
Pre-Feasibility Study

STEEL RE-ROLLING MILL



Small and Medium Enterprises Development Authority

Ministry of Industries & Production
Government of Pakistan

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1 DISCLAIMER

This information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although, the material included in this document is based on data / information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although, due care and diligence has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEDA, its employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information which is necessary for making an informed decision, including taking professional advice from a qualified consultant / technical expert before taking any decision to act upon the information.

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2 EXECUTIVE SUMMARY

Re-rolling is a metal forming process in which metal stock is passed through a pair of rolls. This particular pre-feasibility study is for setting up a medium sized steel re-rolling unit to produce round bars, angle and T-bars from billets and ingots. The focus of the business would be to provide steel products to meet the growing demand of the local housing & construction industry.

Steel ingots and billets are the basic raw materials for this unit. Whereas, the target customers mainly comprises of wholesalers, retailers, contracting firms and dealers dealing in housing and construction materials.

The proposed project will be producing round bars (grade 40 and grade 60), angle bars (grade 40) and T-bars (grade 40) with a product mix of 80%, 10% and 10% respectively. Total installed production capacity of re-rolling mill is 22,464 tons in a year based on 312 working days with 12 working hours per day. The operational capacity is assumed to be 60% in year 1. The entrepreneur's knowledge and experience of the steel industry will be key factor for the success of the business.

The total project cost for setting up the proposed Steel Re-Rolling Mill is estimated at Rs. 261.39 million out of which Rs. 195.46 million is capital cost and Rs. 65.94 million is working capital. The project is proposed to be financed through 50% debt and 50% equity. The NPV is projected around Rs. 96.11 million, with an IRR of 27% and a payback period of 4.21 years. The legal business status of this project is proposed as a 'Sole Proprietorship'.

3 INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectorial research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of experts and consultants and delivery of need based capacity building programs of different types in addition to business guidance through help desk services.

4 PURPOSE OF THE DOCUMENT

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document / study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in **Steel Re-Rolling Mill** by providing them with a general understanding of the business with the intention of supporting potential investors in crucial investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business set-up and it's successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later on, which form basis of any Investment Decision.

5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

Steel products have been of great value for mankind since ages due to their usage. They are predominantly used in housing & construction sector from decades. The steel re-rolling mill is a project of the light engineering sector that mainly entails the production of Round Bars, T-Bars, Angle Bars of different grades and sizes. This particular pre-feasibility study is based on a semi-automatic medium sized steel re-rolling mill that will produce round of two different grades i.e. grade 40 and grade 60 and angle and T-bars of grade 40 respectively.

The proposed product mix will be to produce 80% of round bars, 10% of angle bars and 10% of T-bars. Steel ingot and billets are the basic raw materials for the unit, which will be procured from steel melting units. The unit will operate all year round and mainly target to the wholesales, contractors and retailers dealing in the housing construction materials.

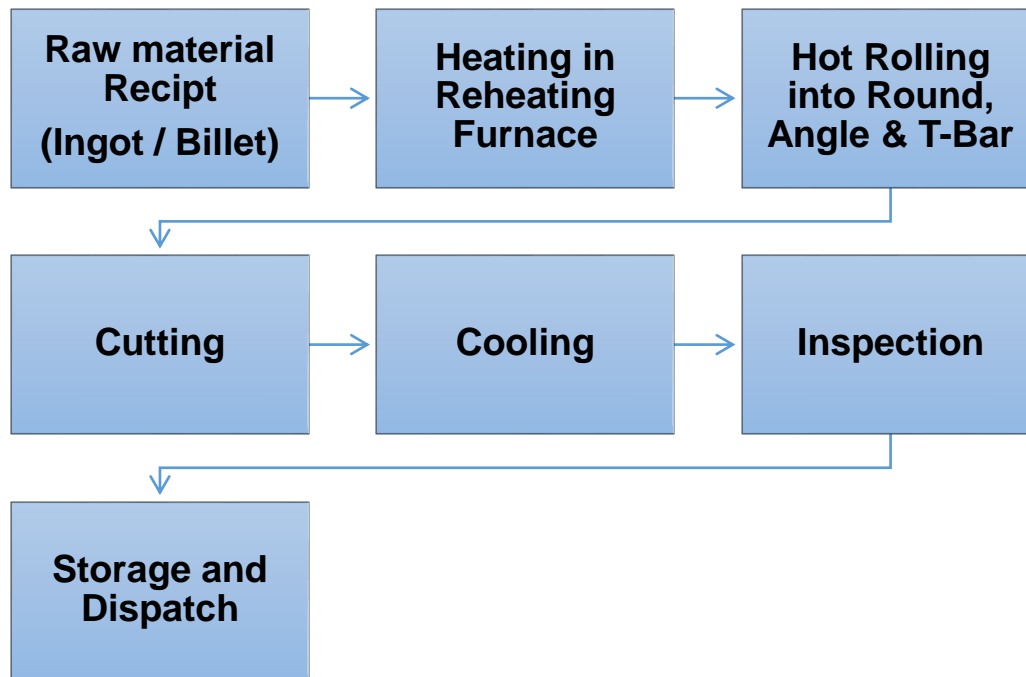
The project will be able to provide direct employment to 18 persons along with laborers hired on contractual basis. The legal status of the business is proposed to be "Sole Proprietorship".

5.1 Steel Re-Rolling Production Process

The production process starts with the inspection inspection of ingots and billets. After Inspection billets are cut in pieces of smaller length and then put into the furnace manually. In furnace billets are heated and after a certain temperature is attained they are passed to special rolls to attain the desired sizes and thickness and then red hot billets are pulled from the furnace on to the conveyor, which transport it to the rolling stand. After passing through rolling stand several times the bars are taken to the cooling bed by conveyer chain. Ends are sheared by shearing machine because they are often cracked. Finished product are inspected and sent to packing department and then weighted and dispatched.

5.2 Production Process Flow

Figure 1: Process Flow



5.3 Product Mix

Following table reflects the proposed product mix of the steel re-rolling mill. However, the entrepreneur can change the product mix according to the demand of the customers.

Table 1: Product Mix

Description	Total	Grade 40	Grade 60
Round Bars	80%	50%	50%
Angle Bars	10%	100%	0%
T Bars	10%	100%	0%
Total	100%		

Table 2: Product Mix Details of Round Bars

	Grade 40	Grade 60
Sizes of round bars	% of each size	% of each size
3/8"	40%	40%
1/2"	40%	40%
3/4"	10%	10%
1"	10%	10%

Table 3: Product Mix Details of Angle Bars

Sizes of angle bars	% of each size
1 x 1/8"	70%
2 x 1/4"	30%

Table 4: Product Mix Details of T- Bars

Sizes of T bars	% of each size
700 gm/rft	70%
900 gm/rft	30%

5.4 Installed And Operational Capacities

The installed capacity of proposed unit is to produce 22,463 tons of round bars, angle bars and T-bars based on 312 operational days. However, in year 1 the unit will operate on 60% of its installed capacity and will produce 13,478 tons of the steel products according to proposed mix. Installed and operational capacity of the unit is given in the table below:

Table 5: Installed and Operational Capacity

Product Description	Product Mix	Installed Capacity (Tons)	Operational Capacity @ 60% (Tons)
Round Bars	80%	17,971	10,783
Angle Bars	10%	2,246	1,348
T Bars	10%	2,246	1,348
Total	100%	22,463	13,479

6 CRITICAL FACTORS

Following factors play a critical role in the successful execution of the business operations and impact profitability:

- Entrepreneur's background and technical know-how of the business.
- Contract sourcing of good quality billets and ingots on reasonable prices.
- Ensure the quality of the finished product.
- Effective marketing and distribution of the product particularly to the wholesale buyers.
- Ensure availability of quality raw material.
- Hiring of skilled and motivated workforce.
- Avoid stocking huge quantity due to price volatility in raw material and components.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The consumption of steel products is not concentrated to certain areas or cities rather its demand exist across the country. Therefore, the proposed venture can be established anywhere in the country. But due to the availability of facilities, easy access to raw materials and high demand in urban centers it is recommended that the proposed business is to be established in major cities i.e. Lahore, Karachi, Gujranwala, Faisalabad, Peshawar etc. and their surrounding areas.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

The potential target customers of the proposed steel re-rolling mill will be wholesalers, retailers, civil works contractors etc.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Steel Re-Rolling Mill. Various cost and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cash Flow Statement and Balance Sheet are also attached as annexure.

9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 1,353.50 million in the year one. The capacity utilization during year one is worked out at 60% with 10% increase in subsequent years up to the maximum capacity utilization of 100%.

The following table shows internal rate of return, payback period and net present value of the proposed venture:

Table 6: Project Economics

Description	Detail
IRR (%)	27%
NPV (Rs.)	96,113,285
Pay Back (years)	4.21

9.2 Project Financing

Following table provides details of the equity required and variables related to bank loan:

Table 7: Project Financing

Description	Detail
Total Equity	Rs. 130,695,988
Total Debt	Rs. 130,695,988
Debt tenure	7
Interest rate	12%

9.3 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business.

Table 8: Project Cost

Description	Amount Rs.
Capital Investment	
Land	27,500,000
Building/Infrastructure	59,675,000
Machinery & equipment	96,678,000
Furniture & fixtures	1,050,500
Office vehicles	884,000
Office equipment	522,500
Pre-operating costs	9,046,037
Legal, Licensing, and Training costs	100,000
Total Capital Investment	195,456,037
Working Capital	
Equipment spare part inventory	168,480
Raw material inventory	49,526,381
Upfront insurance payment	4,833,900
Cash	11,407,177
Total Working Capital	65,935,938
Total Project Cost	261,391,975

9.4 Space Requirement

A total of 49,500 square feet area is required to start this business. Space requirement has been calculated on the basis of area for production, management building, storage and parking. However, the unit's operating in the industry do not follow any set pattern. Following table shows calculations for project space requirement.

Table 9: Space Requirement

Description	Area	Cost / Rate	Amount Rs.
Shed	22,500	1,250	28,125,000
Small Shed	13,500	1,250	16,875,000
Finished Goods Store	7,500	1,250	9,375,000
Office Block	1,000	2,500	2,500,000
Washroom	300	2,000	600,000
Pavement/driveway	2,000	500	1,000,000
Open Area	2,700		
Boundary Wall	960	1,250	1,200,000
Total Infrastructure	49,500		59,675,000

Since the proposed project requires large amount of capital for its execution therefore the proposed steel re-rolling mill will be built on purchased land. For this purpose 11 Kanals of land will be purchased to construct the required infrastructure at Rs. 2.5 million per Kanal.

9.5 Machinery & Equipment Requirement

Machinery and equipment required for the proposed steel re-rolling mill are stated below:

Table 10: Machinery & Equipment Requirement

Description	Amount Rs.
Reheating furnace 9'x70' (Chimney, ejector, pusher, burner, blower)	6,000,000
Mill, Pinion gear, Reduction gear, Roughing stand (16 inch) + Fly wheel x 2	29,750,000
Motor for Rougher 500 HP	1,800,000
Motor for Mill 1200 HP	3,000,000
Transformer x 2 for motor, Panel x 2 for motor	5,500,000
Cooling bed 100' long	8,500,000
Machine shop (4 lathe machine, 1 driller, 1 milling machine, welder, shaper, gas cutter)	4,000,000
Cranes (15, 10, 5, 5 tons)	5,000,000

Coal Gasifier	6,000,000
Water Recycling Plant	800,000
Water Storage Tank	1,500,000
Tensile Testing Equipment	3,500,000
Temperature Measuring Equipment	100,000
Generator - 100 KVA	650,000
Mill Fitting Charges	2,500,000
Sales Tax @ 17%	13,362,000
Income Tax @ 6%	4,716,000
Total Machinery and Equipment	96,678,000

9.6 Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below:

Table 11: Furniture & Fixture Requirement

Description	Quantity	Cost per Unit Rs.	Amount Rs.
Management work stations	9	20,000	180,000
Chairs for Management Staff	9	7,500	67,500
Visitors chairs	9	5,000	45,000
Conference Room Table	1	50,000	50,000
Conference Room Chairs	12	5,000	60,000
Other tables	4	10,000	40,000
Chairs	7	4,000	28,000
Reception Table	1	15,000	15,000
File Cabinets	6	15,000	90,000
Electric wiring & lighting			150,000
Air conditioners (1.5 ton split)	5	65,000	325,000
Total Furniture & Fixtures			1,050,500

9.7 Office Equipment Requirement

Following office equipment will be required for the proposed steel re-rolling mill:

Table 12: Office Equipment Requirement

Description	Quantity	Cost per Unit Rs.	Amount Rs.
Computers	9	40,000	360,000
UPS for Admin - 3 KVA	1	50,000	50,000
Computer printer (s)	3	20,000	60,000
Scanner	1	15,000	15,000
Telephones	9	2,500	22,500

Fax machine	1	15,000	15,000
Total Office Equipment			522,500

9.8 Office Vehicle Requirement

Following vehicle is required for the proposed venture:

Table 13: Office Vehicle Requirement

Description	Quantity	Cost per Unit Rs.	Amount Rs.
Tractor/Trolley	1	850,000	850,000
Registration fee		4%	34,000
Total Office Vehicle			884,000

9.9 Raw Material Requirements

Following raw material will be required for the operations of re-rolling mill during the first year:

Table 14: Raw Material Requirement

Description	Annual Requirement (Tons)	Cost Per Ton Rs.
Grade 60 - CC Billet RM	5,661	85,000
Grade 40 - Ingot RM	6,510	80,000
Grade 40 - CC billet RM	1,981	84,000

9.10 Human Resource Requirement

In order to run operations smoothly, details of human resources required along with monthly salaries are recommended as under:

Table 15: Human Resource Requirement

Description	No. of Employees	Salary per Employee per Month Rs.
CEO/Manager	1	150,000
Admin Officer	2	30,000
Accountant	1	50,000
Accounts Officer	2	30,000
Marketing & Sales Manager	1	100,000
Sales Officers	2	30,000
Store keeper	1	20,000
Electrician	1	35,000
Helper - electrician	2	15,000

Driver	1	16,000
Guard	4	16,000
Total	18	

Apart from these, contractual labor will be hired to run the operations of the proposed venture at Rs. 2,000 per ton.

9.11 Utilities and Other Costs

An essential cost to be borne during the operations of the project is the cost of electricity and fuel / gas. The electricity and gas/fuel expenses are estimated to be around Rs. 35 million and Rs. 33.70 million respectively. Furthermore, promotional expense, being essential for marketing of re-rolling steel mill, is estimated as Rs. 1.08 million in year 1.

9.12 Revenue Generation

Based on the capacity utilization of 60%, sales revenue during the first year of operations is estimated in below table:

Table 16: Revenue Generation – Year 1

Description	Sales (Tons)	Sale Price per Ton Rs.	Revenue Rs.
Round Bars (50:50)			
Grade 40			
3/8"	2,157	100,000	215,654,400
1/2"	2,157	98,000	211,341,312
3/4"	539	98,000	52,835,328
1"	539	98,000	52,835,328
Grade 60			
3/8"	2,157	106,000	228,593,664
1/2"	2,157	104,000	224,280,576
3/4"	539	104,000	56,070,144
1"	539	104,000	56,070,144
Angle Bars - Grade 40			
1 x 1/8"	943	96,000	90,574,848
2 x 1/4"	404	94,000	38,009,088
T Bars - Grade 40			
700 gm/rft.	943	95,000	89,631,360
900 gm/rft.	404	93,000	37,604,736
Total	13,478		1,353,500,928

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of private sector Service Providers relevant to the proposed project be given.

10.1 Machinery and Raw Material Suppliers

	Address	Phone	Website / Email
Aziz Sons Engineering Works	Abdul Qayyum Road Badami Bagh, Lahore, Punjab, Pakistan	042-37287978 0321-8888038	
Mughal Steel	31-A, Shadman 1, Lahore.	042-35960841- 43	www.mughalsteel.com
Shalimar Steel	40-A Peco Road, Badami Bagh Lahore.	042-37283342	info@shalimarsteel.com www.shalimarsteel.com
Model Steel	46-Mall Godown Road, Badami Bagh, Lahore.	042-37280166	info@modelsteel.com www.modelsteel.com

11 USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries & Production	www.moip.gov.pk
Ministry of Federal Education and Professional Training	http://moent.gov.pk
Government of Punjab	www.punjab.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Khyber Pakhtunkhwa	www.khyberpakhtunkhwa.gov.pk
Government of Baluchistan	www.balochistan.gov.pk
Government of Gilgit Baltistan	www.gilgitbaltistan.gov.pk
Government of Azad Jamu Kashmir	www.ajk.gov.pk
Trade Development Authority of Pakistan (TDAP)	www.tdap.gov.pk
Security Commission of Pakistan (SECP)	www.secp.gov.pk
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	www.fpcci.com.pk
State Bank of Pakistan (SBP)	www.sbp.org.pk
Pakistan Steel Melters Association (PSMA)	www.steel melters.com
Pakistan Steel Mill	www.paksteel.com.pk

12 ANNEXURES

12.1 Income Statement

Calculations										
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	1,353,500,928	1,736,992,858	2,183,648,164	2,702,264,603	3,302,767,848	3,633,044,633	3,996,349,096	4,395,984,005	4,835,582,406	5,319,140,647
<i>Cost of sales</i>										
Raw material (Steel Billet) cost	1,168,415,539	1,499,466,609	1,885,043,737	2,332,741,624	2,851,128,652	3,136,241,517	3,449,865,668	3,794,852,235	4,174,337,459	4,591,771,205
Transportation costs	20,217,600	24,766,560	29,719,872	35,106,599	40,957,699	43,005,584	45,155,863	47,413,656	49,784,339	52,273,556
Direct Labour	26,956,800	34,511,578	43,281,913	53,432,888	65,150,211	71,493,328	78,454,019	86,092,413	94,474,492	103,672,662
Maintenance	4,043,520	4,953,312	5,943,974	7,021,320	8,191,540	8,601,117	9,031,173	9,482,731	9,956,868	10,454,711
Rolls and guides	6,739,200	8,255,520	9,906,624	11,702,200	13,652,566	14,335,195	15,051,954	15,804,552	16,594,780	17,424,519
Stocks and Spares (couplings, bearings, rolls, belts etc)	500,000	525,000	551,250	578,813	607,753	638,141	670,048	703,550	738,728	775,664
Direct electricity expense	33,696,000	43,243,200	54,362,880	67,274,064	82,223,856	90,446,242	99,490,866	109,439,952	120,383,948	132,422,342
Generator expense	1,304,160	1,434,576	1,578,034	1,735,837	1,909,421	2,100,363	2,310,399	2,541,439	2,795,583	3,075,141
Fuel/gas expense	33,696,000	43,243,200	54,362,880	67,274,064	82,223,856	90,446,242	99,490,866	109,439,952	120,383,948	132,422,342
Gear Oil	1,347,840	1,651,104	1,981,325	2,340,440	2,730,513	2,867,039	3,010,391	3,160,910	3,318,956	3,484,904
Misc/Furnace repair	13,478,400	16,511,040	19,813,248	23,404,399	27,305,132	28,670,389	30,103,908	31,609,104	33,189,559	34,849,037
Total cost of sales	1,310,395,059	1,678,561,698	2,106,545,736	2,602,612,247	3,176,081,198	3,488,845,154	3,832,635,154	4,210,540,495	4,625,958,657	5,082,626,083
Gross Profit	43,105,869	58,431,159	77,102,428	99,652,356	126,686,649	144,199,479	163,713,941	185,443,510	209,623,749	236,514,564
<i>General administration & selling expenses</i>										
Administration Salaries	7,740,000	8,493,577	9,320,524	10,227,983	11,223,794	12,316,559	13,515,716	14,831,626	16,275,654	17,860,274
Electricity expense	387,504	426,254	468,880	515,768	567,345	624,079	686,487	755,136	830,649	913,714
Travelling expense	240,000	264,000	290,400	319,440	351,384	386,522	425,175	467,692	514,461	565,907
Communications expense (phone, fax, mail, internet, etc.)	300,000	330,000	363,000	399,300	439,230	483,153	531,468	584,615	643,077	707,384
Office vehicles repair and maintenance	120,000	132,000	145,200	159,720	175,692	193,261	212,587	233,846	257,231	282,954
Office expenses (stationary, entertainment, janitorial services, etc.)	420,000	462,000	508,200	559,020	614,922	676,414	744,056	818,461	900,307	990,338
Promotional expense	1,082,801	1,389,594	1,746,919	2,161,812	2,642,214	2,906,436	3,197,079	3,516,787	3,868,466	4,255,313
Insurance expense	4,833,900	4,350,510	3,867,120	3,383,730	2,900,340	2,416,950	1,933,560	1,450,170	966,780	483,390
Professional fees (legal, audit, consultants, etc.)	676,750	868,496	1,091,824	1,351,132	1,651,384	1,816,522	1,998,175	2,197,992	2,417,791	2,659,570
Depreciation expense	13,107,567	14,484,718	14,484,718	14,512,171	14,512,171	14,620,109	14,651,889	14,651,889	14,651,889	14,688,679
Amortization of pre-operating costs	1,809,207	1,809,207	1,809,207	1,809,207	1,809,207	-	-	-	-	-
Amortization of legal, licensing, and training costs	20,000	20,000	20,000	20,000	20,000	-	-	-	-	-
Subtotal	30,737,729	33,030,358	34,115,992	35,419,283	36,907,683	36,440,006	37,896,192	39,508,214	41,326,305	43,407,524
Operating Income	12,368,139	25,400,802	42,986,436	64,233,072	89,778,966	107,759,473	125,817,749	145,935,296	168,297,443	193,107,040
Gain / (loss) on sale of office equipment	-	-	313,500	-	-	519,665	-	-	679,953	-
Gain / (loss) on sale of office vehicles	-	-	-	-	353,600	-	-	-	-	-
Earnings Before Interest & Taxes	12,368,139	25,400,802	43,299,936	64,233,072	90,132,566	108,279,139	125,817,749	145,935,296	168,977,396	193,107,040
Interest expense on long term debt (Project Loan)	-	12,496,904	10,805,304	8,899,167	6,751,284	4,330,995	1,603,754	-	-	-
Interest expense on long term debt (Working Capital Loan)	2,553,218	-	-	-	-	-	-	-	-	-
Subtotal	2,553,218	12,496,904	10,805,304	8,899,167	6,751,284	4,330,995	1,603,754	-	-	-
Earnings Before Tax	9,814,922	12,903,898	32,494,632	55,333,906	83,381,282	103,948,143	124,213,995	145,935,296	168,977,396	193,107,040
Tax	2,657,722	3,738,864	10,595,621	18,589,366	28,405,948	35,604,350	42,697,398	50,299,853	58,364,588	66,809,963
NET PROFIT/(LOSS) AFTER TAX	7,157,200	9,165,034	21,899,012	36,744,539	54,975,334	68,343,794	81,516,598	95,635,443	110,612,808	126,297,077

12.2 Balance Sheet

Calculations											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
<i>Current assets</i>											
Cash & Bank	11,407,177	40,216,296	62,196,947	94,551,551	148,268,761	238,422,001	328,377,011	442,694,024	602,877,298	785,196,923	1,188,065,739
Accounts receivable		55,623,326	63,503,297	80,561,117	100,395,468	123,391,078	142,516,695	156,768,364	172,445,201	189,689,721	208,658,693
Equipment spare part inventory	168,480	206,388	247,666	292,555	341,314	358,380	376,299	395,114	414,869	435,613	-
Raw material inventory	49,526,381	63,509,715	79,781,817	98,660,343	120,503,598	132,468,629	145,625,897	160,094,412	176,005,075	193,501,865	-
Pre-paid insurance	4,833,900	4,350,510	3,867,120	3,383,730	2,900,340	2,416,950	1,933,560	1,450,170	966,780	483,390	-
Total Current Assets	65,935,938	163,906,235	209,596,847	277,449,296	372,409,481	497,057,037	618,829,462	761,402,084	952,709,223	1,169,307,512	1,396,724,431
<i>Fixed assets</i>											
Land	27,500,000	27,500,000	27,500,000	27,500,000	27,500,000	27,500,000	27,500,000	27,500,000	27,500,000	27,500,000	27,500,000
Building/Infrastructure	59,675,000	56,691,250	53,707,500	50,723,750	47,740,000	44,756,250	41,772,500	38,788,750	35,805,000	32,821,250	29,837,500
Machinery & equipment	96,678,000	99,404,559	88,359,608	77,314,657	66,269,706	55,224,755	44,179,804	33,134,853	22,089,902	11,044,951	-
Furniture & fixtures	1,050,500	945,450	840,400	735,350	630,300	525,250	420,200	315,150	210,100	105,050	-
Office vehicles	884,000	707,200	530,400	353,600	176,800	1,423,691	1,138,953	854,215	569,476	284,738	-
Office equipment	522,500	348,333	174,167	604,859	403,239	201,620	700,200	466,800	233,400	810,569	540,379
Total Fixed Assets	186,310,000	185,596,792	171,112,075	157,232,216	142,720,045	129,631,565	115,711,657	101,059,767	86,407,878	72,566,558	57,877,879
<i>Intangible assets</i>											
Pre-operation costs	9,046,037	7,236,830	5,427,622	3,618,415	1,809,207	-	-	-	-	-	-
Legal, licensing, & training costs	100,000	80,000	60,000	40,000	20,000	-	-	-	-	-	-
Total Intangible Assets	9,146,037	7,316,830	5,487,622	3,658,415	1,829,207	-	-	-	-	-	-
TOTAL ASSETS	261,391,975	356,819,857	386,196,544	438,339,927	516,958,734	626,688,603	734,541,118	862,461,851	1,039,117,102	1,241,874,070	1,454,602,311
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		106,186,570	135,997,419	170,675,830	210,896,529	256,328,796	281,737,137	309,675,085	340,395,039	374,174,612	393,795,812
Total Current Liabilities	-	106,186,570	135,997,419	170,675,830	210,896,529	256,328,796	281,737,137	309,675,085	340,395,039	374,174,612	393,795,812
<i>Other liabilities</i>											
Deferred tax		2,657,722	6,396,585	16,992,206	35,581,572	63,987,520	99,591,870	142,289,268	192,589,121	250,953,708	317,763,672
Long term debt (Project Loan)	97,728,019	110,122,378	96,784,317	81,754,657	64,818,859	45,735,179	24,231,210	-	-	-	-
Long term debt (Working Capital Loan)	32,967,969	-	-	-	-	-	-	-	-	-	-
Total Long Term Liabilities	130,695,988	112,780,099	103,180,903	98,746,863	100,400,432	109,722,700	123,823,080	142,289,268	192,589,121	250,953,708	317,763,672
<i>Shareholders' equity</i>											
Paid-up capital	130,695,988	130,695,988	130,695,988	130,695,988	130,695,988	130,695,988	130,695,988	130,695,988	130,695,988	130,695,988	130,695,988
Retained earnings		7,157,200	16,322,234	38,221,246	74,965,785	129,941,119	198,284,913	279,801,511	375,436,954	486,049,762	612,346,839
Total Equity	130,695,988	137,853,187	147,018,222	168,917,234	205,661,773	260,637,107	328,980,901	410,497,499	506,132,942	616,745,750	743,042,827
TOTAL CAPITAL AND LIABILITIES	261,391,975	356,819,857	386,196,544	438,339,927	516,958,734	626,688,603	734,541,118	862,461,851	1,039,117,102	1,241,874,070	1,454,602,311

12.3 Cash Flow Statement

Calculations											SMEDA
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		7,157,200	9,165,034	21,899,012	36,744,539	54,975,334	68,343,794	81,516,598	95,635,443	110,612,808	126,297,077
Add: depreciation expense		13,107,567	14,484,718	14,484,718	14,512,171	14,512,171	14,620,109	14,651,889	14,651,889	14,651,889	14,688,679
amortization of pre-operating costs		1,809,207	1,809,207	1,809,207	1,809,207	1,809,207	-	-	-	-	-
amortization of training costs		20,000	20,000	20,000	20,000	20,000	-	-	-	-	-
Deferred income tax		2,657,722	3,738,864	10,595,621	18,589,366	28,405,948	35,604,350	42,697,398	50,299,853	58,364,588	66,809,963
Accounts receivable		(55,623,326)	(7,879,971)	(17,057,820)	(19,834,351)	(22,995,610)	(19,125,617)	(14,251,669)	(15,676,836)	(17,244,520)	(18,968,972)
Equipment inventory	(168,480)	(37,908)	(41,278)	(44,889)	(48,759)	(17,066)	(17,919)	(18,815)	(19,756)	(20,743)	435,613
Raw material inventory	(49,526,381)	(13,983,335)	(16,272,102)	(18,878,526)	(21,843,255)	(11,965,031)	(13,157,268)	(14,468,515)	(15,910,663)	(17,496,790)	193,501,865
Advance insurance premium	(4,833,900)	483,390	483,390	483,390	483,390	483,390	483,390	483,390	483,390	483,390	483,390
Accounts payable		106,186,570	29,810,849	34,678,411	40,220,699	45,432,267	25,408,341	27,937,948	30,719,954	33,779,572	19,621,201
Cash provided by operations	(54,528,761)	61,777,087	35,318,712	47,989,124	70,653,007	110,660,611	112,159,179	138,548,223	160,183,275	183,130,194	402,868,816
<i>Financing activities</i>											
Project Loan - principal repayment		-	(13,338,060)	(15,029,660)	(16,935,797)	(19,083,680)	(21,503,969)	(24,231,210)	-	-	-
Working Capital Loan - principal repayment		(32,967,969)	-	-	-	-	-	-	-	-	-
Additions to Project Loan	97,728,019	-	-	-	-	-	-	-	-	-	-
Additions to Working Capital Loan	32,967,969	-	-	-	-	-	-	-	-	-	-
Issuance of shares	130,695,988	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	261,391,975	(32,967,969)	(13,338,060)	(15,029,660)	(16,935,797)	(19,083,680)	(21,503,969)	(24,231,210)	-	-	-
<i>Investing activities</i>											
Capital expenditure	(195,456,037)	-	-	(604,859)	-	(1,423,691)	(700,200)	-	-	(810,569)	-
Cash (used for) / provided by investing activities	(195,456,037)	-	-	(604,859)	-	(1,423,691)	(700,200)	-	-	(810,569)	-
NET CASH	11,407,177	28,809,118	21,980,652	32,354,604	53,717,210	90,153,239	89,955,010	114,317,013	160,183,275	182,319,625	402,868,816

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Travelling expense	Rs. 240,000
Communications expense (phone, fax, mail, internet, etc.)	Rs. 300,000
Office vehicles repair and maintenance	Rs. 120,000
Office expenses (stationary, entertainment, janitorial services, etc.)	Rs. 420,000
Promotional expense	Rs. 1,082,801
Insurance expense	Rs. 4,833,900
Professional fees (legal, audit, consultants, etc.)	Rs. 676,750
Burning wastage percentage Round Bars	2%
Cutting wastage percentage Round Bars	3%

13.2 Production Cost Assumptions

Description	Cost per Ton Rs.
Direct Labor (Production + Loading + Unloading)	2,000
Raw Material transportation cost + Loading + Un-loading	1,500
Finished Goods transportation cost	1,500
Misc./Furnace repair	1,000
Gear Oil	100
Rolls and guides	500

13.3 Revenue Assumptions

Description	Details
Production capacity (Tons)	22,464
Starting capacity utilization	60%
Production capacity utilization growth rate	10%
Maximum capacity utilization	100%
Production in year 1 (Tons)	13,478
Production quantity sold	13,478
Sale price growth rate	10%
Days operational / year	312
Hours operational / day	12

13.4 Financial Assumptions

Description	Details
Debt	50%
Equity	50%
Interest rate	12%
Debt tenure (years)	7
Debt payments / year	12
Grace Period (years)	1