



Pre-feasibility Study

KRAFT AND FLUTED PAPER MANUFACTURING UNIT

May 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

The objective of 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 have been taken to compile this document, the contained information may vary due to any of the concerned factors. The future is uncertain, 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 to be obtained by the user. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information necessary for making an informed decision, including taking professional advice from a qualified consultant/technical expert before making any decision to act upon the information.

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2 EXECUTIVE SUMMARY

Kraft Paper is a porous paper with high elasticity and high tear resistance, designed for packaging products with high demands for strength and durability. Fluted paper is the middle liner of corrugated board, which can be supplied individually as a type of protective packaging. These papers are primarily used for packaging various consumer and general items such as cigarettes, cosmetics, garments, detergents, toiletries, food and spices and stationery etc.

This particular pre-feasibility study is for setting up a 'Kraft and Fluting Paper Manufacturing Unit' that will produce a high-grade paper to be used in the manufacturing of packaging cartons. These cartons are primarily used for secondary packaging to group a certain number of products and items to create a Stock-Keeping Unit (SKU). The unit will operate on order manufacturing as well as offer its services to Corrugated Carton manufacturers.

The proposed unit can produce 9,000 tons of Kraft paper and Fluted paper, 90-330g/m² thickness and 2500mm net paper width, in a year based on 300 working days with 24 hours operational per day. However, starting operational capacity is assumed at 55% (i.e. 4,950 tons), and with an annual increase of 5%, it will attain a maximum capacity of 95% in the 9th year. This production capacity is estimated to be economically viable and justifies the capital and operational cost of the project. However, the entrepreneur's knowledge of the industry, competitive pricing, and strong linkage with industrial buyers are critical factors for the success of this business.

The total cost of the proposed Kraft and Fluted Paper Manufacturing Unit is estimated at Rs. 251.77 million, out of which Rs. 232.67 million is the capital cost and Rs. 19.10 million is for working capital. The project is to be financed through 100% equity. The project NPV is around Rs. 159.19 million, with an IRR of 29% and a Payback Period of 4.05 years. The project will provide employment opportunities to 90 individuals, including the owner. 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 the development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through the 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 investment areas have 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 SMEs by SMEDA. These services include the 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, production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in the **Kraft and Fluted Paper Manufacturing Unit** business 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 the basis of an informed Investment Decision.

5 BRIEF DESCRIPTION OF PROJECT AND PRODUCT

Kraft Paper is a porous paper with high elasticity and high tear resistance, designed for packaging products with high demands for strength and durability. Because of its strength, Kraft Paper is used for many industrial and commercial applications. The material is used in packaging operations for packing, wrapping individual items, bundling and void fill. Also, Kraft paper can be used as load binders between layers of palatalized products.

Fluted paper is the middle liner of corrugated board, which can be supplied individually as a type of protective packaging. It provides protection by filling empty spaces in the outer case and providing a cushioning effect for the primary product.

The fluted paper offers an environmentally friendly alternative to traditional packaging materials such as bubble wrap and other plastic-based solutions. Fluted paper is 100% recyclable and made from a renewable resource. Fluted paper is available in several different sizes and weights depending on the client's specific requirements. Fluted paper is most commonly supplied in rolls.

The proposed Kraft and Fluted Paper manufacturing unit will be erected on purchased land of 8 Kanals. The imported plant will be fully automatic with state of the art technology. The primary raw material is waste paper and will be procured from the local market. The manufacturer will supply the final product to the industrial customers, wholesalers and retailers.

Financial analysis shows the unit shall be profitable from the very first year of operation. The proposed business model unit will mainly target general consumers through wholesalers and business / industrial buyers on an order manufacturing basis.

The ideal location for the proposed project is any major industrial city across Pakistan. However, it can also be established in other areas with required infrastructural support, skilled labour and easy access to markets. The legal business status of this project is assumed to be 'Sole Proprietorship'.

5.1 Production Process

A brief overview of production process involved in Kraft and Fluted Paper manufacturing and process flow diagram is provided in the below section.

Figure 1: Production Process Flow



Fiber Separation and Pulping

The first step in the process is the separation of fiber from waste-paper to make the pulp.

Washing and Pressing

The recovered fiber is then mixed with water. The pulp is washed and the debris is removed, then the pulp is poured onto a moving endless belt which filters out the

water, it then goes through several presses to further remove excess water.

Drying

The dryer is a large cylinder and uses steam to dry the pulp, the wet web of pulp is pressed against the cylinder tightly to dry it through evaporation.

Calendaring and Reeling

The dried sheet is then calendared, which means the sheet is passed between steel rollers to improve its smoothness and adjust its thickness. Then the paper is reeled so it can be shipped or cut to individual sheets as per requirement.

5.2 Installed and Operational Capacities

The proposed manufacturing unit will have the capacity to produce 9,000 tons of Kraft and Fluted in a year with 300 working days and 3 shifts per day. However, the initial operating capacity of the project will be 55% and with an annual increase of 5%, it will achieve a maximum operational capacity of 95% in year 9.

Table 1: Installed and Operational Capacity

Description	Total Installed Capacity	Operational Capacity 55 % (Year 1)	Maximum Operational Capacity 95% (Year 9)
Kraft and Fluted Paper (Tons)	9,000	4,950	8,550

6 CRITICAL SUCCESS FACTORS

Following are critical success factors associated with this business:

- ⇒ Prior knowledge and information about the paper and packaging industry.
- ⇒ Selection of appropriate plant and machinery.
- ⇒ Agile marketing team to establish contacts with the industrial buyers.
- ⇒ Induction of trained human resources for the handling of business operations especially in production and sales.
- ⇒ Selection of appropriate location with availability of required infrastructural support and easy access to markets
- ⇒ Product quality and yet affordable price.

- ⇒ Employ careful financial and accounting analysis to ensure efficiency and proper controls.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Location selection is critical to 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, Karachi, Lahore, Faisalabad, Multan, and Peshawar can be considered as these cities have adequate availability of skilled labour, raw material, and infrastructure.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

Kraft and Fluted Paper is primarily used for bulk packaging of various consumer and general items, including Food Products, Toiletries, Pharmaceuticals, Cosmetics, Apparel and Shoes, Electronic Good and other Miscellaneous Products etc. The potential target customers and markets will mainly include the FMCG Companies, Pharmaceutical Companies, Cosmetic Manufacturers, Apparel, Shoes Manufacturer and Electronics Manufacturers etc. The unit is proposed to operate on 'Order Manufacturing Basis' to target the different segments of potential industrial buyers.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Kraft and Fluted Paper Manufacturing Unit. Various cost and revenue related assumptions along with results of the analysis are outlined in this section.

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

9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 355.78 million in year one. In order to financially appraise the project, a 100% Equity Based Business Model has been assumed. The following table shows Internal Rate of Return, Payback Period and Net Present Value of the proposed venture:

Table 2: Project Economics (Equity Financed)

Description	Details
Internal Rate of Return (IRR)	29%
Payback Period (Yrs.)	4.05
Net Present Value (Rs.)	159,199,252

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	173,380,677	175,405,641	182,475,096	190,920,005	200,865,733	207,558,242	220,910,841	236,359,857	254,200,745	276,409,601
Break-Even Units	2,312	2,227	2,207	2,199	2,203	2,168	2,198	2,240	2,294	2,376
Margin of Safety	51%	59%	62%	65%	67%	70%	71%	72%	73%	72%

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)	29%
Payback Period (Yrs.)	3.98
Net Present Value (Rs.)	221,183,028

The financial assumptions for Debt:Equity are as follows:

Table 4.1: Financial Assumptions for Debt:Equity Model

Description	Details
Debt	50%
Equity	50%
Interest Rate on Debt	12%
Debt Tenure (Years)	5
Debt Payment / Year	1

The projected Income Statement, Balance Sheet and Cash Flow Statement 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 5: Project Cost

Description	Amount (Rs.)
Capital Cost	
Machinery and Equipment	129,347,571
Building / Infrastructure	82,122,600
Pre-Operating Cost	10,560,895
Land	7,000,000
Office Vehicles	2,655,237
Furniture and Fixture	1,482,700
Office Equipment	1,058,800
Total Capital Cost	234,227,803
Working Capital	
Cash	8,454,130
Raw Material Inventory	6,888,265
Up-Front Insurance Payment	3,366,451
Equipment Spare Parts Inventory	395,313
Total Working Capital	19,104,159
Total Project Cost	253,331,963

9.3 Land and Building Requirement

Approximately 8 Kanals of land would be required for the establishment of the proposed unit, it is recommended that required land should be procured in the industrial estates of any major industrial city. The cost of land is estimated at the rate of Rs. 0.875 million per Kanal.

The infrastructural requirements of the project mainly comprise the construction of a plant area, warehouses for storage of raw materials and finished goods, admin block for offices of production and administration staff.

The cost of construction of building for the proposed unit is provided in the table below:

Table 6: Infrastructure Requirement

Description	Area (Sq. Ft.)	Unit Cost (Rs.)	Total Cost (Rs.)
Plant Area	12,110	2,500	30,275,000
Warehouse and Store	8,000	2,500	20,000,000
Production and Inspection Area	7,000	2,500	17,500,000
Design Cost			3,910,600
Management Building	1,250	2,500	3,125,000
Mosque	1,000	2,500	2,500,000
Cafeteria	900	2,500	2,250,000
Boundary Wall	920 ft	1,300	1,196,000
Pavement / Driveway	2,000	400	800,000
Grounds	3,660	100	366,000
Electric Room	80	2,500	200,000
Total	36,000		82,122,600

9.4 Machinery and Equipment Requirement

Machinery and equipment for the proposed project are stated below:

Table 7: Machinery and Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Plant and Machinery*	1	83,562,438	83,562,438
Custom Duty, Sale Tax, Clearance Charges		34,089,858	34,089,858
Generator (750 KVA)	1	4,500,000	4,500,000
Experts Cost			3,499,375
Installation Cost (Fabrication Cost)	1	2,000,000	2,000,000
Transformer (750 KVA)	1	1,464,000	1,464,000
Industrial Exhaust Fan	6	38,650	231,900
Total			129,347,571

**Item wise details of 'Plant and Machinery' is provided in Annexure 12.4*

9.5 Furniture and Fixtures Requirement

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

Table 8: Furniture and Fixture

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Electric Wiring and Lighting		500,000	500,000
Air Conditioners (1.5 Ton Split)	4	83,000	332,000
Chairs	35	5,689	199,100
Table	15	10,333	155,000
Sofa Set	4	25,000	100,000
Fans	17	4,500	76,500
Carpeting	50	1,250	62,500
Tube Lights	57	800	45,600
Exhaust Fans	4	3,000	12,000
Total			1,482,700

9.6 Office Equipment Requirement

Following office equipment will be required for Kraft and Fluted Paper Manufacturing Unit:

Table 9: Office Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Computers for Staff	16	25,000	400,000
Laptops	5	65,000	325,000
Water Cooler	2	45,000	90,000
Computer Printer	4	16,000	64,000
Fridge	1	51,500	51,500
Fire Extinguishers	5	9,000	45,000
LED For Meeting Room	1	32,500	32,500
Telephones	19	1,200	22,800
Water Dispenser	1	16,000	16,000
Microwave Oven	1	12,000	12,000
Total			1,058,800

9.7 Vehicle Requirement

Vehicles are required for transportation of raw material and finished goods. Details of the 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
Honda CD-70	1	77,900	77,900
Registration fee (3% of Vehicles Cost)			77,337
Total			2,655,237

9.8 Raw Material Requirement

The main raw material required for the manufacturing of Kraft and Fluted Paper is waste-paper. Following are the details of raw material required:

Table 11: Raw Material Requirement (Year 1)

Description	Cost (Rs.)
Waste paper Per Ton	30,163
Chemicals Cost:	
Soap Stone (50 Kgs per Ton @ 20,482/MT)	1,024
Alum (26 kgs per ton @ 122,240/MT)	3,178
Caustic Soda (10 kgs per ton @ 48,438/MT)	484
Total	34,849

9.9 Human Resource Requirement

In order to run the operations of Kraft and Fluted Paper Manufacturing Unit smoothly, details of human resources required along with number of employees and monthly salary are recommended as under:

Table 12: Human Resource

Description	No. of Employees	Monthly Salary per person (Rs.)
CEO	1	200,000
Production Manager	1	150,000
Plant Engineer	3	100,000
Procurement Manager	1	80,000
Admin Manager	1	80,000

Sales/Marketing Manager	1	80,000
Electrical Engineer	1	80,000
Finance Manager	1	80,000
Production Supervisor	3	60,000
Assistant Plant Engineer	3	45,000
Security Supervisor	1	45,000
HSE Officer	1	40,000
Accounts Officer	2	35,000
Warehouse In-charge	3	30,000
Quality/Inspection In-charge	3	30,000
HR Officer	1	30,000
Sales Officer	4	30,000
Electrician	3	30,000
Admin Assistant	2	30,000
IT Officer	2	30,000
Labour	39	20,000
Driver	1	20,000
Security Guard	6	20,000
Office Boy	6	20,000
	90	

9.10 Utilities and Other Cost

An essential cost to be borne by the project is the cost of electricity. The electricity expense is estimated to be around Rs. 51.06 million per year. Furthermore, promotional expense essential for marketing is estimated as Rs.1.78 million. The cost of maintenance of machinery is assumed at Rs. 0.95 million.

9.11 Revenue Generation

Based on the operational capacity utilization of 55%, sales revenue during the first year of operation is provided in the table below:

Table 13: Revenue Generation (Year 1)

Description	Rate / Ton (Rs.)	No. of Tons Sold	Total Revenue (Rs.)
Kraft and Fluted Paper	75,000	4,744	355,781,250

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of private sector vendors relevant to the proposed project is given below:

Table 14: Suppliers

Name of Supplier	Type of supplies	Address
Qinyang City Shunfu Paper Making Machinery Co., Ltd.	Machinery	www.sfmachinery.cn www.shunfu3158.com P: +86 391 5939 222
High Tech Office Furniture (Gulberg III Lahore)	Furniture	apnafurniture.pk P: +92 322 4927 264

11 USEFUL WEB LINKS

Small and Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries and Production	www.moip.gov.pk
Ministry of Education, Training and 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 Jammu Kashmir	www.ajk.gov.pk

Trade Development Authority of Pakistan (TDAP)	www.tdap.gov.pk
Security and Exchange 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 Vocational Training Council (PVTC)	www.pvtc.gop.pk
Technical Education and Vocational Training Authority (TEVTA)	www.tevta.org
Century Paper and Board Mills Limited (CPBM)	centurypaper.com.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.pk
Punjab Industrial Estate Development and Management Company (PIEDMC)	www.pie.com.pk
Punjab Small Industries Corporation	www.psic.gop.pk
Sindh Small Industries Corporation	www.ssic.gos.pk
All Pakistan Paper Merchants Association (APPMA)	www.appma.com.pk
Sundar Industrial Estate, Lahore	sie.com.pk
Khyber Pakhtunkhwa Economic Zones Development and Management Company	www.kpezdmc.org.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 10
Revenue	355,781,250	423,773,438	482,171,484	545,349,902	613,640,733	687,397,273	766,995,364	852,834,772	945,340,632	994,789,218
<i>Cost of sales</i>										
Raw Material Cost	143,085,731	170,430,376	193,916,513	219,325,188	246,789,939	276,452,853	308,465,082	342,987,403	380,190,793	400,077,696
Chemicals and others	22,232,628	26,481,433	30,130,703	34,078,697	38,346,164	42,955,181	47,929,234	53,293,304	59,073,958	62,163,980
Pakaging	2,371,875	2,825,156	3,214,477	3,635,666	4,090,938	4,582,648	5,113,302	5,685,565	6,302,271	6,631,928
Operation costs 1 (direct labor)	19,147,500	21,901,688	24,098,313	26,514,233	29,171,460	32,094,193	35,309,034	38,845,239	42,734,981	47,111,795
Operating costs 2 (machinery maintenance)	948,750	1,130,063	1,285,791	1,454,266	1,636,375	1,833,059	2,045,321	2,274,226	2,520,908	2,652,771
Operating costs 3 (direct electricity)	49,946,964	57,905,982	67,608,622	78,589,527	91,017,725	105,083,264	120,999,731	139,007,058	159,374,652	173,336,041
Operating costs 4 (direct water)	1,200,000	1,260,000	1,323,000	1,389,150	1,458,608	1,531,538	1,608,115	1,688,521	1,772,947	1,861,594
Operating costs 5 (direct gas)	5,657,374	6,738,536	7,667,139	8,671,756	9,757,667	10,930,490	12,196,200	13,561,156	15,032,117	15,818,412
Total cost of sales	244,590,822	288,673,233	329,244,558	373,658,484	422,268,876	475,463,225	533,666,020	597,342,472	667,002,627	709,654,218
Gross Profit	111,190,428	135,100,205	152,926,926	171,691,418	191,371,857	211,934,048	233,329,344	255,492,300	278,338,005	285,135,001
<i>General administration & selling expenses</i>										
Administration expense	17,220,000	18,942,000	20,836,200	22,919,820	25,211,802	27,732,982	30,506,280	33,556,908	36,912,599	40,603,859
Administration benefits expense	1,722,000	1,894,200	2,083,620	2,291,982.00	2,521,180.20	2,773,298.22	3,050,628.04	3,355,690.85	3,691,259.93	4,060,385.92
Electricity expense	1,118,838	1,230,722	1,353,794	1,489,173	1,638,091	1,801,900	1,982,090	2,180,299	2,398,329	2,638,161
Water expense	144,000	151,200	158,760	166,698	175,033	183,785	192,974	202,622	212,754	223,391
Travelling expense	774,900	852,390	937,629	1,031,391.90	1,134,531.09	1,247,984.20	1,372,782.62	1,510,060.88	1,661,066.97	1,827,173.67
Communications expense (phone, fax, mail, internet, etc.)	516,600	568,260	625,086	687,594.60	756,354.06	831,989.47	915,188.41	1,006,707.25	1,107,377.98	1,218,115.78
Office vehicles running expense	929,333	1,022,266	1,124,493	1,236,942	1,360,636	1,496,700	1,646,370	1,811,007	1,992,108	2,191,318
Office expenses (stationary, entertainment, janitorial services, etc.)	344,400	378,840	416,724	458,396.40	504,236.04	554,659.64	610,125.61	671,138.17	738,251.99	812,077.18
Promotional expense	1,778,906	1,689,961	1,605,463	1,525,190	1,448,930	1,376,484	1,307,660	1,242,277	1,180,163	1,121,155
Insurance expense	3,366,451	3,016,530	2,666,609	2,316,687	1,966,766	1,630,659	1,464,527	1,298,395	1,148,264	1,000,132
Professional fees (legal, audit, consultants, etc.)	889,453	1,059,434	1,205,429	1,363,375	1,534,102	1,718,493	1,917,488	2,132,087	2,363,352	2,606,973
Depreciation expense	17,931,965	17,931,965	17,931,965	17,931,965	17,931,965	18,314,680	18,314,680	18,314,680	18,314,680	18,314,680
Amortization of pre-operating costs	1,800,168	1,800,168	1,800,168	1,800,168	1,800,168	-	-	-	-	-
Bad debt expense	5,336,719	5,069,883	4,816,389	4,575,569	4,346,791	4,129,451	3,922,979	3,726,830	3,540,488	3,363,464
Subtotal	53,873,733	55,607,818	57,562,327	59,794,952	62,330,585	63,993,065	67,203,772	70,808,702	74,844,692	79,226,886
Operating Income	57,316,695	79,492,387	95,364,599	111,896,466	129,041,272	147,940,983	166,125,572	184,683,598	203,493,313	205,908,115
Other income (interest on cash)	321,967	1,081,409	2,343,376	3,590,522	4,803,907	6,021,649	7,302,904	8,590,740	9,897,880	11,549,330
Gain / (loss) on sale of office equipment	-	-	-	-	423,520	-	-	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	1,062,095	-	-	-	-	-
Earnings Before Interest & Taxes	57,638,663	80,573,796	97,707,975	115,486,988	135,330,794	153,962,632	173,428,476	193,274,338	213,391,193	217,457,445
Earnings Before Tax	57,638,663	80,573,796	97,707,975	115,486,988	135,330,794	153,962,632	173,428,476	193,274,338	213,391,193	217,457,445
Tax	19,293,532	27,320,828	33,317,791	39,540,445	46,485,778	53,006,921	59,819,966	66,766,018	73,806,917	75,230,105
NET PROFIT/(LOSS) AFTER TAX	38,345,131	53,252,968	64,390,184	75,946,543	88,845,017	100,955,711	113,608,510	126,508,320	139,584,276	142,227,339

12.2 Balance Sheet

Calculations Balance Sheet											SMEDA
	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	8,454,130	17,303,246	69,209,435	118,260,621	168,981,128	215,331,436	266,400,516	317,831,828	369,427,401	422,402,961	501,543,401
Accounts receivable		43,863,441.78	48,054,741	55,845,920	63,340,359	71,444,628	80,200,973	89,654,341	99,852,543	110,846,429	119,597,046
Finished goods inventory		10,634,384	12,069,961	13,762,634	15,615,578	17,643,546	19,862,693	22,290,718	24,947,017	27,852,857	29,568,926
Equipment spare part inventory	395,313	494,402	590,660	701,456	828,760	974,792	1,142,052	1,333,360	1,551,887	1,714,716	-
Raw material inventory	6,888,265	8,614,892	10,292,169	12,222,778	14,441,030	16,985,608	19,900,103	23,233,615	27,041,421	29,878,690	-
Pre-paid insurance	3,366,451	3,016,530	2,666,609	2,316,687	1,966,766	1,830,659	1,464,527	1,098,395	732,264	366,132	-
Total Current Assets	19,104,159	83,926,895	142,883,575	203,110,097	265,173,622	324,210,669	388,970,865	455,442,257	523,552,533	593,061,785	650,709,372
<i>Fixed assets</i>											
Land	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000
Building/Infrastructure	82,122,600	78,016,470	73,910,340	69,804,210	65,698,080	61,591,950	57,485,820	53,379,690	49,273,560	45,167,430	41,061,300
Machinery & equipment	129,347,571	116,412,814	103,478,057	90,543,300	77,608,543	64,673,786	51,739,029	38,804,271	25,869,514	12,934,757	-
Furniture & fixtures	1,482,700	1,334,430	1,186,160	1,037,890	889,620	741,350	593,080	444,810	296,540	148,270	-
Office vehicles	2,655,237	2,124,190	1,593,142	1,062,095	531,047	4,276,286	3,421,029	2,565,771	1,710,514	855,257	-
Office equipment	1,058,800	847,040	635,280	423,520	211,760	1,351,327	1,081,062	810,796	540,531	270,265	-
Total Fixed Assets	223,666,908	205,734,944	187,802,979	169,871,015	151,939,050	139,634,698	121,320,019	103,005,339	84,690,659	66,375,980	48,061,300
<i>Intangible assets</i>											
Pre-operation costs	9,000,839	7,200,671	5,400,504	3,600,336	1,800,168	-	-	-	-	-	-
Total Intangible Assets	9,000,839	7,200,671	5,400,504	3,600,336	1,800,168	-	-	-	-	-	-
TOTAL ASSETS	251,771,907	296,862,510	336,087,058	376,581,447	418,912,840	463,845,367	510,290,884	558,447,596	608,243,192	659,437,764	698,770,672
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		14,414,499	17,171,893	19,582,787	22,202,297	25,046,538	28,132,870	31,479,995	35,108,075	38,907,868	38,210,503
Total Current Liabilities	-	14,414,499	17,171,893	19,582,787	22,202,297	25,046,538	28,132,870	31,479,995	35,108,075	38,907,868	38,210,503
<i>Shareholders' equity</i>											
Paid-up capital	251,771,907	251,771,907	251,771,907	251,771,907	251,771,907	251,771,907	251,771,907	251,771,907	251,771,907	251,771,907	251,771,907
Retained earnings		30,676,105	67,143,258	105,226,754	144,938,637	187,026,923	230,386,107	275,195,694	321,363,211	368,757,989	408,788,263
Total Equity	251,771,907	282,448,012	318,915,165	356,998,660	396,710,544	438,798,830	482,158,014	526,967,601	573,135,118	620,529,896	660,560,170
TOTAL CAPITAL AND LIABILITIES	251,771,907	296,862,510	336,087,058	376,581,447	418,912,840	463,845,367	510,290,884	558,447,596	608,243,192	659,437,764	698,770,672

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		38,345,131	53,252,968	64,390,184	75,946,543	88,845,017	100,955,711	113,608,510	126,508,320	139,584,276	142,227,339
Add: depreciation expense		17,931,965	17,931,965	17,931,965	17,931,965	17,931,965	18,314,680	18,314,680	18,314,680	18,314,680	18,314,680
amortization of pre-operating costs		1,800,168	1,800,168	1,800,168	1,800,168	1,800,168	-	-	-	-	-
Accounts receivable		(43,863,442)	(4,191,299)	(7,791,179)	(7,494,440)	(8,104,269)	(8,756,345)	(9,453,368)	(10,198,202)	(10,993,886)	(8,750,617)
Finished goods inventory		(10,634,384)	(1,435,577)	(1,692,673)	(1,852,944)	(2,027,968)	(2,219,147)	(2,428,025)	(2,656,299)	(2,905,840)	(1,716,069)
Equipment inventory	(395,313)	(99,090)	(96,258)	(110,796)	(127,304)	(146,031)	(167,261)	(191,308)	(218,527)	(162,829)	1,714,716
Raw material inventory	(6,888,265)	(1,726,627)	(1,677,277)	(1,930,609)	(2,218,252)	(2,544,578)	(2,914,495)	(3,333,512)	(3,807,806)	(2,837,269)	29,878,690
Advance insurance premium	(3,366,451)	349,921	349,921	349,921	349,921	136,107	366,132	366,132	366,132	366,132	366,132
Accounts payable		14,414,499	2,757,394	2,410,894	2,619,510	2,844,241	3,086,332	3,347,126	3,628,079	3,799,794	(697,366)
Cash provided by operations	(10,650,029)	16,518,142	68,692,004	75,357,874	86,955,166	98,734,651	108,665,607	120,230,235	131,936,376	145,165,057	181,337,506
<i>Financing activities</i>											
Issuance of shares	251,771,907	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	251,771,907	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(232,667,748)	-	-	-	-	(5,627,613)	-	-	-	-	-
Cash (used for) / provided by investing activities	(232,667,748)	-	-	-	-	(5,627,613)	-	-	-	-	-
NET CASH	8,454,130	16,518,142	68,692,004	75,357,874	86,955,166	93,107,039	108,665,607	120,230,235	131,936,376	145,165,057	181,337,506

12.4 Machinery Details

	Description	Quantity
	Main Structure:	
A	Back Device	
1	Back Roll	1
B	Wire Part	
1	Cylinder Mould	4
2	Couch Roller	4
3	Felt Guide Roller	1
4	Vacuum Suction Box	10
5	16 Type Vacuum Pump	3
6	Move Spray Water Pipe	7
	Multistage Pump	2
	Cylinder And Couch Roll Bracket	4
	VAT Former	1
C	Press Part (One Pre-Press + Two Main-Press)	
1	Pre-Press	
	Upper Roll	1
	Lower Roll	1
2	Main-Press	
	Upper Roll	2
	Lower Roll	2
3	Pneumatic Device Of Press	
4	Bin Structure Frame	
D	Drying Part (10 Dryer Cylinder Group	
	Dryer Cylinder	10
	Siphon Tube Device, Rotation Exhaust Head Device	1
	Gear Wheel: M10, Z180 And Small Gear Wheel	1

	Provide Bin Structure Frame And Base Plate	1
	Scrape	10
	Provide Guide Roll, Tensioner And Corrector	1
	Dryers Cylinder Part Air Hood ,Bearing Air Blower ,Working Board, Ladder	10
E	Three Roll Calendar	
1	Upper Roller	1
2	Pneumatic Device Of Press	1
3	The Material Of Roll Is Cold And Hard Cast Steel, The Deepness	1
F	Pneumatic Paper Reel Machine	
	Cold Cylinder	
G	Frame Rewinding Machine	1
H	Drive Part	8
I	Others	
	Guide Roll, Felt Roll With Bearing	
	Tensioner And Felt Beater Device Are All Electric	
	All Bearings With Dryer Can And Roller	
	Provide Decelerator, Base Plate And Motor Plate	
	Provide All Screw Bolts	
	Air Compressor	1
	D-Type Pulper	1
	High Concentration Cleaner	1
	Double Disc Refiner	3
	Fiber Separator	1
	Vibrating Screen	1
	Pulp Pump 6 Inch	5
	Pulp Pump 6 Inch	4
	Pulp Pump 8 Inch	1

	Pulp Pump 10 Inch	1
	Incline Screen	4
	Thruster	6
	Inflow Pressure Screen	1
	Low Concentration Cleaner	1
	Electric Control Cabinet	6
	Gas Boiler	1

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Operating Costs Growth Rate	5.0%
Administration Benefits Expense	10.0% of Admin Expense
Travelling Expense	4.5% of Admin Expense
Communication Expense	3.0% of Admin Expense
Office Expenses (Stationary, Entertainment, Janitorial Services, Etc.)	2.0% of Admin Expense
Promotional Expense	0.5% Of Revenue
Professional Fees (Legal, Audit, Consultants, Etc.)	0.3% Of Revenue
Bad Debt Expense	1.5% Of Revenue
Machinery and Equipment Insurance Rate	2.5%
Office Vehicles Insurance Rate	5.0%
Depreciation Method	Straight Line

13.2 Production Cost Assumptions

Description	Details
Machinery Maintenance	Rs. 200 per Ton of Production
Raw Material Cost	Rs. 30,163 per Ton
Chemicals Cost	Rs. 4,687 per Ton of Production
Packaging	Rs. 500 Per Ton of Production
Hours Operational / Day	24
Shift Length (Hours)	8
No. of Shifts	3

Days Operational / Year

300

13.3 Revenue Assumptions

Description	Details
Maximum Production Capacity	9,000 Tons per annum
Sale Price Per Unit in Year 1	Rs. 75,000 Per Ton
Sale Price Growth Rate	5%
Production Capacity Utilization Year 1	55%
Production Capacity Utilization Growth Rate	5%
Maximum Capacity Utilization	95%

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