Pre-Feasibility Study FAN GUARDS MANUFACTURING UNIT



Small and Medium Enterprises Development Authority

Ministry of Industries & Production

Government of Pakistan

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1 DISCLAIMER

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Document Control

2 EXECUTIVE SUMMARY

Fan is a necessity item of summer season. The hot local climate during summer season makes it mandatory to use. Their main usage is to get rid of extensive heat through air displacement at a fast rate. Three major types of fans have the maximum demand, which are Ceiling Fans, Pedestal Fans, and Bracket Fans. All pedestal and bracket fans have fan guards as an integral part of the product. The reason is to protect the users from any harm that could be caused by fast rotating, sharp edged fan blades.

This document provides details regarding setting up a Fan Guards Manufacturing Unit. The unit will be capable of producing on average 450 Fan Guards per day.

The proposed Fan Guards manufacturing business involves a total investment of about Rs. 29.64 million. This includes capital investment of Rs. 28.11 million and Rs. 1.52 million as initial working capital. The project is financed through 50% debt and 50% equity. The Net Present Value (NPV) of the project is around Rs. 17.09 million with an Internal Rate of Return (IRR) of 27% and a payback period of 4.11 years.

The project will provide employment opportunities to 7 people including owner manager. Higher return on investment and a steady growth of business is expected with the entrepreneur having some prior experience or education in the related field of business. The legal business status of this project is proposed as '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 **Fan Guard Manufacturing 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 reveals 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

Fan guards are primarily used to provide a physical barrier around revolving fan blades of different types of pedestal and bracket fans to prevent accidental contact with fingers or other objects. They are typically constructed using metal wire or plastic. Fan guards are manufactured in a variety of configurations, which depend upon the degree of accessibility required, and the shape of the fan blades themselves. Fan guards are designed to maximize airflow while minimizing noise. Fan guards manufacturing is a part of vendors industry for fan manufacturing sector.

This particular pre-feasibility provides information for setting up a fan guards manufacturing unit on a small-scale level that will operate as a vendor for fan manufacturers. Fan guards are manufactured in different diametric sizes and



measured in terms of their weight depending upon the requirements of fan manufacturers. The most common fan guard used in the local fan industry generally weighs 3 kg on average, with a diameter of approximately 26-inch. Accordingly, the proposed unit will mainly cater to 1.5 kg and 3 kg fans guards and will have an installed capacity of producing around 101,250 guards annually on 8 hours single shift basis.

Since, fan guard is an industrial product and, therefore, its target market cannot be defined in terms of gender, age bracket, profession, etc. The factors involved in defining the target market for fan guard would be the size of the fan manufacturing unit, the quality of fan it produces, and the price the customer is willing to pay for the product.

The proposed project would mainly cater to the fan manufacturer's demand of fan guards for following types of fans:

- Pedestal Fans
- Bracket Fans
- TCP (Table cum pedestal) Fans
- Baby Fans
- Railway Fans
- Air Coolers

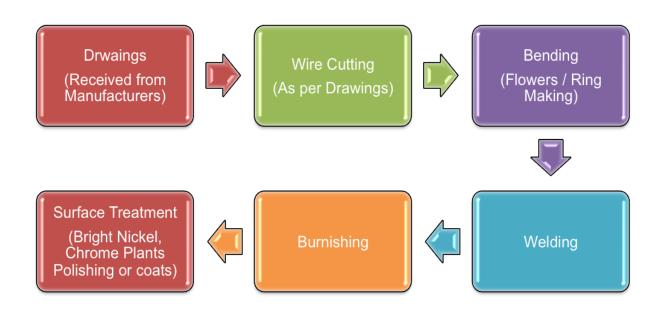
Presently, fan-manufacturing units in Pakistan are predominantly concentrated in the districts of Gujranwala, Gujrat and Sialkot. Therefore, the ideal location for proposed fan guards manufacturing is the industrial estates / cluster of these two cities mainly due to easy availability of customers and skilled labor force.

The Fan Guard manufacturing business is assumed to operate as a sole proprietorship, however, partnership opportunities may be explored if further investment is required.



5.1 Production Process Flow

The production process flow of proposed fan guards manufacturing units mainly entails the following key process:



5.2 Installed and Operational Capacities

This pre-feasibility is based on a combination of different types of machines related to above stated production operations. Accordingly to the capacity of installed machines the proposed unit can manufacture 450 guards per day on 8 hours single shift basis. The details of overall installed, operational and maximum capacity utilization of the proposed unit is provided below:

Table 1	: Installed	and (Operational	Capacities	

Description / Product Mix	Percentage of Production	Total Production Capacity (Annually)	Operational Capacity 75 % (Year 1)	Maximum Operational Capacity 90% (Year 03-10)
Fan Guard 1.5 Kg	10%	13,500	10,125	12,150
Fan Guard 3 Kg	90%	121,500	91,125	109,350
Total		135,000	101,250	121,500



6 CRITICAL FACTORS

The commercial viability of the proposed fan guards manufacturing unit depends on the following critical factors:

- > Technical know-how and relevant experience of entrepreneur.
- > Availability of skilled labour having technical knowledge.
- Ability to generate work orders through industrial networking, direct marketing and negotiating long term contracts.
- Selection of appropriate machinery, technology and human resources would be required to run project successfully.
- Stringent supervision of the production process at every level; utilization of job costing and job card with technical specifications sheet.
- Higher return on investment and a steady growth of business is closely associated with regular training and capacity building of the entrepreneur and employees.
- The most important factor for the success of the project would be the quality products and customer satisfaction in order to get a comparative advantage.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

For the success of the project, it is important to find a location preferably in an industrial cluster where utilities especially electricity and other infrastructure are conveniently available. Presently, Gujrat, Gujranwala and Sialkot are the centre of fans and fan guards manufacturing in Pakistan.

Therefore, industrial clusters in Gujranwala, Gujrat and Sialkot are most suitable locations to house the proposed project. Establishing the unit in stated cities would have an advantage of being close to large buyers, which may lead to consistent orders and referrals. Additionally, these cities have adequate availability of skilled labor, raw material and other support infrastructure.

8 POTENTIAL TARGET MARKETS / CITIES

Major target market for proposed unit includes manufacturers of different types of fans, especially Pedestal, Bracket, Railway Fans and Room Coolers etc.,



predominantly based in Gujranwala and Gujrat districts. However, there is also a growing demand for the product in Sialkot, Lahore and Karachi.

The production of 3 kg weight fan guards is the highest, as they are used in the pedestal and bracket fans, which have the highest, market demands in terms of their usage.

Additionally, fan guards manufactured from Pakistan have huge export potential in Malaysia, Middle Eastern, African and Korean markets.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Fan Guard Manufacturing Unit. 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. 42.45 million in the year one. The capacity utilization during year one is worked out at 75% with 10% increase in subsequent years up to the maximum capacity utilization of 90%.

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

Description	Details
Internal Rate of Return (IRR)	27%
Payback Period (yrs.)	4.11
Net Present Value (Rs.)	17,099,347

Table 2: Project Economics

9.2 **Project Financing**

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

Table 3: Project Financing

Details



Total Equity (50%)	Rs. 14,822,667
Bank Loan (50%)	Rs. 14,822,667
Markup to the Borrower (%age / annum)	14%
Tenure of the Loan (Years)	5

9.3 Project Cost

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

Description	Amount Rs.
Capital Cost	
Land	13,000,000
Building / Infrastructure	5,760,368
Machinery and Equipment	7,860,000
Furniture and Fixture	151,500
Office Equipment	97,000
Pre-operating Cost	1,250,421
Total Capital Cost	28,119,289
Working Capital	
Raw Material Inventory	1,202,005
Cash	300,000
Equipment Spare Part Inventory	24,040
Total Working Capital	1,526,045
Total Project Cost	29,645,334

Table 4: Project Cost

9.4 Space Requirement

Approximately 2 Kanal 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 potential cities. The total cost of land is estimated at Rs. 13.00 million.

The infrastructural requirements of the project mainly comprises of the construction of management office, production area, store and open area. The cost of construction of building for the proposed unit is provided in the table below:

Description	Estimated Area (Sq ft.)	Cost per Sq ft.	Total Cost
Management / Admin Area	400	1,500	600,000
Production Area	4,200	1,000	4,200,000
Store	300	1,000	300,000
Open Area	4,100	50	205,000
Boundary Wall	(379)	1,200	455,368
Total Area	9,000		5,760,368

Table 5: Space Requirement

9.5 Machinery & Equipment Requirement

Machinery and equipment for the proposed project are stated below:

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Flower Making Machine	3	250,000	750,000
Hydraulic Press, capacity 40 ton	2	35,000	70,000
Roller Machine to make rings	2	225,000	450,000
Spot welding with fixtures	8	150,000	1,200,000
Welding Transformer	2	35,000	70,000
Strip Cutting Machine	2	25,000	50,000
Power Press (15 Ton)	2	65,000	130,000
Ring Welding Machine	2	200,000	400,000
Grinder	1	15,000	15,000
Cutting Press	2	20,000	40,000
Miscellaneous	1	1,500,000	1,500,000
Polishing Section			
Polishing Machine Bench Type Double	2	40,000	80,000
Flexible Lead Type Polishing Machine	1	55,000	55,000
Pickling Section			
Acid tank with rubber lining	2	150,000	300,000

Table 6: Machinery & Equipment Requirement



Electro Plating Tank with Stirring System, Temperature Control and Heating System	1	500,000	500,000
Nickel Plating Tank Temperature Control and Stirring System (3000 Amp Rectifier)	1	500,000	500,000
Chrome Plating Tank Inside Lead Lining Stirring System With Rectifier (1000 Amp)	1	500,000	500,000
Powder Coating	1	500,000	500,000
Generator (100 KVA)	1	750,000	750,000
Total			7,860,000

9.6 Furniture & Fixtures Requirement

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

Table 7: Furniture & Fixture Requirement

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Table for Manager	1	12,000	12,000
Chair for Manager	1	7,000	7,000
Table	6	3,500	21,000
Chair	12	2,500	30,000
File Cabinet	1	6,500	6,500
Sofa Set	1	15,000	15,000
Air Conditioners (1.5 Ton Split)	1	60,000	60,000
Total			151,500

9.7 Office Equipment Requirement

Following office equipment will be required for the proposed project:

 Table 8: Office Equipment Requirement

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Laptop	1	50,000	50,000
Computer Printer	1	15,000	15,000
Telephone Sets	2	1,000	2,000



Fax Machine	1	15,000	15,000
Scanner	1	15,000	15,000
Total			97,000

9.8 Raw Material Requirement

The aluminum wire is the major raw material used for manufacturing of fan guards. Other than the aluminum, welding stripes and nickel / chrome for polishing will also be used. The details of raw material required for the manufacturing a particular fan guards is provided below:

Table 9: Raw Material Requirement

Description	Unit	Unit Cost Rs.	Cost Per Unit Rs.
Aluminum Wire	Kg	87	Fan Guard 3 Kg = 261 Fan Guard 1.5 Kg = 131
Misc. (Welding, Polishing and etc.)			Fan Guard 3 Kg = 6 Fan Guard 1.5 Kg = 5

The 5% wastage of aluminum wire is assumed for per unit production.

9.9 Human Resource Requirement

Following table provides details of human resource required for the proposed venture:

Description	No. of Employees	Monthly Salary per person (Rs.)
Owner / Manager	1	60,000
Plant Manager	1	35,000
Purchaser	1	28,000
Accountant	1	22,000
Office Boy	1	14,000
Gate keeper	1	14,000
Sweeper	1	14,000
Total	07	187,000

Table 10: Human Resource Requirement



9.10 Utilities and Other Costs

An essential cost to be borne by the project is the direct electricity expenses, which are estimated to be around Rs. 2,735,655 in year one. The other electricity expenses are assumed as Rs. 102,960 in year one, with 10% increase in subsequent years. Furthermore, promotional expense being essential for marketing of the proposed unit is estimated as 2% of revenues.

9.11 Revenue Generation

Based on the capacity utilization of 75%, sales revenue during the first year of operations is estimated as under:

Product	Unit	Sale Price	1 st Year Capacity	Total Revenue (Rs.)
Fan Guards (3kg)	90%	450	87,328	39,297,555
Fan Guards (1.5kg)	10%	325	9,703	3,153,507
Total			97,031	42,451,062

Table 11: Revenue Generation – Year 1

Note: In calculation the amount of Revenue at the end of year 1 is 42,451,172, this minor difference because of rounding of some amounts.

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of machinery is provided below table:

Table 12: Machinery Suppliers

Company Name	Address	Contact Details
Adeel Engineering Works (Malik Jameel Awan)	Ghazi Chak Road, Near Polo Fan, Gujrat	0300-8620121

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				
Gujranwala Tools Dies and Molds Center (GTDMC)	www.gtdmc.org.pk				
Pakistan Industrial and Technical Assistance (PITAC)	www.pitac.gov.pk				



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 1
Revenue	42,451,172	54,952,734	64,170,176	70,750,969	77,826,066	85,608,672	94,169,539	103,586,493	113,945,143	125,339,65
Cost of sales										
Raw Material Cost	28,848,118	37,343,680	43,607,485	48,079,528	52,887,481	58,176,229	63,993,852	70,393,237	77,432,561	85,175,817
Cost of goods sold 2	-	-	-	-	-	-	-	-	-	-
Operation costs 1 (direct labor)	724,500	827,524	912,643	1,006,236	1,106,860	1,217,546	1,339,300	1,473,230	1,620,553	1,782,608
Operating costs 2 (machinery maintenance)	144,241	186,718	218,037	240,398	264,437	290,881	319,969	351,966	387,163	425,879
Operating costs 3 (direct electricity)	2,735,655	3,541,286	4,135,280	4,559,362	5,015,298	5,516,828	6,068,510	6,675,361	7,342,898	8,077,187
Operating costs 4 (direct water)	180,000	198,000	217,800	239,580	263,538	289,892	318,881	350,769	385,846	424,431
Operating costs 5 (direct gas)	-	-	-	-	-	-	-	-	-	-
Total cost of sales	32,632,514	42,097,208	49,091,244	54,125,104	59,537,614	65,491,375	72,040,513	79,244,564	87,169,021	95,885,923
Gross Profit	9,818,658	12,855,527	15,078,932	16,625,865	18,288,452	20,117,297	22,129,026	24,341,929	26,776,122	29,453,734
General administration & selling expenses										
Administration expense	1,488,000	1,636,800	1,800,480	1,980,528	2,178,581	2,396,439	2,636,083	2,899,691	3,189,660	3,508,620
Administration benefits expense	74,400	81,840	90,024	99,026	108,929	119,822	131,804	144,985	159,483	175,431
Electricity expense	102,960	113,256	124,582	137,040	150,744	165,818	182,400	200,640	220,704	242,774
Travelling expense	74,400	81,840	90,024	99,026	108,929	119,822	131,804	144,985	159,483	175,431
Communications expense (phone, fax, mail, internet, etc.)	74,400	81,840	90,024	99,026	108,929	119,822	131,804	144,985	159,483	175,431
Office vehicles running expense	-	-	-	-	-	-	-	-	-	-
Office expenses (stationary, entertainment, janitorial services, etc.	74,400	81,840	90,024	99,026	108,929	119,822	131,804	144,985	159,483	175,431
Promotional expense	849,023	1,099,055	1,283,404	1,415,019	1,556,521	1,712,173	1,883,391	2,071,730	2,278,903	2,506,793
Insurance expense	-	-	-	-	-	-	-	-	-	-
Professional fees (legal, audit, consultants, Medical etc.)	424,512	549,527	641,702	707,510	778,261	856,087	941,695	1,035,865	1,139,451	1,253,397
Depreciation expense	1,108,568	1,108,568	1,108,568	1,108,568	1,108,568	1,120,412	1,120,412	1,120,412	1,120,412	1,120,412
Amortization of pre-operating costs	250,084	250,084	250,084	250,084	250,084	-	-	-	-	-
Amortization of legal, licensing, and training costs	-	-	-	-	-	-	-	-	-	-
Property tax expense										
Bad debt expense	-	-	-	-	-	-	-	-	-	-
Miscellaneous expense 1										
Subtotal	4,520,748	5,084,651	5,568,915	5,994,855	6,458,475	6,730,217	7,291,198	7,908,276	8,587,063	9,333,728
Operating Income	5,297,910	7,770,876	9,510,016	10,631,010	11,829,976	13,387,080	14,837,829	16,433,653	18,189,059	20,120,000
Gain / (loss) on sale of office equipment	-	-	-	-	38,800	-	-	-	-	
Earnings Before Interest & Taxes	5,297,910	7,770,876	9,510,016	10,631,010	11,868,776	13,387,080	14,837,829	16,433,653	18,189,059	20,120,000
Interest expense on long term debt (Project Loan)	1,968,350	1,670,571	1,331,103	944,110	502,937	-	-	-	-	-
Interest expense on long term debt (Working Capital Loan)	99,735	82,812	63,362	41,007	15,314	-	-	-	-	-
Subtotal	2,068,085	1,753,383	1,394,465	985,117	518,251	-	-	-	-	-
Earnings Before Tax	3,229,825	6,017,493	8,115,551	9,645,893	11,350,526	13,387,080	14,837,829	16,433,653	18,189,059	20,120,00
Tax	529,956	1,328,622	2,062,942	2,598,562	3,195,183	3,907,977	4,415,739	4,974,278	5,588,670	6,264,50
NET PROFIT/(LOSS) AFTER TAX	2,699,869	4,688,871	6,052,609	7,047,331	8,155,342	9,479,102	10,422,089	11,459,375	12,600,389	13,855,505



12.2 Balance Sheet

Calculations											
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	Ical U	Ical I	Ical 2	Ical 5	Ical 4	Ical 5	iear o	Ical /	iear o	Ical 9	Icai IU
Current assets											
Cash & Bank	300,000	480.137	3,732,175	7,407,146	11.688.987	16,459,740	26,122,769	36,554,494	47,814,849	59.966.205	82,127,732
	500,000	,	4,002,900	4,895,462	,,.			7,388,146	8,126,960	8,939,656	9,833,622
Accounts receivable		3,489,137			5,544,705	6,105,906	6,716,496				
Finished goods inventory	21.010	1,418,805	1,762,691	2,050,214	2,255,213	2,480,734	2,728,807	3,001,688	3,301,857	3,632,043	3,995,247
Equipment spare part inventory	24,040	34,232	43,971	53,328	64,527	78,078	94,474	114,314	138,320	167,367	-
Raw material inventory	1,202,005	1,711,585	2,198,544	2,666,411	3,226,357	3,903,892	4,723,709	5,715,688	6,915,982	8,368,338	-
Pre-paid annual land lease	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid machinery & equipment lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid office equipment lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid office vehicles lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid insurance	-	-	-	-	-	-	-	-	-	-	-
Total Current Assets	1,526,045	7,133,896	11,740,281	17,072,561	22,779,788	29,028,348	40,386,256	52,774,329	66,297,968	81,073,609	95,956,601
Fixed assets											
Land	13,000,000	13,000,000	13,000,000	13,000,000	13,000,000	13,000,000	13,000,000	13,000,000	13,000,000	13,000,000	13,000,000
Building/Infrastructure	5,760,368	5,472,350	5,184,331	4,896,313	4,608,294	4,320,276	4,032,258	3,744,239	3,456,221	3,168,202	2,880,184
Machinery & equipment	7,860,000	7,074,000	6,288,000	5,502,000	4,716,000	3,930,000	3,144,000	2,358,000	1,572,000	786,000	2,000,104
Furniture & fixtures	151,500	136,350	121,200	106,050	4,710,000	75,750	60,600	45,450	30,300	15,150	-
Office vehicles	-	150,550	121,200	100,050	90,900	75,750	00,000	45,450	30,300	15,150	-
		-		-	-	-	-	-			-
Office equipment	97,000	77,600	58,200	38,800	19,400	156,219	124,976	93,732	62,488	31,244	-
Total Fixed Assets	26,868,868	25,760,300	24,651,731	23,543,163	22,434,594	21,482,246	20,361,833	19,241,421	18,121,009	17,000,596	15,880,184
Intangible assets											
Pre-operation costs	1,250,421	1,000,337	750,252	500,168	250,084	-	-	-	-	-	-
Legal, licensing, & training costs	_	-	_	_	_	-	-	-	-	-	-
Total Intangible Assets	1.250.421	1.000.337	750.252	500.168	250.084	_	_	_	-	_	-
TOTAL ASSETS	29,645,334	33,894,533	37,142,265	41,115,892	45,464,467	50,510,594	60,748,089	72,015,750	84,418,977	98,074,206	111,836,785
TOTALASSEIS	27,040,004	55,674,555	57,142,205	41,115,672	40,404,407	50,510,574	00,740,007	/2,010,/00	04,410,277	<i>J</i> 0,074,200	111,050,705
Liabilities & Shareholders' Equity											
Current liabilities											
		2 700 (20	1 002 510	6 720 467	6 2 6 2 0 7 7	7.042.004	7,000,000	0 6 47 0 60	0 501 700	10 646 560	10 552 624
Accounts payable		3,789,638	4,903,510	5,738,457	6,362,977	7,043,904	7,802,296	8,647,869	9,591,720	10,646,560	10,553,634
Export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Short term debt	-	-	-	-	-	-	-	-	-	-	-
Other liabilities											
Total Current Liabilities	-	3,789,638	4,903,510	5,738,457	6,362,977	7,043,904	7,802,296	8,647,869	9,591,720	10,646,560	10,553,634
Other liabilities											
Machinery & equipment lease payable	_	-	=	_	_	-	_	-	_	-	_
Office equipment lease payable	-		-	-			_			-	-
Office vehicle lease payable	-	-	-	-	-	-	-	-	-	-	-
Deferred tax	-	-	-	-	-	-	-	-	-	-	-
	14.050.611	-	-	-	2 502 405	-	-	-	-	-	-
Long term debt (Project Loan)	14,059,644	11,932,652	9,507,880	6,743,640	3,592,406	-	-	-	-	-	-
Long term debt (Working Capital Loan)	763,023	649,707	519,468	369,780	197,737	-	-	-	-	-	-
Total Long Term Liabilities	14,822,667	12,582,358	10,027,348	7,113,420	3,790,143	-	-	-	-	-	-
Shareholders' equity											
Paid-up capital	14,822,667	14,822,667	14,822,667	14,822,667	14,822,667	14,822,667	14,822,667	14,822,667	14,822,667	14,822,667	14,822,667
Retained earnings	14,022,007	2,699,869	7,388,740	13,441,349	20,488,681	28,644,023	38,123,125	48,545,215	60.004.590	72,604,979	86,460,484
	14 900 677	,,									
Total Equity	14,822,667	17,522,536	22,211,407	28,264,016	35,311,347	43,466,690	52,945,792	63,367,882	74,827,257	87,427,646	101,283,151
TOTAL CAPITAL AND LIABILITIES	29,645,334	33,894,533	37,142,265	41,115,892	45,464,467	50,510,594	60,748,089	72,015,750	84,418,977	98,074,206	111,836,785



12.3 Cash Flow Statement

Calculations											SMEDA
Cash Flow Statement											
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
Operating activities											
Net profit		2,699,869	4,688,871	6,052,609	7,047,331	8,155,342	9,479,102	10,422,089	11,459,375	12,600,389	13,855,505
Add: depreciation expense		1,108,568	1,108,568	1,108,568	1,108,568	1,108,568	1,120,412	1,120,412	1,120,412	1,120,412	1,120,412
amortization of pre-operating costs		250,084	250,084	250,084	250,084	250,084	-	-	-	-	-
amortization of training costs		-	-	-	-	-	-	-	-	-	-
Equipment inventory	(24,040)	(10,192)	(9,739)	(9,357)	(11,199)	(13,551)	(16,396)	(19,840)	(24,006)	(29,047)	167,367
Raw material inventory	(1,202,005)	(509,580)	(486,959)	(467,866)	(559,946)	(677,535)	(819,817)	(991,979)	(1,200,294)	(1,452,356)	8,368,338
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Accounts payable		3,789,638	1,113,872	834,947	624,520	680,927	758,392	845,572	943,851	1,054,840	(92,926)
Cash provided by operations	(1,226,045)	2,420,445	5,807,049	6,588,899	7,605,118	8,717,115	9,663,030	10,431,725	11,260,355	12,151,356	22,161,527
Financing activities											
Project Loan - principal repayment		(2,126,993)	(2,424,772)	(2,764,240)	(3,151,234)	(3,592,406)	-	-	-	-	-
Working Capital Loan - principal repayment		(113,316)	(130,238)	(149,689)	(172,043)	(197,737)	-	-	-	-	-
Additions to Project Loan	14,059,644	-	-	-	-	-	-	-	-	-	-
Additions to Working Capital Loan	763,023	-	-	-	-	-	-	-	-	-	-
Issuance of shares	14,822,667	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares											
Cash provided by / (used for) financing activities	29,645,334	(2,240,309)	(2,555,010)	(2,913,928)	(3,323,277)	(3,790,143)	-	-	-	-	-
Investing activities											
Capital expenditure	(28,119,289)	_	_	_	_	(156,219)	_	_		_	
Acquisitions	(20,117,207)	-	-	-	-	(150,219)	-	-	-	-	-
Cash (used for) / provided by investing activities	(28,119,289)	-	-	-	-	(156,219)	-	-	-	-	-
	200.000	100 125	2 252 026	2 (84.081	4 201 041		0.((2.020	10 401 805	11 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10.151.054	AA 1/1 FAF
NET CASH	300,000	180,137	3,252,038	3,674,971	4,281,841	4,770,752	9,663,030	10,431,725	11,260,355	12,151,356	22,161,527



13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Administration Benefit Expenses	5% of Administration Cost
Office Expenses (Stationery, Entertainment etc)	5% of Administration expenses
Communication Expenses	5% of Administration Cost
Travelling Expense	5% of Administration Cost
Promotional Expenses	2% of Revenue
Professional Fee	1% of Revenues
Depreciation Method	Accelerated depreciation
Depreciation Rate	10% on Machinery 20% on Office Equipment 10% on Furniture & Fixture
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Salaries Growth Rate	10%

13.2 Production Cost Assumptions

Description	Details
Number of Machines Installed	36
Per Unit Cost – 3 Kg Guard	Rs. 261 Labor Charges Rs. 30 Polishing / Nickel Rs. 6 Processing Loss, 5% Production percentage: 90%
Per Unit Cost – 1.5 Kg Guard	Rs. 131 Labor Charges Rs. 23 Polishing / Nickel Rs. 5 Processing Loss, 5% Production percentage: 10%
Hours Operational Per Day	8 Hours
Days Operational Per Month	25 Days

13.3 Revenue Assumptions

Description	Details
Growth in Sales Price	10%



Days Operational / Year	300
Per Day Production Capacity	450 Guard
Production Capacity in First Year	75%
Percentage Increase in Production Capacity every G Year	10%
Maximum Production Capacity	90%

13.4 Financial Assumptions

Description	Details
Debt	50%
Equity	50%
Interest Rate on Debt	14%
Debt Tenure	5 Years
Debt Payment / Year	1

