918	110022	102522	95022
SHORT TERM										
INT.WORK.CAP.	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
*** TOTAL (S)	0	0	0	0	0	0	0	0	0	0
*** TOTAL	222353	201482	178971	162872	148554	134236	119917	110021	102522	95022

****

*****

***** LOAN REPAYMENT SCHEDULE (CASE:BASE) ***** UNIT : 1,000DL

*****

****

INTEREST(%) LONG-1 : 3.50 LONG-2 : 10.00 LONG-3 : 8.00 LONG-4 : 12.00 SHORT : 12.00

**** PERIOD ****	21 (17)	22 (18)
<BORROWING>		
LONG TERM		
LONG-1	0	0
LONG-2	0	0
LONG-3	0	0
LONG-4	0	0
*** TOTAL (L)	0	0
SHORT TERM		
INT.WORK.CAP.	0	0
OTHER	0	0
*** TOTAL (S)	0	0
*** TOTAL	0	0
<REPAYMENT>		
LONG TERM		
LONG-1	7500	7500
LONG-2	0	0
LONG-3	0	0
LONG-4	0	0
*** TOTAL (L)	7500	7500
SHORT TERM		
INT.WORK.CAP.	0	0
OTHER	0	0
*** TOTAL (S)	0	0
*** TOTAL	7500	7500
<INTEREST>		
LONG TERM		
LONG-1	3326	3063
LONG-2	0	0
LONG-3	0	0
LONG-4	0	0
*** TOTAL (L)	3326	3063
SHORT TERM		
INT.WORK.CAP.	0	0
OTHER	0	0
*** TOTAL (S)	0	0
*** TOTAL	3326	3063
<BALANCE>		
LONG TERM		
LONG-1	87522	80022
LONG-2	0	0
LONG-3	0	0
LONG-4	0	0
*** TOTAL (L)	87522	80022
SHORT TERM		
INT.WORK.CAP.	0	0
OTHER	0	0
*** TOTAL (S)	0	0
*** TOTAL	87522	80022

Table 11-31

PROFIT AND LOSS STATEMENT (ESCALA:TARIFF)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	-4 (1)	-3 (2)	-2 (3)	-1 (4)	1 (5)	2 (6)	3 (7)	4 (8)	5 (9)	6 (10)
<SALES>										
QUANTITY (1000TON)	0.00	0.00	0.00	0.00	326.98	663.33	721.41	723.33	723.33	723.33
AVERAGE UNIT SALES PRICE	0.000	0.000	0.000	0.000	0.412	0.447	0.467	0.468	0.468	0.468
REVENUE	0	0	0	0	134717	296510	336900	338518	338518	338518
<COST OF PRODUCTS SOLD>	0	0	0	0	117839	222800	240630	240608	240582	239212
** GROSS PROFIT	0	0	0	0	16878	73710	96270	97910	97936	99306
<SELLING & ADMINIST. EXP.>										
SELLING EXPENSES	0	0	0	0	0	0	0	0	0	0
GENERAL & ADMINIST. EXP.	0	0	0	0	23661	22347	16796	16212	10954	9347
<DEPRECIATION>	0	0	0	0	40968	40968	40968	40968	40968	40757
** OPERATING PROFIT	0	0	0	0	-47751	10395	38506	40730	46014	49202
<NON-OPERATING EXPENSES>										
INTEREST LONG-TERM	0	0	0	0	42102	38951	35800	30990	25816	20640
SHORT-TERM	0	0	0	0	0	8829	12757	14611	16362	17432
AMORT. OF PRE-PROD. EXP.	0	0	0	0	9659	9659	9659	9659	9659	0
OTHERS	0	0	0	0	0	0	0	0	0	0
** PROFIT BEFORE TAX	0	0	0	0	-99512	-47044	-19710	-14530	-5823	11130
<DIVIDEND>	0	0	0	0	0	0	0	0	0	0
<TAX>	0	0	0	0	0	0	0	0	0	0
** NET PROFIT AFTER TAX	0	0	0	0	-99511	-47044	-19709	-14531	-5822	11131
** RETAINED PROFIT	0	0	0	0	-99511	-47044	-19709	-14531	-5822	11131
ACCUMULATED RETAINED PROFIT	0	0	0	0	-99511	-146555	-166264	-180795	-186617	-175487

PROFIT AND LOSS STATEMENT (ESCALA:TARIFF)

UNIT : 1,000DOLLARS

TAX(%) : 39.7% DIVIDEND(%) : 65.00

***** PERIOD *****	7 (11)	8 (12)	9 (13)	10 (14)	11 (15)	12 (16)	13 (17)	14 (18)	15 (19)	16 (20)
<SALES>										
QUANTITY (1000TON)	723.33	723.33	723.33	723.33	723.33	723.33	723.33	723.33	723.33	723.33
AVERAGE UNIT SALES PRICE	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468
REVENUE	338518	338518	338518	338518	338518	338518	338518	338518	338518	338518
<COST OF PRODUCTS SOLD>	239152	239152	239152	239152	239152	239152	239152	239152	239152	239152
** GROSS PROFIT	99366	99366	99366	99366	99366	99366	99366	99366	99366	99366
<SELLING & ADMINIST. EXP.>										
SELLING EXPENSES	0	0	0	0	0	0	0	0	0	0
GENERAL & ADMINIST. EXP.	3212	3212	3212	3212	3212	3212	3212	3212	3212	3212
<DEPRECIATION>	40757	40757	40757	40757	29933	29933	29933	29933	29933	29933
** OPERATING PROFIT	55397	55397	55397	55397	66221	66221	66221	66221	66221	66221
<NON-OPERATING EXPENSES>										
INTEREST LONG-TERM	15465	13441	11399	9291	8098	7102	6105	5108	4629	4314
SHORT-TERM	17180	12391	9168	6233	3000	0	0	0	0	0
AMORT. OF PRE-PROD. EXP.	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
** PROFIT BEFORE TAX	22752	29565	34830	39873	55123	59119	60116	61113	61592	61907
<DIVIDEND>	19339	25130	29606	33893	46854	50251	51099	51946	52353	52621
<TAX>	0	0	2074	2374	3283	3521	3580	3639	3668	3687
** NET PROFIT AFTER TAX	22752	29565	32756	37500	51840	55598	56537	57474	57924	58220
** RETAINED PROFIT	3413	4435	3150	3607	4986	5347	5438	5528	5571	5599
ACCUMULATED RETAINED PROFIT	-172074	-167639	-164489	-160882	-155896	-150549	-145111	-139584	-134013	-128413

****

PROFIT AND LOSS STATEMENT (ESCALA:TARIFF)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	17 (21)	18 (22)
<SALES>		
QUANTITY (1000TON)	723.33	723.33
AVERAGE UNIT SALES PRICE	0.468	0.468
REVENUE	338518	338518
<COST OF PRODUCTS SOLD>	239152	239152
** GROSS PROFIT	99366	99366
<SELLING & ADMINIST. EXP.>		
SELLING EXPENSES	0	0
GENERAL & ADMINIST. EXP.	3212	3212
<DEPRECIATION>	29933	4981
** OPERATING PROFIT	66221	91173
<NON-OPERATING EXPENSES>		
INTEREST LONG-TERM	3999	3684
SHORT-TERM	0	0
AMORT. OF PRE-PROD. EXP.	0	0
OTHERS	0	0
** PROFIT BEFORE TAX	62222	87489
<DIVIDEND>	52889	74366
<TAX>	3705	5210
** NET PROFIT AFTER TAX	58517	82279
** RETAINED PROFIT	5628	7913
ACCUMULATED RETAINED PROFIT	-122785	-114872

Table 11-32 CASH - FLOW PROJECTION (ESCALA:TARIFF)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	-4 (1)	-3 (2)	-2 (3)	-1 (4)	1 (5)	2 (6)	3 (7)	4 (8)	5 (9)	6 (10)
<CASH INFLOW>										
FINANCIAL RESOURCES TOTAL	18180	126187	417196	195579	73571	106306	121761	136349	145263	143170
SALES REVENUE	0	0	0	0	134717	296510	336900	338518	338518	338518
* TOTAL CASH INFLOW	18180	126187	417196	195579	208288	402816	458661	474867	483781	481688
<CASH OUTFLOW>										
CONSTRUCTION COSTS	18180	125820	409818	142360	0	0	0	0	3860	0
OPERATING COSTS	0	0	0	28257	143235	255210	258100	257650	251540	248499
INTEREST LONG-TERM	0	367	7377	21657	42102	38951	35800	30990	25816	20640
SHORT-TERM	0	0	0	0	0	8829	12757	14611	16362	17432
REPAYMENT LONG-TERM	0	0	0	0	26256	26256	45697	49854	49854	49854
SHORT-TERM	0	0	0	0	0	73571	106306	121761	136349	145263
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
TAX	0	0	0	0	0	0	0	0	0	0
* TOTAL CASH OUTFLOW	18180	126187	417195	192274	211593	402817	458660	474866	483781	481688
SURPLUS / DEFICIT	0	0	1	3305	-3305	-1	1	1	0	0
CUMULATIVE CASH BALANCE	0	0	1	3306	1	0	1	2	2	2

****

CASH - FLOW PROJECTION (E:CALA:TARIFF)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	7 (11)	8 (12)	9 (13)	10 (14)	11 (15)	12 (16)	13 (17)	14 (18)	15 (19)	16 (20)
<CASH INFLOW>										
FINANCIAL RESOURCES TOTAL	103260	76399	51942	25002	0	0	0	0	0	0
SALES REVENUE	338518	338518	338518	338518	338518	338518	338518	338518	338518	338518
* TOTAL CASH INFLOW	441778	414917	390460	363520	338518	338518	338518	338518	338518	338518
<CASH OUTFLOW>										
CONSTRUCTION COSTS	0	0	0	3860	0	0	0	0	3860	0
OPERATING COSTS	242364	242364	242364	242364	242364	242364	242364	242364	242364	242364
INTEREST LONG-TERM	15465	13441	11399	9291	8098	7102	6105	5108	4629	4314
SHORT-TERM	17180	12391	9168	6233	3000	0	0	0	0	0
REPAYMENT LONG-TERM	23598	24122	26000	18150	15818	15818	15818	10640	9000	9000
SHORT-TERM	143170	103260	76399	51942	25002	0	0	0	0	0
DIVIDENDS	0	19339	25130	29606	33893	46654	50251	51099	51946	52353
TAX	0	0	0	2074	2374	3283	3521	3580	3639	3668
* TOTAL CASH OUTFLOW	441777	414917	390460	363520	330549	315421	318059	312791	315438	311699
SURPLUS / DEFICIT	1	0	0	0	7969	23097	20459	25727	23080	26819
CUMULATIVE CASH BALANCE	3	3	3	3	7972	31069	51528	77255	100335	127154

****

****

******* CASH - FLOW PROJECTION (ESCALA:TARIFF) *******

****

****

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	17 (21)	18 (22)
<CASH INFLOW>		
FINANCIAL RESOURCES TOTAL	0	0
SALES REVENUE	338518	338518
* TOTAL CASH INFLOW	338518	338518
<CASH OUTFLOW>		
CONSTRUCTION COSTS	0	0
OPERATING COSTS	242364	242364
INTEREST LONG-TERM	3999	3684
SHORT-TERM	0	0
REPAYMENT LONG-TERM	9000	9000
SHORT-TERM	0	0
DIVIDENDS	52621	52889
TAX	3687	3705
* TOTAL CASH OUTFLOW	311671	311642
SURPLUS / DEFICIT	26847	26876
CUMULATIVE CASH BALANCE	154001	180877

Table 11-33

B A L A N C E S H E E T (ESCALA:TARIFF)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	-4 (1)	-3 (2)	-2 (3)	-1 (4)	1 (5)	2 (6)	3 (7)	4 (8)	5 (9)	6 (10)
<<ASSETS>>	18180	144367	561563	757142	704945	664380	614430	564633	517870	477054
<CURRENT ASSETS>	0	0	1	31563	29993	40055	40732	41562	41566	41507
CASH	0	0	1	3306	1	0	1	2	2	2
ACCOUNTS RECEIVABLE	0	0	0	0	0	0	0	0	0	0
INVENTORY	0	0	0	28257	29992	40055	40731	41560	41564	41505
RAW MATERIAL	0	0	0	28257	21122	24029	23664	24547	24547	24547
SEMI-PRODUCTS	0	0	0	0	3747	6562	7016	6989	6993	6993
PRODUCTS	0	0	0	0	5123	9464	10051	10024	10024	9965
<FIXED ASSETS>	18180	144367	561562	725579	674952	624325	573698	523071	476304	435547
LAND	0	0	0	0	0	0	0	0	0	0
NET BUILDINGS & EQUIPMENTS	17348	142121	549423	677284	636316	595348	554380	513412	476304	435547
BUILDINGS & EQUIPMENTS	17348	142121	549423	677284	677284	677284	677284	677284	681144	681144
ACCUMULATED DEPRECIATION	0	0	0	0	40968	81936	122904	163872	204840	245597
NET PRE-PRODUCTION EXPENSES	832	2246	12139	48295	38636	28977	19318	9659	0	0
PRE-PRODUCTION EXPENSES	832	2246	12139	48295	48295	48295	48295	48295	48295	48295
ACCUMULATED AMORTIZATION	0	0	0	0	9659	19318	28977	38636	48295	48295

****

B A L A N C E S H E E T (ESCALA:TARIFF)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	-4 (1)	-3 (2)	-2 (3)	-1 (4)	1 (5)	2 (6)	3 (7)	4 (8)	5 (9)	6 (10)
<<LIABILITIES & EQUITY>>	18180	144367	561563	757142	704945	664380	614430	564633	517870	477054
<<LIABILITIES>>	10485	105000	351135	529999	577314	583792	553549	518282	477342	425394
<CURRENT LIABILITIES>	0	0	0	0	73571	106306	121761	136349	145263	143170
ACCOUNTS PAYABLE	0	0	0	0	0	0	0	0	0	0
SHORT-TERM LOAN	0	0	0	0	73571	106306	121761	136349	145263	143170
<FIXED LIABILITIES>	10485	105000	351135	529999	503743	477486	431788	381933	332079	282224
LONG-TERM LOAN	10485	105000	351135	529999	503743	477486	431788	381933	332079	282224
<<EQUITY>>	7695	39367	210428	227143	127632	80588	60879	46348	40526	51656
CAPITAL	7695	39367	210428	227143	227143	227143	227143	227143	227143	227143
ACCUMULATED RETAINED PROFIT	0	0	0	0	-99511	-146555	-166264	-180795	-186617	-175487

BALANCE SHEET (ESCALA:TARIFF)

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	7 (11)	8 (12)	9 (13)	10 (14)	11 (15)	12 (16)	13 (17)	14 (18)	15 (19)	16 (20)
<<ASSETS>>	436298	395541	354784	317887	295924	289088	279614	275408	272415	269301
<CURRENT ASSETS>	41508	41508	41508	41508	49478	72575	93034	118761	141841	168660
CASH	3	3	3	3	7972	31069	51528	77255	100335	127154
ACCOUNTS RECEIVABLE	0	0	0	0	0	0	0	0	0	0
INVENTORY	41505	41505	41505	41505	41506	41506	41506	41506	41506	41506
RAW MATERIAL	24547	24547	24547	24547	24548	24548	24548	24548	24548	24548
SEMI-PRODUCTS	6993	6993	6993	6993	6993	6993	6993	6993	6993	6993
PRODUCTS	9965	9965	9965	9965	9965	9965	9965	9965	9965	9965
<FIXED ASSETS>	394790	354033	313276	276379	246446	216513	186580	156647	130574	100641
LAND	0	0	0	0	0	0	0	0	0	0
NET BUILDINGS & EQUIPMENTS	394790	354033	313276	276379	246446	216513	186580	156647	130574	100641
BUILDINGS & EQUIPMENTS	681144	681144	681144	685004	685004	685004	685004	685004	688864	688864
ACCUMULATED DEPRECIATION	286354	327111	367868	408625	438558	468491	498424	528357	558290	588223
NET PRE-PRODUCTION EXPENSES	0	0	0	0	0	0	0	0	0	0
PRE-PRODUCTION EXPENSES	48295	48295	48295	48295	48295	48295	48295	48295	48295	48295
ACCUMULATED AMORTIZATION	48295	48295	48295	48295	48295	48295	48295	48295	48295	48295

****

****

******* B A L A N C E S H E E T (ESCALA:TARIFF) *******

****

****

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	7 (11)	8 (12)	9 (13)	10 (14)	11 (15)	12 (16)	13 (17)	14 (18)	15 (19)	16 (20)
<<LIABILITIES & EQUITY>>	436298	395541	354784	317887	295924	289088	279614	275408	272415	269301
<<LIABILITIE_>>	381225	336033	292125	251622	224672	212489	197578	187844	179280	170567
<CURRENT LIABILITIES>	122599	101529	83622	61269	50137	53772	54679	55585	56021	56308
ACCOUNTS PAYABLE	19339	25130	31680	36267	50137	53772	54679	55585	56021	56308
SHORT-TERM LOAN	103260	76399	51942	25002	0	0	0	0	0	0
<FIXED LIABILITIES>	258626	234504	208503	190353	174535	158717	142899	132259	123259	114259
LONG-TERM LOAN	258626	234504	208503	190353	174535	158717	142899	132259	123259	114259
<<EQUITY>>	55069	59504	62654	66261	71247	76594	82032	87559	93130	98730
CAPITAL	227143	227143	227143	227143	227143	227143	227143	227143	227143	227143
ACCUMULATED RETAINED PROFIT	-172074	-167639	-164489	-160882	-155896	-150549	-145111	-139584	-134013	-128413

****

******* BALANCE SHEET (ESCALA:TARIFF) *******

****

UNIT : 1,000DOLLARS

TAX(%) : 39.70 DIVIDEND(%) : 85.00

***** PERIOD *****	17 (21)	18 (22)
<<ASSETS>>	266215	288110
<CURRENT ASSETS>	195507	222383
CASH	154001	180877
ACCOUNTS RECEIVABLE	0	0
INVENTORY	41506	41506
RAW MATERIAL	24548	24548
SEMI-PRODUCTS	6993	6993
PRODUCTS	9965	9965
<FIXED ASSETS>	70708	65727
LAND	0	0
NET BUILDINGS & EQUIPMENTS	70708	65727
BUILDINGS & EQUIPMENTS	688864	688864
ACCUMULATED DEPRECIATION	618156	623137
NET PRE-PRODUCTION EXPENSES	0	0
PRE-PRODUCTION EXPENSES	48295	48295
ACCUMULATED AMORTIZATION	48295	48295

****

*******　　*******

*******　B A L A N C E　S H E E T　(E:CALA:TARIFF)　*******

*******　　*******

****

UNIT : 1,000DOLLARS

TAX(%) : 39.70　DIVIDEND(%) : 85.00

***** PERIOD *****	17 (21)	18 (22)
<<LIABILITIES & EQUITY>>	266215	288110
<<LIABILITIES>>	161853	175835
<CURRENT LIABILITIES>	56594	79576
ACCOUNTS PAYABLE	56594	79576
SHORT-TERM LOAN	0	0
<FIXED LIABILITIES>	105259	96259
LONG-TERM LOAN	105259	96259
<<EQUITY>>	104358	112271
CAPITAL	227143	227143
ACCUMULATED RETAINED PROFIT	-122785	-114872