



Pre-feasibility Study

MARBLE PROCESSING PLANT

January 2021

“The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, and revenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA’s website and consult financial experts to stay current with market conditions.”

Small and Medium Enterprises Development Authority
Ministry of Industries and Production
Government of Pakistan

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1 DISCLAIMER

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2 EXECUTIVE SUMMARY

Marble is calcareous metamorphic rock that is widely used in housing and building construction as well as interior decorative, especially for floor, stairs, pavement, external walls, kitchen slabs and novelties etc. The processing of marble mainly entails the cutting (into predefined sizes), grinding and polishing of raw marble rocks as per the required usages.

This particular pre-feasibility provides the basic information for setting up a small scale 'Marble Processing Plant' that will process raw marble blocks and produce marble strips, tiles and slabs for construction industry. The proposed unit will have installed capacity of processing 1,500 sq. ft. of marble per day and 450,000 sq. ft. per year.

The unit will operate on 8 hours single shift per day and total 300 days in a year. Initial capacity utilization is estimated at 75% per annum with a gradual increase of 5% in subsequent years to achieve the maximum operational capacity (i.e. 95%). The commercial viability of the proposed venture heavily depends on the quality of produced marble slabs/tiles, variety of colors and regular orders from the customers. Therefore, unit should preferably be located in or near to the marble processing clusters where basic infrastructure and skilled labour is easily available.

The total project cost for setting up this unit is estimated at Rs. 68.688 million out of which Rs. 66.805 million is capital cost and Rs. 1.883 million is working capital. The project is proposed to be financed through 100% equity. The NPV is projected around Rs. 13.483 million, with an IRR of 22% and a Payback Period of 4.76 years. The project will provide employment opportunities to 17 people including the Owner. The legal business status of this project is assumed to be '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 '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 “**Marble Processing Plant**” 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

Marble processing is gaining popularity due to increase in its usage in construction industry. Today almost all the modern architectural designs of houses and plazas include the final touch of beautiful shades of marble in exterior as well as interior portions. Even though reasonable number of marble processing units are working in the country but there is still a great demand for a fully equipped marble processing plant.

The proposed Marble Processing Unit will be equipped to process raw marble rocks into marble tiles, slabs and strips mainly for the local construction industry. The unit will mainly entails to cut and polish the raw marble into predefined sizes of tiles and slabs. In this regard locally manufactured processing machines including cutting, splitting, resizing and polishers will be installed to produce different types and sizes of tiles and slabs. The unit will initially process raw stone of weight from 10 to 15 ton. Though the project will be capable of producing many varieties of marble but its main focus will be on the sizes with high market demands.

The unit is proposed to be located nearby to marble processing clusters in KPK, Punjab and Baluchistan with easy availability of labour and infrastructural

requirements, especially transportation of marble.

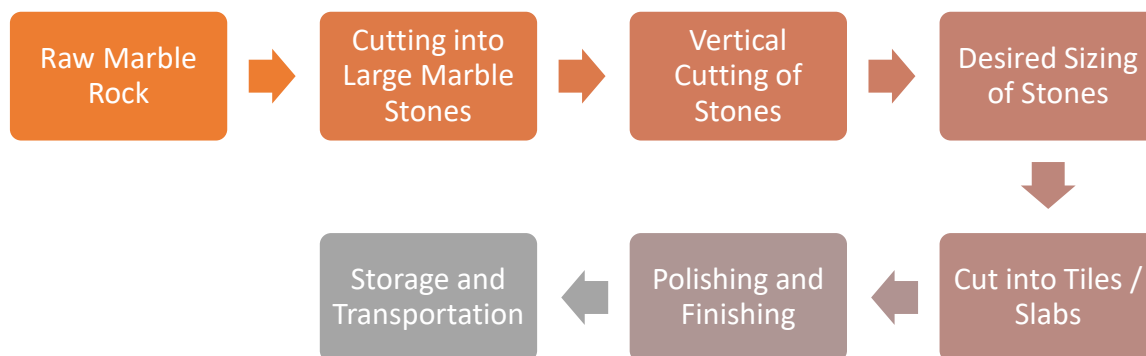
The major target customers will be the housing and construction sector. Produced marble tiles and slabs will be used for floors, stairs, kitchen slabs, table tops, outer walls and pavements as well as at the main entrances of offices and hotels etc. The proposed unit will operate on order manufacturing basis from construction companies, builders and commercial contractors / traders. The Financial Analysis shows the unit will be profitable from the very first year of the operation.

5.1 Production Process Flow

Raw marble rocks as received in the plant are cut into large marble stones using gang saw machine. Stone is then placed in the trolley and moved to vertical cutting machine for further division into smaller (but still large enough to handle) sizes. These stone pieces are then brought to the sizing machine to cut them into desired size of tiles blocks. Tiles blocks are then cut into tiles of desired thickness which are then stacked in the storage area.

The plant would process (cut and polish) raw marble blocks and would produce three types of products i.e. Marble Strips, Marble Slabs and Marble Tiles. The plant would produce tiles of various sizes from the strips depending on the orders of customers.

Figure 1: Production Process Flow



5.2 Installed and Operation Capacity

The proposed Marble Processing Unit has an installed capacity of processing and producing 45,000 square feet of Marble Tiles/Slabs per annum. The unit is assumed to operate 300 days per year. The unit is assumed to operate at 75% production capacity in year 1, whereas the maximum capacity utilization is worked out at 95% of the installed capacity.

Table 1: Installed and Operational Capacity

Description	Total Capacity (Sq. Ft.)	Operational Capacity 75 % (Year 1)	Max. Operational Capacity 95% (Year 5)
Marble Tiles / Slabs	450,000	337,500	427,500

6 CRITICAL FACTORS

Following are the factors critical for the success of this business venture;

- ⇒ Efficient and cost effective procurement system for raw material.
- ⇒ Technical skills are vital for effectively operating the business, as skilled workers can reduce wastage; ensure lower machine maintenance cost, in-time delivery and quality finish of the product.
- ⇒ Factory location must take into account the availability of electric power and water supply, proximity to supply sources and markets, and optimum visibility and ease of access by customers.
- ⇒ Sufficient inventory of cutting blades and proper maintenance of machinery.
- ⇒ Availability, training, and retention of skilled labor.
- ⇒ Effective market linkages, especially with civil contractors focusing upon construction of houses for lower middle and middle class.
- ⇒ Customer services through advice on cost effective transportation and maintaining a list of transporters for the purpose. Clear communication to the customers about expected color variation.
- ⇒ Careful selection of good location and acquiring the land at competitive rental rates.
- ⇒ Strong networking with contractors and builders for repeat orders.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Marble and granite industry of Pakistan has a total estimated reserve of around 160 million tons. The marble and onyx mines of Pakistan are mainly located in Baluchistan (Chaghi, Lasbela, Loralai, Mastong, and Naal), Khyber Pakhtunkhwa / FATA (Bunair, Mardan, Mohamand and Swat), Chitral, and Sindh (Dadu, Johi Range).

The major marble and granite processing clusters are concentrated in Gujranwala, Islamabad, Rawalpindi, Karachi, Lasbela, Lahore, Peshawar, Swat, Buner,

Nowshera and Risalpur. As the production is dependent upon the easy availability of marble and onyx, therefore, the project should be established nearby to stated marble and onyx mines locations or marble and granite processing cluster. Resources like skilled labour, utilities, infrastructure and transportation are also easily available in these cities.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

The marble products are famous worldwide for their application in construction industry as well as for decorative purposes. They are widely used in floorings, pave ways, corridors, hotel lobbies and shopping malls. Tiles and slabs made from marble are well known for their uniqueness and the natural shades/colors of marble makes it even more elusive. Therefore, construction companies, builders, architects, corporate offices and commercial traders of major cities are the potential customers / markets for the proposed unit. Besides local market, promising export markets for marble slabs and tiles are Central Asian Republics, United States of America, and Australia.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Marble Processing Plant. Various costs 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. 41.766 million in the year one. The capacity utilization during year one is worked out at 75%.

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

Table 2: Project Economics

Description	Details
Internal Rate of Return (IRR)	22%
Payback Period (Yrs.)	4.76
Net Present Value (Rs.)	13,483,054

Calculation of break-even analysis is as follows:

Table 3: Breakeven (100% Equity Based)

Break-Even Analysis	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Break-Even Revenue	26,174,197	26,331,095	27,321,675	28,463,009	29,763,879	32,272,299	34,592,188	36,720,234	39,085,168	41,712,163
Break-Even Units	193,883	177,314	167,258	158,405	150,586	148,434	144,640	139,580	135,063	131,037
Margin of Safety	37%	50%	54%	58%	62%	62%	62%	63%	63%	64%

However, for the purposes of further explanation the Project Economics based on Debt:Equity (i.e. 50:50) Model has also been computed. On the basis of Debt:Equity model the Internal Rate of Return, Payback Period and Net Present Value of the proposed project are provide in the table below.

Table 4: Project Economics Based on Debt (50%):Equity (50%)

Description	Details
Internal Rate of Return (IRR)	21%
Payback Period (Yrs.)	4.94
Net Present Value (Rs.)	31,194,113

The financial assumptions for Debt:Equity are as follows:

Table 5: Financial Assumptions for Debt:Equity Model

Description	Details
Debt (50%)	34,394,162
Equity (50%)	34,394,162
Interest Rate on Debt	12%
Debt Tenure	5
Debt Payment / Year	1

The projected Income Statement, Cash Flow Statement and Balance Sheet enclosed as annexures are based on 100% Equity Based Business Model.

9.2 Project Cost

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

Table 6: Project Cost

Description	Amount Rs.
Capital Cost	
Land	20,000,000
Building / Infrastructure	21,344,000
Machinery & Equipment	19,680,000
Vehicles	3,600,000
Pre-Operating Costs	995,000
Furniture & Fixtures	671,000
Office & Computer Equipment	113,000
Security Deposit for Electricity Connection	402,000
Total Capital Cost	66,805,000
Working Capital	
Upfront Insurance Payment	698,400
Equipment Spare Part Inventory	9,625
Raw Material Inventory	670,313
Cash	504,376
Total Working Capital	1,882,714
Total Project Cost	68,687,714

9.3 Land & Building Requirements

Approximately 5 Kanals of land would be required for establishment of proposed unit. It is recommended that required land should be procured in the industrial estates of identified city / area. The cost of land is estimated at the rate of Rs. 4 million per kanal.

The infrastructural requirements of the project mainly comprise the construction of various facilities including management office, machine shed, storage, labour resting room and open space, etc. The cost of construction of building for the proposed unit is provided in the table below.

Table 7: Land and Building Requirement

Description	Estimated Area (Sq. ft.)	Cost per Sq. ft. (Rs.)	Total Cost (Rs.)
Finished Goods Store	6,000	2,000	12,000,000
Machine Shed	3,000	1,100	3,300,000
Labour Resting Room	1,000	2,000	2,000,000
Grounds	11,900	150	1,785,000
Management Building	500	2,500	1,250,000
Boundary Wall	660	1,150	759,000
Kitchen	100	2,500	250,000
Total Construction Cost			21,344,000
Cost of Land			20,000,000
Total Cost of Land & Construction			41,344,000

9.4 Machinery & Equipment Requirement

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

Table 8: Machinery & Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Polishing Machine Semi Auto	1	1,000,000	1,000,000
Cutting Machine	1	400,000	400,000
HV Cutter	1	2,500,000	2,500,000
Gang Saw	1	8,000,000	8,000,000
Sizer / Re-Sizer	2	200,000	400,000
Crane	1	3,500,000	3,500,000
Transformer (200)	1	1,500,000	1,500,000
Generator	1	980,000	980,000
Health and Safety Equipment	1	150,000	150,000
Tube Well	1	1,200,000	1,200,000
Electric Wiring & Lighting	1	50,000	50,000

Total			19,680,000
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9.5 Furniture & Fixtures Requirement

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

Table 9: Furniture & Fixture

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Table & Chair (Owner Room)	4	8,000	32,000
Visitor Chair (Owner Room)	4	12,000	48,000
Sofa (Owner Room)	1	15,000	15,000
Cabinet	1	35,000	35,000
Staff Table & Chair	2	25,000	50,000
Visitor Chair	4	6,500	26,000
Cabinet Racks	2	15,000	30,000
Miscellaneous Furniture	1	50,000	50,000
Renovations & Fixtures	1	300,000	300,000
Air conditioners (1.5 ton Split)	1	85,000	85,000
Total			671,000

9.6 Vehicles Requirement

A mini truck would be required for providing services for transportation of raw material (i.e. Marble Rock Stone) to factory and finished good (i.e. Marble Tiles and Slabs) to customers. A fork lifter will also be required for lifting and moving heavy stones and marble slabs / tiles for efficient and smooth operations at the marble processing plant. Details of the office vehicles required for the project are given below.

Table 10: Vehicles

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Mini Truck	1	2,500,000	2,500,000
Fork Lifter	1	1,100,000	1,100,000
Total			3,600,000

9.7 Office Equipment

Following office equipment will be required for the project.

Table 11 Office Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Computers with UPS	1	35,000	35,000
Computer Printers and Scanner	1	29,500	29,500
Telephone	3	1,500	4,500
Water Dispenser	1	19,000	19,000
Miscellaneous Kitchen Utensils	1	25,000	25,000
Total			113,000

9.8 Human Resource Requirement

In order to run operations of “Marble Processing Plant” smoothly, details of human resources required along with number of employees and monthly salary are recommended as under.

Table 12: Human Resource Requirement

Description	No. of Employees	Salary per Person (Rs.)
Owner / Manager	1	100,000
Gang Saw Operator	1	45,000
H/V Cutter Operator	1	45,000
Cutter Man	2	45,000
Crane Operator	1	35,000
Helper	6	22,000
P. Machine Operator	1	35,000
Accounts & Admin Officer	1	35,000
Security Guards	2	20,000
Procurement Officer	1	70,000
Total	17	

9.9 Utilities and Other Costs

An essential cost to be borne by the project is the cost of electricity and diesel. The electricity and diesel expenses are estimated to be around Rs.171,188 per month. Furthermore, travelling expense being essential for Marble Processing Plant is estimated as 20% of administration expense.

9.10 Revenue Generation

Based on the capacity utilization of 75%, sales revenue during the first year of operations is provided in the table below.

Table 13: Revenue Generation – Year 1

Description	Quantity Produced (Sq. ft.)	Finished Goods Inventory (Sq. ft.)	Quantity for Sale (Sq. ft.)	Unit Sale Price (Rs.)	Sales Revenue (Rs.)
Marble Tiles	337,500	28,125	309,375	135	41,765,625

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of machinery supplier relevant to the proposed project are given.

Table 14: Machinery Suppliers

Name of Supplier	Address	Phone	E-mail
Mr. Zahoor	ZAK Marble Factory Kili Gul Mohammad, Airport Road, Quetta	0300- 9383853	zakakar@yahoo.com
Mr. Zafar Zehri	M/s Zafar Zehri Marble Industries (Pvt) Ltd. Mauripur Road Karachi	021-5863787	
Mr. Ilyas	M/s N-Traders Marble City, Gadani, Lasbela	0346-2332552	

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
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
Punjab Small Industries Corporation	www.psic.gop.pk
Sindh Small Industries Corporation	www.ssic.gos.pk
Pakistan Stone Development Company (PASDEC)	www.pasdec.com.pk
Pakistan Mineral Development Corporation (PMDC)	www.pmdc.gov.pk
Mines and Mineral Development Department Government of Punjab	www.mnm.punjab.gov.pk
Mineral Development Department Government of KPK	www.minerals_developmen.kp.gov.pk
Mines and Mineral Development Department Government of Sindh	www.smd.gov.pk/Minerals.aspx
Mines and Mineral Development Department Government of Baluchistan	www.balochistan.gov.pk/departments/mines-and-minerals

12 ANNEXURES

12.1 Income Statement

Calculations										SMEDA
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	41,765,625	52,214,625	59,934,735	68,555,889	78,172,845	84,798,597	91,582,484	98,909,083	106,821,810	115,367,555
<i>Cost of sales</i>										
Raw Material Cost	16,087,500	20,112,300	23,085,972	26,406,713	30,111,022	32,663,163	35,276,216	38,098,313	41,146,179	44,437,873
Direct labour	4,584,000	5,030,305	5,520,062	6,057,503	6,647,270	7,294,458	8,004,657	8,784,002	9,639,224	10,577,713
Machinery maintenance	231,000	288,792	331,491	379,173	432,363	469,010	506,530	547,053	590,817	638,082
Direct electricity	1,800,000	2,112,000	2,468,400	2,874,960	3,338,148	3,671,963	4,039,159	4,443,075	4,887,382	5,376,121
Diesel cost for generator	254,250	279,675	307,643	338,407	372,247	409,472	450,419	495,461	545,007	599,508
Operating costs 5 (Misc)	148,500	189,090	221,067	257,549	299,116	330,477	363,524	399,877	439,864	483,851
Total cost of sales	23,105,250	28,012,162	31,934,635	36,314,305	41,200,167	44,838,542	48,640,506	52,767,781	57,248,474	62,113,148
Gross Profit	18,660,375	24,202,463	28,000,100	32,241,584	36,972,679	39,960,054	42,941,978	46,141,302	49,573,336	53,254,407
<i>General administration & selling expenses</i>										
Administration expense	2,940,000	3,226,243	3,540,354	3,885,048	4,263,302	4,678,383	5,133,877	5,633,718	6,182,225	6,784,135
Administration benefits expense	588,000	645,249	708,071	777,010	852,660	935,677	1,026,775	1,126,744	1,236,445	1,356,827
Water expense	176,400	193,575	212,421	233,103	255,798	280,703	308,033	338,023	370,934	407,048
Travelling expense	588,000	645,249	708,071	777,010	852,660	935,677	1,026,775	1,126,744	1,236,445	1,356,827
Communications expense (phone, fax, mail, internet, etc.)	147,000	161,312	177,018	194,252	213,165	233,919	256,694	281,686	309,111	339,207
Office vehicles running expense	900,000	990,000	1,089,000	1,197,900	1,317,690	1,449,459	1,594,405	1,753,845	1,929,230	2,122,153
Office expenses (stationary, entertainment, janitorial services, etc.)	147,000	161,312	177,018	194,252	213,165	233,919	256,694	281,686	309,111	339,207
Insurance expense	698,400	617,760	537,120	456,480	375,840	295,200	389,223	291,917	194,611	97,306
Professional fees (legal, audit, consultants, etc.)	104,414	130,537	149,837	171,390	195,432	211,996	228,956	247,273	267,055	288,419
Depreciation expense	4,912,100	4,912,100	4,912,100	4,912,100	4,912,100	5,485,061	5,485,061	5,485,061	5,485,061	5,485,061
Amortization of pre-operating costs	199,000	199,000	199,000	199,000	199,000	-	-	-	-	-
Miscellaneous expense 1	294,000	322,624	354,035	388,505	426,330	467,838	513,388	563,372	618,223	678,414
Subtotal	11,694,314	12,204,959	12,764,045	13,386,049	14,077,143	15,207,832	16,219,881	17,130,069	18,138,451	19,254,603
Operating Income	6,966,061	11,997,504	15,236,056	18,855,535	22,895,536	24,752,222	26,722,098	29,011,234	31,434,885	33,999,804
Other income (interest on cash)	95,703	342,287	695,678	1,109,246	1,594,573	2,058,820	2,569,425	3,209,164	3,897,611	4,690,261
Earnings Before Interest & Taxes	7,061,763	12,339,791	15,931,734	19,964,781	24,490,108	26,811,042	29,291,522	32,220,397	35,332,496	38,690,064
Earnings Before Tax	7,061,763	12,339,791	15,931,734	19,964,781	24,490,108	26,811,042	29,291,522	32,220,397	35,332,496	38,690,064
Tax	1,591,617	3,438,926	4,696,107	6,107,673	7,691,537	8,503,864	9,372,033	10,397,139	11,486,373	12,661,522
NET PROFIT/(LOSS) AFTER TAX	5,470,147	8,900,864	11,235,627	13,857,108	16,798,571	18,307,178	19,919,490	21,823,259	23,846,123	26,028,542

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	504,376	7,151,828	20,231,110	35,423,150	53,316,509	74,249,295	90,456,316	115,097,670	141,635,448	170,173,430	205,047,435
Accounts receivable		1,716,396	1,931,101	2,304,439	2,640,218	3,014,974	3,348,728	3,624,269	3,914,210	4,227,347	4,565,535
Finished goods inventory		2,100,477	2,346,569	2,674,329	3,040,267	3,448,472	3,736,545	4,053,376	4,397,315	4,770,706	5,176,096
Equipment spare part inventory	9,625	12,635	15,228	18,289	21,898	24,941	28,283	32,073	36,371	41,245	-
Raw material inventory	670,313	905,054	1,121,978	1,386,036	1,706,905	1,999,704	2,332,455	2,720,576	3,173,279	3,701,313	-
Pre-paid insurance	698,400	617,760	537,120	456,480	375,840	295,200	389,223	291,917	194,611	97,306	-
Total Current Assets	1,882,714	12,504,149	26,183,106	42,262,723	61,101,637	83,032,586	100,291,551	125,819,881	153,351,235	183,011,347	214,789,066
<i>Fixed assets</i>											
Land	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000
Building/Infrastructure	21,344,000	19,209,600	17,075,200	14,940,800	12,806,400	10,672,000	8,537,600	6,403,200	4,268,800	2,134,400	-
Machinery & equipment	19,680,000	17,712,000	15,744,000	13,776,000	11,808,000	9,840,000	7,872,000	5,904,000	3,936,000	1,968,000	-
Furniture & fixtures	671,000	603,900	536,800	469,700	402,600	335,500	268,400	201,300	134,200	67,100	-
Office vehicles	3,600,000	2,880,000	2,160,000	1,440,000	720,000	-	5,102,096	3,826,572	2,551,048	1,275,524	-
Computer equipment	113,000	90,400	67,800	45,200	22,600	-	160,149	120,112	80,075	40,037	-
Security deposit for WAPDA	402,000	402,000	402,000	402,000	402,000	402,000	402,000	402,000	402,000	402,000	402,000
Total Fixed Assets	65,810,000	60,897,900	55,985,800	51,073,700	46,161,600	41,249,500	42,342,245	36,857,184	31,372,122	25,887,061	20,402,000
<i>Intangible assets</i>											
Pre-operation costs	995,000	796,000	597,000	398,000	199,000	-	-	-	-	-	-
Total Intangible Assets	995,000	796,000	597,000	398,000	199,000	-	-	-	-	-	-
TOTAL ASSETS	68,687,714	74,198,049	82,765,906	93,734,423	107,462,237	124,282,086	142,633,795	162,677,064	184,723,357	208,898,408	235,191,066
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		708,336	885,136	1,020,073	1,171,837	1,338,412	1,458,613	1,583,646	1,720,069	1,869,023	1,852,437
Total Current Liabilities	-	708,336	885,136	1,020,073	1,171,837	1,338,412	1,458,613	1,583,646	1,720,069	1,869,023	1,852,437
<i>Other liabilities</i>											
Deferred tax		(668,147)	(1,177,954)	(1,580,002)	(1,861,059)	(2,006,356)	(2,082,026)	(2,083,280)	(1,996,669)	(1,816,694)	(1,535,993)
Total Long Term Liabilities	-	(668,147)	(1,177,954)	(1,580,002)	(1,861,059)	(2,006,356)	(2,082,026)	(2,083,280)	(1,996,669)	(1,816,694)	(1,535,993)
<i>Shareholders' equity</i>											
Paid-up capital	68,687,714	68,687,714	68,687,714	68,687,714	68,687,714	68,687,714	68,687,714	68,687,714	68,687,714	68,687,714	68,687,714
Retained earnings		5,470,147	14,371,011	25,606,638	39,463,746	56,262,317	74,569,495	94,488,985	116,312,243	140,158,366	166,186,908
Total Equity	68,687,714	74,157,860	83,058,725	94,294,352	108,151,460	124,950,030	143,257,208	163,176,698	184,999,957	208,846,079	234,874,622
TOTAL CAPITAL AND LIABILITIES	68,687,714	74,198,049	82,765,906	93,734,423	107,462,237	124,282,086	142,633,795	162,677,064	184,723,357	208,898,408	235,191,066

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		5,470,147	8,900,864	11,235,627	13,857,108	16,798,571	18,307,178	19,919,490	21,823,259	23,846,123	26,028,542
Add: depreciation expense		4,912,100	4,912,100	4,912,100	4,912,100	4,912,100	5,485,061	5,485,061	5,485,061	5,485,061	5,485,061
amortization of pre-operating costs		199,000	199,000	199,000	199,000	199,000	-	-	-	-	-
Deferred income tax		(668,147)	(509,807)	(402,048)	(281,057)	(145,297)	(75,669)	(1,255)	86,612	179,975	280,702
Accounts receivable		(1,716,396)	(214,705)	(373,338)	(335,779)	(374,756)	(333,754)	(275,541)	(289,942)	(313,137)	(338,188)
Finished goods inventory		(2,100,477)	(246,091)	(327,760)	(365,938)	(408,205)	(288,073)	(316,830)	(343,940)	(373,391)	(405,389)
Equipment inventory	(9,625)	(3,010)	(2,593)	(3,061)	(3,608)	(3,044)	(3,342)	(3,790)	(4,298)	(4,874)	41,245
Raw material inventory	(670,313)	(234,741)	(216,925)	(264,057)	(320,869)	(292,800)	(332,751)	(388,121)	(452,704)	(528,034)	3,701,313
Advance insurance premium	(698,400)	80,640	80,640	80,640	80,640	80,640	(94,023)	97,306	97,306	97,306	97,306
Accounts payable		708,336	176,799	134,938	151,763	166,576	120,201	125,034	136,423	148,954	(16,586)
Cash provided by operations	(1,378,338)	6,647,452	13,079,282	15,192,040	17,893,359	20,932,786	22,784,827	24,641,354	26,537,777	28,537,982	34,874,005
<i>Financing activities</i>											
Issuance of shares	68,687,714	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	68,687,714	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(66,805,000)	-	-	-	-	-	(6,577,806)	-	-	-	-
Cash (used for) / provided by investing activities	(66,805,000)	-	-	-	-	-	(6,577,806)	-	-	-	-
NET CASH	504,376	6,647,452	13,079,282	15,192,040	17,893,359	20,932,786	16,207,021	24,641,354	26,537,777	28,537,982	34,874,005

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Water Expense	6% of Administration expenses
Communication Expenses	5% of Administration expenses
Travelling Expense	20% of Administration expenses
Depreciation Method	Straight Line
Depreciation Rate	10% on Machinery 20% on Office Equipment 10% on Furniture & Fixture 20% on vehicles
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Water Price Growth Rate	5%
Wage Growth Rate	10%

13.2 Production Cost Assumptions

Description	Details
Maximum Operational Capacity (Square Feet)	450,000
Production Capacity in First Year	75%
Hours Operational / Day	8
Shift Length (Hours)	8
Days Operational / Year	300

13.3 Revenue Assumptions

Description	Details
Sale Price Growth Rate	8%
Sale Price Per Square Feet (Rs.)	135
Square Feet Sold – Year 1	309,375
Finished Goods Inventory – Year 1	28,125

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