
Pre-Feasibility Study

STEEL WIRE DRAWING UNIT



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

Steel Wire Drawing Unit is proposed to be located at Quetta, Peshawar, Lahore, Faisalabad, Hub, Karachi, Islamabad, Rawalpindi, Gujranwala, etc.

Product include **Steel Wire for Industrial and Commercial Uses**

Capacity; Installed capacity **3,432 Tons** and initial utilization **2,231 Tons, 65%**

Total Cost Estimates is **Rs. 99,711,566** with fixed investment **Rs. 91,162,831** and working capital **Rs. 8,548,735**.

Given the cost assumptions IRR and payback are **28%** and **4.03 years** respectively

The most critical considerations or factors for success of the project are:

- Most significant consideration

Recognizing quality at all levels of an organization, including upper management.

Fostering a responsive corporate culture.

Training all personnel on how to plan, control and improve quality

Availability of hard working & low-cost labor.

Increasing inland trends towards use of steel wires

Large and established world markets.

Improved technological changes available.

- Equally important factor

Emphasizing on excellent services to its customers such as standardized products and timely order fulfillment.

New machinery should be purchased in order to increase the efficiency and lower the maintenance cost.

Refurbished standardized machinery is also recommended.

Adapt to the rapid, social, economic and technological changes.

Hiring of well-trained / experienced staff will add in the efficiency of the facility.

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 'sectoral 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 Wire Drawing Unit** 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 its 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

This project envisages production of steel wires which is having a very bright prospect in industrial and commercial use.

Drawing of wire from metal rod is a metal working process that reduces the cross-section and elongates in to wire. During wire drawing the volume of metal remains the same and hence there is increase in the length of the drawn wire. A significant advantage of drawing is that there is very little material waste. It is carried out by pulling the metal rod through a series of the drawing dies.

In the case of series of drawing dies, the each subsequent drawing stage uses smaller bore diameter than the previous drawing die. The draw ratio of diameter depends on elongation and de-formability of metal. Drawing is usually performed in round sections at room temperature, however, it can also be performed at higher temperatures for large wires to reduce forces.

5.1 The Mechanics of Wiredrawing

Deformation in wiredrawing is influenced by a number of factors; wire chemistry, approach angle, lubrication, drawing speed, and reduction are the most significant. The primary emphasis in wiredrawing mechanics is on understanding and defining the relationships that exist between these process conditions and the resulting thermo-mechanical response of the wire. Many of the technological developments that have taken place in wiredrawing over the past 20 years have been the result of an increased understanding of these relationships.

5.2 The ISO 9000 Standard

The ISO 9000 standard (Quality Management and Quality Assurance Standard) is a deliberately generic standard series of quality system management. The ISO 9000 standard has permanently influenced the way manufacturing companies conduct business in world trade and has become the world standard for quality.

The ISO series includes the following standards:

1. ISO 9001 – Quality systems: model for quality assurance in design / development production, installation and servicing.
2. ISO 9002 – Quality systems: model for quality assurance in production and installation.
3. ISO 9003 – Quality systems: model for quality assurance in final inspection and test.
4. ISO 9004 – Quality management and quality system element: Guidelines.

Companies voluntarily register for these standards and are issued certificates ISO 9000 standard is not a product certification. It is a quality process certification; the QS 9000 standard, ISO 14000 standard are rapidly being employed by manufacturers in the industries.

5.3 Uses of Steel Wires

Wire/rod drawing is an important industrial process, providing commercial products. Wire products cover a very wide range of applications which include smaller diameter rods used for shafts of different diameter for machine and wire rods for structural components, blanks for bolts, rivets, nails screws, fences, spring wires pins, staples, needles, and many others.

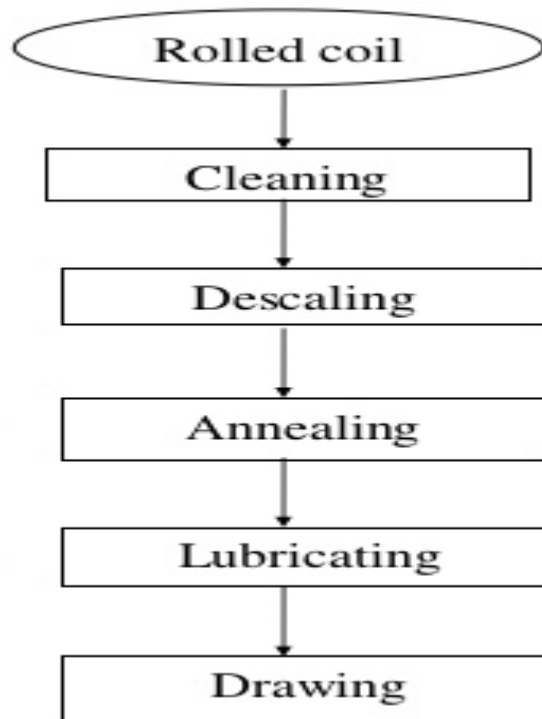
Commercial wire drawing usually starts with a coil of hot rolled 6 mm diameter coil. The surface is first treated to remove scales. It is then fed into a wire drawing machine which may have one or more blocks in series.

Wires are drawn from carbon steel, alloy steel, stainless steel, etc. ferrous metals as also from aluminum, copper, brass, bronze and many other alloys. Nonferrous wires are used in electrical power transmission, viz. wires and cables, electronics systems and even in semiconductor IC etc. packaging, motor and transformer windings.

Following key parameters must be addressed as per pre-feasibility study under preparation

- **Technology:** This proposed unit with modern processing and production machines including Wire Rod Pay Off Machine, Mechanical Descaling, Wire Drawing Machine (11 Blocks), Declined Neck Coiler, Rosette Wiring System For Coiler etc.
- **Location:** The unit would be located in or near an area where the raw material is available easily like Quetta, Peshawar, Lahore, Faisalabad, Hub, Karachi, Islamabad, Gujranwala, Rawalpindi or any other site where raw material can be transported easily.
- **Product:** The unit would produce Steel Wires with Standard Wire Gauge of 8,10,12,14,16,17,18,19,20,21,22 for industrial and commercial uses.
- **Target Market:** As domestic consumption is available, Steel Wire industry will be dependent largely on the local market. But Steel Wire can be exported.
- **Employment Generation:** The proposed project will provide direct employment to 12 people. Financial analysis shows the unit shall be profitable from the very first year of operation.

5.4 Flow Chart



5.5 Production Process Flow

Manufacturing of Wires passes through the following steps.

Coating:

The surface of the bar or coil is coated with a drawing lubricant to aid cold drawing.

Pointing:

Several inches of the input end of the bar or coil is reduced in size by swaging or extruding so that it can pass freely through the first drawing die.

Drawing:

The drawing machine pulls or draws the lead wire bar or coil through the die in single or multiple stages. The die reduces the cross section of the bar or coil, shapes the profile of the product and increases length in each stage. In multi-pass drawing wire passes through smaller and smaller dies. Material may require annealing to soften the material and increase ductility, after certain stage between drawing pass to remove hardening and brittleness due to cold work.

Finished Product:

The drawn product passes through final finishing die to get bright and/or polished finish. Heat treatment is generally used to soften the material, to modify the microstructure, improve mechanical properties and the machining characteristics and get precise and uniform dimensional tolerances.

The finished product is tested for tensile and hardness testing, and measuring of the diameter.

In case of drawing of stainless steel or other materials, wire/rod has to be inspected and /or treated. Surface preparation is done by pickling in acid (ferritic and martensitic steels) or basic solutions (austenitic steels). The prepared skin is then coated with lubricant. Cold drawing is carried out through diamond dies or tungsten carbide dies till the desired diameter is achieved.

5.6 Materials for Wires

Various grades of steel and other metal e.g. copper wire rods are required. These are available from 6 mm to 12 mm diameter size. Normally 6 mm wire is procured for drawing. For higher diameter rods, in-house Rod breakdown machine or outside job work is normally required.

Other materials consist of lubricant powder soaps of different grades and fuel for annealing furnace.

5.7 Installed And Operational Capacities

The total installed capacity of the project is **3,432 Tons** of Steel Wires along with assumed operational capacity of **65%** during the first year of operations i.e. **2,231 Tons** of steel Wires. A gradual increase of **3%** in production capacity per annum.

6 CRITICAL FACTORS

Steel Wires have a wide range of application, not only in industrial sector but also in the commercial sector. Certain critical factors involved during the production process of steel wires are:

- Create constancy of purpose towards improvement of product and service
- Adopt the new philosophy
- Cease dependence on mass inspection to achieve quality
- End the practice of awarding business on the basis of price tag

- Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease cost
- Institute training on the job
- Drive out fear so that everyone can work effectively
- Break down barriers between departments
- Eliminate slogans, exhortations and targets for zero defect and new level of productivity
- Institute a vigorous program of education and self-improvement
- Put everybody in the company to work to accomplish the transformation.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

It is suitable to establish the production unit Quetta, Hub, Bostan, Peshawar, Islamabad, Rawalpindi, Lahore and Karachi. However such a unit could be established in other parts of the country provided the main conditions are fulfilled such as Availability of low carbon mild steel rod/coil. Along with, manpower availability, accessibility to markets, and reasonable demand & usage of steel wires should be considered.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

As domestic consumption is available, Steel Wires industry will be dependent largely on the local market. Most of the Steel Wire used for industrial and commercial applications could be produced.

9 PROJECT COST SUMMARY

9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 305.58 million in the year one. The capacity utilization during year one is worked out at 65% with 3% increase in subsequent years up to the maximum capacity utilization of 95%.

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

Table 1: Project Economics

Description	Details
Internal Rate of Return (IRR)	28%
Payback Period (yrs.)	4.03

Net Present Value (Rs.)	65,568,453
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9.2 Project Financing

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

Table 2: Project Financing

Description	Details
Total Equity (50%)	Rs. 49,855,783
Bank Loan (50%)	Rs. 49,855,783
Markup to the Borrower (%age / annum)	16%
Tenure of the Loan (Years)	5 Years

9.3 Project Cost

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

Table 3: Project Cost

Description	Amount Rs.
Capital Cost	
Land	1,722,222
Building / Infrastructure	7,539,080
Plant and Machinery	79,615,400
Furniture & Fixture	532,500
Office Equipment	497,500
Pre-operating Cost	1,256,129
Total Capital Cost	91,162,831
Working Capital	
Equipment Spare Parts Inventory	367,888

Raw Material Inventory	3,700,077
Up-front Insurance Payments	3,980,770
Cash	500,000
Total Working Capital	8,548,735
Total Project Cost	99,711,566

9.4 Space Requirement

The space requirement for the proposed **Steel Wire Drawing Unit** is estimated considering various facilities including management office, production hall, storage, open space, etc. Details of space requirement and cost related to land & building is given below;

Table 4: Space Requirement

Description	Estimated Area (Sqft)	Unit Cost (Rs.)	Total Cost (Rs.)
Management Office	500	1,200	600,000
Working Shed Area	5,000	1,258	6,289,080
Restrooms	800	500	400,000
Drive way / Pavement	5,000	30	150,000
Grounds	5,000	20	100,000
Total	16,300		7,539,080

9.5 Machinery & Equipment Requirement

Plant, machinery and equipment for the proposed project are stated below.

Table 5: Machinery & Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Wire Dry Drawing Line	1	63,200,000	63,200,000
Wire Rod Pay Off Machine			
Mechanical Descaling			
Wire Drawing Machine (11 Blocks)			
Declined Neck Coiler			
Rosette Wiring System For Coiler			
Transformer 50 kv	1	2,500,000	2,500,000

Generator	1	1,200,000	1,200,000
Installation	1	720,000	720,000
Total machinery cost			67,620,000
GST 17%		0.17	
Total			79,115,400
Transportation charges	1	500,000	500,000
Total			79,615,400

9.6 Furniture & Fixtures Requirement

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

Table 6: Furniture & Fixture

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Tables	3	6,000	18,000
Executive Chairs	3	5,000	15,000
Visitors Chairs	7	3,500	24,500
Carpeting & Wiring	1,000	385	385,000
Air Conditioners (2 ton Split)	1	90,000	90,000
Total			532,500

9.7 Office Equipment Requirement

Following office equipment will be required for **Steel Wire Drawing Unit**;

Table 7: Office Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Laptop	2	50,000	50,000
Printer	1	20,000	20,000
Fax Machine	1	20,000	20,000
Telephone Exchange	1	150,000	150,000
Telephone Sets	3	2,500	7,500
Photo Copier	1	200,000	200,000
Total			497,500

9.8 Human Resource Requirement

In order to run operations of **Steel Wire Drawing Unit** smoothly, details of human resources required along with number of employees and monthly salary are recommended as under;

Table 8: Human Resource Requirement

Description	No. of Employees	Monthly Salary per person (Rs.)
CEO	1	50,000
Manager/ Supervisor	1	45,000
Mechanic cum Operator	1	25,000
Electrician cum Operator	1	25,000
Accountant cum Receptionist	1	22,000
Salesman	1	22,000
Skilled Worker/ Operator	2	22,000
Semi-Skilled Worker	2	18,000
Security Guard	2	18,000
Total	15	349,000

9.9 Utilities and other costs

An essential cost to be borne by the project is the cost of electricity and gas. The electricity expenses are estimated to be around Rs. 2,948,550 / year. Furthermore, promotional expense being essential for marketing of **Steel Wire Drawing Unit** is estimated as 1% of administrative / Cost of Sales expenses.

9.10 Revenue Generation

Based on the capacity utilization of 65% for Steel Wires Sales revenue during the first year of operations is estimated as under;

Table 9: Revenue Generation – Year 1

Description	No. of Tons Produced	Finished Goods Inventory	Units available for Sale	Sale Price / Ton	Sales Revenue (Rs.)
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	(No.)	(Tons)	(Tons)	(Rs.)	
Steel Wires	2,231	93	2,138	142,939	305,582,802

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 Suppliers

Name of Supplier	Address	Phone	Fax	E-mail	Website
Raja Machinery	Main G.T.Road Daroghawala Chowk, Lahore	0322- 847739			
ARA Makina	ÇAYIROVA- KOCAELİ- TURKEY	+98- 9126264312		info@ aramakina .com	www.aramakina.com
New England Machinery	Main G.T.Road Daroghawala Chowk, Lahore	042- 6559373		new_england _machines @yahoo.com	www.new England machinery store.enic.pk

10.2 Raw Material Suppliers

Name of Supplier	Address	Phone	Fax	E-mail	Website
Nizami Wires PVT LTD	Nizami Building, Lahore,	042- 3217774798			
STRONGWILL WIRE INDUSTRIES (PVT) LTD	Share-e- Faisal, P.E.C.H.S, Karachi, Sindh, Pakistan	021-35241034 0332-3274880			

10.3 Technical Experts / Consultants

Name of Expert/ Organization	Address	Phone	Fax	E-mail	Website
Pakistan Industrial Technical Assistance Centre	234 Ferozepur Road, Garden Town, Lahore	(042) 99230699		info@pitac.gov.pk	www.pitac.gov.pk
PCSIR Laboratories Quetta	Mastung Road, near Main Ghundi, Quetta	081-2460128, 2460161	081-2460158	pcsirqta@qta.paknet.com.pk	www.pcsir.gov.pk

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 Education, Training & Standards in Higher Education	http://moptt.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 Balochistan	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
Punjab Small Industries Corporation	www.psic.gop.pk
Sindh Small Industries Corporation	www.ssic.gos.pk
Pakistan Horticulture Development and Export Company (PHDEC)	www.phdec.org.pk
Punjab Vocational Training Council (PVTC)	www.pvtc.gop.pk
Technical Education and Vocational Training Authority (TEVTA)	www.tevta.org
Pakistan Readymade Garment Technical Training Institute	www.prgmea.org/prgtti/
Pakistan Council of Scientific and Industrial Research (PCSIR).	http://www.pcsir.gov.pk
Punjab Industrial Estates (PIE)	www.pie.com.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.pk

12 ANNEXURES

12.1 Income Statement

Statement Summaries										SMEDA
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Rs. in actuals Year 10
Revenue	305,582,802	366,270,116	420,704,735	482,363,577	552,147,140	631,063,780	720,242,277	820,945,835	934,587,682	1,062,748,440
Cost of goods sold	271,266,542	325,720,246	373,760,984	428,152,663	489,685,067	559,242,429	637,814,417	726,508,389	826,563,024	939,363,519
Gross Profit	34,316,260	40,549,870	46,943,751	54,210,914	62,462,073	71,821,352	82,427,860	94,437,446	108,024,658	123,384,922
<i>General administration & selling expenses</i>										
Administration expense	1,782,000	2,534,905	2,781,707	3,052,538	3,349,737	3,675,872	4,033,760	4,426,493	4,857,463	5,330,392
Rental expense	-	-	-	-	-	-	-	-	-	-
Utilities expense	2,948,550	3,243,405	3,567,745	3,924,520	4,316,972	4,748,669	5,223,536	5,745,890	6,320,478	6,952,526
Travelling & Comm. expense (phone, fax, etc.)	16,200	23,045	25,288	27,750	30,452	33,417	36,671	40,241	44,159	48,458
Office vehicles running expense	-	-	-	-	-	-	-	-	-	-
Office expenses (stationary, etc.)	16,200	23,045	25,288	27,750	30,452	33,417	36,671	40,241	44,159	48,458
Promotional expense	3,055,828	3,662,701	4,207,047	4,823,636	5,521,471	6,310,638	7,202,423	8,209,458	9,345,877	10,627,484
Insurance expense	3,980,770	3,582,693	3,184,616	2,786,539	2,388,462	1,990,385	1,592,308	1,194,231	796,154	398,077
Professional fees (legal, audit, etc.)	1,527,914	1,831,351	2,103,524	2,411,818	2,760,736	3,155,319	3,601,211	4,104,729	4,672,938	5,313,742
Depreciation expense	8,441,494	8,441,494	8,441,494	8,441,494	8,441,494	8,441,494	8,441,494	8,441,494	8,441,494	8,441,494
Amortization expense	251,226	251,226	251,226	251,226	251,226	-	-	-	-	-
Property tax expense	-	-	-	-	-	-	-	-	-	-
Miscellaneous expense	-	-	-	-	-	-	-	-	-	-
Subtotal	22,020,182	23,593,863	24,587,935	25,747,271	27,091,002	28,389,211	30,168,073	32,202,777	34,522,722	37,160,632
Operating Income	12,296,078	16,956,006	22,355,816	28,463,644	35,371,071	43,432,141	52,259,786	62,234,669	73,501,937	86,224,290
Other income	-	-	-	-	-	-	-	-	-	-
Gain / (loss) on sale of assets	-	-	-	-	-	-	-	-	-	-
Earnings Before Interest & Taxes	12,296,078	16,956,006	22,355,816	28,463,644	35,371,071	43,432,141	52,259,786	62,234,669	73,501,937	86,224,290
Interest expense	7,260,348	5,717,776	4,411,336	2,879,834	1,084,499	-	-	-	-	-
Earnings Before Tax	5,035,730	11,238,231	17,944,480	25,583,810	34,286,571	43,432,141	52,259,786	62,234,669	73,501,937	86,224,290
Tax	1,258,932	2,809,558	4,486,120	6,395,952	8,571,643	10,858,035	13,064,947	15,558,667	18,375,484	21,556,072
NET PROFIT/(LOSS) AFTER TAX	3,776,797	8,428,673	13,458,360	19,187,857	25,714,929	32,574,106	39,194,840	46,676,002	55,126,452	64,668,217
Balance brought forward		3,776,797	9,764,376	18,578,189	30,212,837	44,742,213	61,853,055	80,838,315	102,011,454	125,710,325
Total profit available for appropriation	3,776,797	12,205,470	23,222,737	37,766,046	55,927,766	77,316,318	101,047,894	127,514,317	157,137,906	190,378,542
Dividend	-	2,441,094	4,644,547	7,553,209	11,185,553	15,463,264	20,209,579	25,502,863	31,427,581	38,075,708
Balance carried forward	3,776,797	9,764,376	18,578,189	30,212,837	44,742,213	61,853,055	80,838,315	102,011,454	125,710,325	152,302,834

12.2 Balance Sheet

Statement Summaries											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
	Rs. in actuals										
Assets											
<i>Current assets</i>											
Cash & Bank	500,000	505,794	10,798,909	22,193,836	31,612,457	40,192,551	60,661,112	82,178,069	104,862,137	128,810,769	192,351,635
Accounts receivable	-	12,558,197	13,805,197	16,170,716	18,556,198	21,257,070	24,312,553	27,766,563	31,668,249	36,072,607	41,041,153
Finished goods inventory	-	11,794,197	13,596,671	15,600,841	17,869,880	20,436,721	23,338,234	26,615,685	30,315,246	34,488,565	39,193,399
Equipment spare part inventory	367,888	485,044	612,844	772,929	973,224	1,223,556	1,536,108	1,925,974	2,411,841	3,016,837	-
Raw material inventory	3,700,077	4,878,384	6,163,744	7,773,818	9,788,302	12,306,045	15,449,575	19,370,691	24,257,350	30,342,157	-
Pre-paid annual land lease	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid insurance	3,980,770	3,582,693	3,184,616	2,786,539	2,388,462	1,990,385	1,592,308	1,194,231	796,154	398,077	-
Total Current Assets	8,548,735	33,804,310	48,161,981	65,298,679	81,188,524	97,406,327	126,889,891	159,051,213	194,310,976	233,129,011	272,586,186
<i>Fixed assets</i>											
Land	1,722,222	1,722,222	1,722,222	1,722,222	1,722,222	1,722,222	1,722,222	1,722,222	1,722,222	1,722,222	1,722,222
Building/Infrastructure	7,539,080	7,162,126	6,785,172	6,408,218	6,031,264	5,654,310	5,277,356	4,900,402	4,523,448	4,146,494	3,769,540
Machinery & equipment	79,615,400	71,653,860	63,692,320	55,730,780	47,769,240	39,807,700	31,846,160	23,884,620	15,923,080	7,961,540	-
Furniture & fixtures	532,500	479,250	426,000	372,750	319,500	266,250	213,000	159,750	106,500	53,250	-
Office vehicles	-	-	-	-	-	-	-	-	-	-	-
Office equipment	497,500	447,750	398,000	348,250	298,500	248,750	199,000	149,250	99,500	49,750	-
Total Fixed Assets	89,906,702	81,465,208	73,023,714	64,582,220	56,140,726	47,699,232	39,257,738	30,816,244	22,374,750	13,933,256	5,491,762
<i>Intangible assets</i>											
Pre-operation costs	1,256,129	1,004,903	753,678	502,452	251,226	-	-	-	-	-	-
Legal, licensing, & training costs	-	-	-	-	-	-	-	-	-	-	-
Total Intangible Assets	1,256,129	1,004,903	753,678	502,452	251,226	-	-	-	-	-	-
TOTAL ASSETS	99,711,566	116,274,421	121,939,373	130,383,350	137,580,475	145,105,559	166,147,629	189,867,457	216,685,726	247,062,267	278,077,948
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable	-	22,270,683	26,722,139	30,756,266	35,343,012	40,555,638	46,477,251	53,202,203	60,837,719	69,505,774	75,919,331
Export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Short term debt	-	-	-	-	-	-	-	-	-	-	-
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	-	22,270,683	26,722,139	30,756,266	35,343,012	40,555,638	46,477,251	53,202,203	60,837,719	69,505,774	75,919,331
<i>Other liabilities</i>											
Lease payable	-	-	-	-	-	-	-	-	-	-	-
Deferred tax	-	1,258,932	4,068,490	8,554,610	9,951,925	9,951,925	7,961,540	5,971,155	3,980,770	1,990,385	(0)
Long term debt	49,855,783	39,112,226	31,528,584	22,638,502	12,216,918	-	-	-	-	-	-
Total Long Term Liabilities	49,855,783	40,371,158	35,597,074	31,193,112	22,168,843	9,951,925	7,961,540	5,971,155	3,980,770	1,990,385	(0)
<i>Shareholders' equity</i>											
Paid-up capital	49,855,783	49,855,783	49,855,783	49,855,783	49,855,783	49,855,783	49,855,783	49,855,783	49,855,783	49,855,783	49,855,783
Retained earnings	-	3,776,797	9,764,376	18,578,189	30,212,837	44,742,213	61,853,055	80,838,315	102,011,454	125,710,325	152,302,834
Total Equity	49,855,783	53,632,580	59,620,159	68,433,972	80,068,620	94,597,996	111,708,838	130,694,098	151,867,237	175,566,108	202,158,617
TOTAL CAPITAL AND LIABILITY	99,711,566	116,274,421	121,939,373	130,383,350	137,580,475	145,105,559	166,147,629	189,867,457	216,685,726	247,062,267	278,077,948
<i>Note: Total assets value will differ from project cost due to first installment of leases paid at the start of year 0</i>											

12.3 Cash Flow Statement

Statement Summaries											SMEDA
Cash Flow Statement											Rs. in actuals
	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	-	3,776,797	8,428,673	13,458,360	19,187,857	25,714,929	32,574,106	39,194,840	46,676,002	55,126,452	64,668,217
Add: depreciation expense	-	8,441,494	8,441,494	8,441,494	8,441,494	8,441,494	8,441,494	8,441,494	8,441,494	8,441,494	8,441,494
amortization expense	-	251,226	251,226	251,226	251,226	251,226	-	-	-	-	-
Deferred income tax	-	1,258,932	2,809,558	4,486,120	1,397,315	-	(1,990,385)	(1,990,385)	(1,990,385)	(1,990,385)	(1,990,385)
Accounts receivable	-	(12,558,197)	(1,247,000)	(2,365,519)	(2,385,482)	(2,700,871)	(3,055,484)	(3,454,010)	(3,901,686)	(4,404,358)	(4,968,547)
Finished good inventory	-	(11,794,197)	(1,802,473)	(2,004,170)	(2,269,039)	(2,566,841)	(2,901,513)	(3,277,451)	(3,699,561)	(4,173,319)	(4,704,834)
Equipment inventory	(367,888)	(117,156)	(127,800)	(160,085)	(200,295)	(250,332)	(312,552)	(389,866)	(485,867)	(604,996)	3,016,837
Raw material inventory	(3,700,077)	(1,178,307)	(1,285,360)	(1,610,074)	(2,014,484)	(2,517,742)	(3,143,530)	(3,921,116)	(4,886,659)	(6,084,808)	30,342,157
Advance insurance premium	(3,980,770)	398,077	398,077	398,077	398,077	398,077	398,077	398,077	398,077	398,077	398,077
Accounts payable	-	22,270,683	4,451,457	4,034,127	4,586,746	5,212,626	5,921,613	6,724,952	7,635,516	8,668,055	6,413,557
Cash provided by operations	(8,048,735)	10,749,351	20,317,852	24,929,556	27,393,415	31,982,565	35,931,825	41,726,536	48,186,931	55,376,213	101,616,574
<i>Financing activities</i>											
Change in long term debt	49,855,783	(10,743,557)	(7,583,642)	(8,890,082)	(10,421,584)	(12,216,918)	-	-	-	-	-
Issuance of shares	49,855,783	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financ	99,711,566	(10,743,557)	(7,583,642)	(8,890,082)	(10,421,584)	(12,216,918)	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(91,162,831)	-	-	-	-	-	-	-	-	-	-
Cash (used for) / provided by invest	(91,162,831)	-	-	-	-	-	-	-	-	-	-
NET CASH	500,000	5,794	12,734,210	16,039,473	16,971,831	19,765,647	35,931,825	41,726,536	48,186,931	55,376,213	101,616,574
Cash balance brought forward		500,000	505,794	10,798,909	22,193,836	31,612,457	40,192,551	60,661,112	82,178,069	104,862,137	128,810,769
Cash available for appropriation	500,000	505,794	13,240,004	26,838,383	39,165,667	51,378,104	76,124,376	102,387,648	130,365,000	160,238,350	230,427,343
Dividend	-	-	2,441,094	4,644,547	7,553,209	11,185,553	15,463,264	20,209,579	25,502,863	31,427,581	38,075,708
Cash carried forward	500,000	505,794	10,798,909	22,193,836	31,612,457	40,192,551	60,661,112	82,178,069	104,862,137	128,810,769	192,351,635

13 KEY ASSUMPTIONS

13.1 Operating Assumptions

Description	Details
Days operational per month	26
Days operational per year	312

13.2 Production Assumptions

Description	Details
Maximum Capacity Utilization	95%
Total Production of tons per day	11
Total Production of tons per month	286
Total Production of the unit per year (100%)	3,432

13.3 Economy Related Assumptions

Description	Details
Electricity price growth rate	10%
Wage growth rate	10%
Sales price growth rate	10%

13.4 Cash Flow Assumptions

Description	Details
Accounts Receivable cycle (in days)	15
Accounts payable cycle (in days)	30