

DETAILED TECHNO-ECONOMIC
CUM PRE-INVESTMENT PROJECT
REPORT

ON

(NON WOVEN FABRIC BAGS)

FOR

M/S PIONEER PRINTING AND PACKAGINGS

(BARI BRAHMNA JAMMU)

JOINT VENTURE

MARCH, 2011

INTRODUCTION



A **bag** (also known as a sack) is a non-rigid mostly semi-rigid container, made of paper, cloth, plastic, leather, Non Woven Fabric or some other flexible material.

A bag is used for packaging and/or carrying items. For the latter a bag may have one or two handles; a shoulder bag has a strap to carry it on the shoulder (the bag is either carried on the side of the shoulder carrying it, or the other side). A rucksack has straps to carry it on the back. There is also be a string bag, with two strings which go over the shoulder and can be used as the fastening as well.

A bag may be closable by a zipper, snap fastener, etc., or simply by folding (e.g. in the case of a paper bag). Sometimes a money bag or travel bag has a lock. *Sachets* may be fabric bags that are filled with pot pourri and tied off with ribbons.

A bag may or may not be disposable; however, even a disposable bag can often be used many times, for economic and environmental reasons. On the other hand, there may be logistic or hygienic reasons to use a bag only once. For example, a garbage bag is often disposed of with its content. A bag for packaging a disposable product is often disposed of when it is empty.

An empty bag may or may not be very light and foldable to a small size. If it is, this is convenient for carrying it to the place where it is needed, such as a shop, and for storage of empty bags.

Bags vary from small ones, like purses (e.g. as an alternative to putting small objects in pockets of clothing) to large ones for use in traveling like a suitcase.

Cheap disposable paper bags and plastic shopping bags are very common in the retail trade as a convenience for shoppers, and are often supplied by the shop for free or for a small fee. Customers may also take their own shopping bags to the shop.

There are environmental concerns regarding use and disposal of plastic shopping and trash bags. Efforts are being taken to control and reduce their use in the state of Jammu and Kashmir. In some cases the cheap bags are taxed so the customer must pay a fee where they may not have done previously.

The first recorded historical reference to grocery paper bags was made in 1630 but the use of sacks only really started to take off during the Industrial Revolution between 1700 and 1800.

Plastics play a major role in the modern world. They occur in various forms, shapes and have diverse end uses ranging from hi-tech applications in IT & medical space to simpler, but functional applications in consumer durables, agriculture etc. Owing to its unique characteristics, ease of processing and design flexibility, there is an infinite scope of innovation when it comes to plastics. Injection Moulding, blow moulding, rotational moulding, extrusion, thermoforming, calendaring are the plastic processes which help develop new products & end uses. Thus, the scope of business opportunities for the entrepreneur is infinite.

Innovative products result from a vivid imagination. Likewise, is the development of new plastic products. There are various plastic products in the world today in many industrial sectors which have been made possible because of the properties of plastic and also its cost effectiveness. One such product which has many end uses is the high density polyethylene (HDPE) tarpaulin, commonly known as tarpaulin. NON WOVEN FABRIC BAGS can be used as a protective covering in sectors like agriculture, infrastructure, automobiles and also as tents, floor spreads, as a cover for machinery etc.

NON WOVEN FABRIC BAGS is excellent for covering products & goods thereby protecting them from moisture and dust. This multi purpose product has therefore become a boon to the Indian Industry especially in the rainy season. Versatility of the tape extruder, which makes it capable of manufacturing more products, besides the wide fabric helps the entrepreneur in diversifying his product offering.

Advantages of NON WOVEN FABRIC BAGS > It is light- weight > Handling is easy > Water proof, does not get wet or soaked > Can be manufactured in desired colours > Attractive printing

Nonwoven fabric

Nonwoven fabric is a fabric-like material made from long fibers, bonded together by chemical, mechanical, heat or solvent treatment. The term is used in the textile manufacturing industry to denote fabrics, such as felt, which are neither woven nor knitted. Nonwoven materials typically lack strength unless densified or reinforced by a backing. In recent years, nonwovens have become an alternative to polyurethane foam

Applications

Nonwoven fabrics are broadly defined as sheet or web structures bonded together by entangling fiber or filaments (and by perforating films) mechanically, thermally or chemically. They are flat, porous sheets that are made directly from separate fibers or from molten plastic or plastic film. They are not made by weaving or knitting and do not require converting the fibers to yarn. Typically, a certain percentage of recycled fabrics and oil-based materials are used in nonwoven fabrics. The percentage of recycled fabrics vary based upon the strength of material needed for the specific use. Conversely, some nonwoven fabrics can be recycled after use, given the proper treatment and facilities. For this reason, some consider nonwovens a more ecological fabric for certain applications, especially in fields and industries where disposable or single use products are important, such as hospitals, schools, nursing homes and luxury accommodations.

Nonwoven fabrics are engineered fabrics that may be a limited life, single-use fabric or a very durable fabric. Nonwoven fabrics provide specific functions such as absorbency, liquid repellency, resilience, stretch, softness, strength, flame retardancy, washability, cushioning, filtering, use as a bacterial barrier and sterility. These properties are often combined to create fabrics suited for specific jobs, while achieving a good balance between product use-life and cost. They can mimic the appearance, texture and strength of a woven fabric and can be as bulky as the thickest paddings. In combination with other materials they provide a spectrum of products with diverse properties, and are used alone or as components of apparel, home furnishings, health care, engineering, industrial and consumer goods.

Non-woven materials are used in numerous applications, including:

Hygiene

- baby diapers or nappies
- feminine hygiene
- adult incontinence products
- wet wipes
- bandages and wound dressings
- disposable bath and face towels

- disposable slippers and footwear

Medical

- isolation gowns
- surgical gowns
- surgical drapes and covers
- surgical scrub suits
- caps

Filters

- gasoline, oil and air - including HEPA filtration
- water, coffee, tea bags
- pharmaceutical industry
- mineral processing
- liquid cartridge and bag filters
- vacuum bags
- allergen membranes or laminates with non woven layers

Geotextiles

- soil stabilizers and roadway underlayment
- foundation stabilizers
- erosion control
- canals construction
- drainage systems
- geomembrane protection
- frost protection
- agriculture mulch
- pond and canal water barriers
- sand infiltration barrier for drainage tile

Other

- carpet backing, primary and secondary
- composites
 - marine sail laminates
 - tablecover laminates
 - chopped strand mat
- backing/stabilizer for machine embroidery
- packaging - to sterilize medical products
- insulation (fiberglass batting)
- pillows, cushions, and upholstery padding
- batting in quilts or comforters
- consumer and medical face masks
- mailing envelopes
- tarps, tenting and transportation (lumber, steel) wrapping
- disposable clothing (foot coverings, coveralls)

Manufacturing processes

Nonwovens are typically manufactured by putting small fibers together in the form of a sheet or web (similar to paper on a paper machine), and then binding them either mechanically (as in the case of felt, by interlocking them with serrated needles such that the inter-fiber friction results in a stronger fabric), with an adhesive, or thermally (by applying binder (in the form of powder, paste, or polymer melt) and melting the binder onto the web by increasing temperature).

Staple nonwovens

Staple nonwovens are made in 2 steps. Fibers are first spun, cut to a few centimeters length, and put into bales. These bales are then dispersed on a conveyor belt, and the fibers are spread in a uniform web by a wetlaid process or by carding. Wetlaid operations typically use 1/4" to 3/4" long fibers, but sometimes longer if the fiber is stiff or thick. Carding operations typically use ~1.5" long fibers. Rayon used to be a common fiber in nonwovens, now greatly replaced by PET and PP. Fiberglass is wetlaid into mats for use in roofing and shingles. Synthetic fiber blends are wetlaid along with cellulose for single-use fabrics. Staple nonwovens are bonded by using either resin or thermally. Bonding can be throughout the web by resin saturation or overall thermal bonding or in a distinct pattern via resin printing or thermal spot bonding. Conforming with staple fibers usually refers to a combination with meltblown, often used in high-end textile insulations. Melt Blown non wovens are produced by extruding melted polymer fibers through a spin net or die consisting of up to 40 holes per inch to form long thin fibers which are stretched and cooled by passing hot air over the fibers as they fall from the die. The resultant web is collected into rolls and subsequently converted to finished products. The extremely fine fibers typically polypropylene differ from other extrusions particularly spun bond in that they have low intrinsic strength but much smaller size offering key properties. Often melt blown is added to spun bond to form SM or SMS webs, which are strong and offer the intrinsic benefits of fine fibers such as fine filtration, low pressure drop as used in face masks or filters and physical benefits such as acoustic insulation as used in dishwashers. One of the largest users of SM and SMS materials is the disposable diaper and feminine care industry^[1]

Spunlaid nonwovens

Spunlaid nonwovens are made in one continuous process. Fibers are spun and then directly dispersed into a web by deflectors or can be directed with air streams. This technique leads to faster belt speeds, and cheaper costs. Several variants of this concept are available, but the leading technology is the REICOFIL machinery^[2]. PP spunbonds run faster and at lower temperatures than PET spunbonds, mostly due to the difference in melting points. Spunbond has been combined with meltblown nonwovens, conforming them into a layered product called SMS (spun-melt-spun). Meltblown nonwovens have extremely fine fiber diameters but are not strong fabrics. SMS fabrics, made completely from PP are water-repellent and fine enough to serve as disposable fabrics. Meltblown is often used as filter media, being able to capture very fine particles. Spunlaid is bonded by either resin or thermally. Regarding the bonding of Spunlaid, Rieter^[3] has launched a new generation of nonwovens called Spunjet. In fact, Spunjet is the bonding of the Spunlaid filaments thanks to the hydroentanglement

Manufacturing Process -Lamination

NON WOVEN FABRIC is laminated with LDPE, LLDPE or a blend of the two. It could be a three-layer tarpaulin having one layer of woven fabric and two layers of LDPE/LLDPE coating, one each on either side. Five layer tarpaulins consisting of two layers of woven fabric sandwiched between layers of LDPE/LLDPE coating are also made.

Sealing

The laminated fabric, which is normally 48 inches wide, is cut into pieces according to desired size and sealed.

Border Making

A border is made and a rope is provided along the border to provide strength. Metallic loops are used to make eyelets along the border, through which the tightening ropes are passed.

End Uses of NON WOVEN FABRIC BAGS

Under an umbrella of high density polyethylene tarpaulin, products remain protected against rains during the monsoons. People use it for shelter, and also as a cover for products during transportation and storage for protection.

MARKET POTENTIAL

NON WOVEN FABRIC BAGS are widely used as packing material due to so many advantages over conventional sacks. In turn due to rapid growth in processing and chemical industries the demand of these materials are touching sky high. The present manufacturers are not able to meet the anticipated demand. Keeping in view the aforesaid advantages, coupled with various incentives concessions offered by the state govt. for setting up the new projects, it is expected that the proposed unit would be able to get the enough jobs from the local establishments as also from Govt. Departments, Corporations and Private organizations for bulk jobs. Hence it is expected that the unit would be able to get sufficient orders for achieving the capacity.

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STANDARDS AND SPECIFICATION

The Bureau of Indian Standards has formulated following specifications for NON WOVEN FABRIC BAGS

IS : 9755 : 1989 NON WOVEN FABRIC BAGS

LIST OF PROMOTERS

S.NO	NAME		AGE	QUALIFICATION	RESIDENCE
01	ABHISHEK MEHTA	S/O M.C. MEHTA	32 YEARS	MASTER IN PROFESSIONAL ACCOUNTS	147 A - A/D GANDHI NAGAR, JAMMU
02	BHAWNA NAGPAL	W/O SANJAY NAGPAL	35 YEARS	GRADUATE	132 PACCI DHAKI, JAMMU

SEED CAPITAL ASSISTANCE

RS. 7.50 LACS FOR ABHISHEKH MEHTA AND

RS. 3.00 LACS FOR BHAWNA GUPTA

TOTAL SEED CAPITAL : RS. 10.50 LACS FOR THE JOINT VENTURE

BACKGROUND OF THE PROJECT

M/S PIONEER PRINTING AND PACKAGINGS is a Partnership concern.

The promoters will be the overall incharge of the unit. The promoters are assisted by trained technicians/managerial persons in carrying out the day to day activities of the concern. The promoter has been brought up in Kashmir Valley from their early childhood and is fully aware of nature, culture and social economic background of Kashmir. Keeping this into consideration the promoter will not face any difficulty for successful running of the unit. The promoter has been very keen in starting their independent business since past many years and has therefore studied and surveyed many options and avenues with the objective in their minds. Finding that the demands for NON WOVEN FABRIC BAGS is increasing at a faster rate and there exists a gap in the demand and supply curve therefore the promoter has found tremendous potential on concentrating on the proposed activity and has conceived the present project as envisaged herein after.

The promoter belongs to cultured family with sound background. He has the financial strength and capability to withstand the unforeseen streams of promoting an industrial venture.

The unit will be working on Double shift basis of 8 hours each a day for 300 working days in a year. It has been assumed in the project report that the unit will operate at 60% of the installed capacity during the first operating year which will subsequently increase to 80% in the 3rd Year so on.

Depending upon the efficiency of the promoter and his marketing ability the unit will be able to operate at higher production level than what has been envisaged in the report.

PROJECT HIGHLIGHTS

S.No	PARTICULARS	DESCRIPTION
1	NAME OF THE BUSINESS ESTABLISHMENT	M/S PIONEER PRINTING AND PACKAGINGS
2	LINE OF ACTIVITY	NON WOVEN FABRIC BAGS
3	LOCATION	BARI BRAHMNA JAMMU
4	CONSTITUTION	PARTNERSHIP
5	ANY KIND OF SUBSIDY AVAILED	NIL
6	JKEDI TRAINING DATE	22-02-2011 to 08-03-2011
7	SCREENING COMMITTEE ACTIVITY ALLOTTED	BUSINESS ESTABLISHMENT
8	SEED CAPITAL	RS. 10.50 LACS
9	CATEGORY	PROSPECTIVE ENTREPRENEUR

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S.No	PARTICULARS	DESCRIPTION
1	NAME OF THE BUSINESS ESTABLISHMENT	M/S PIONEER PRINTING AND PACKAGINGS
2	LINE OF ACTIVITY	NON WOVEN FABRIC BAGS
3	PRIMARY SECURITY	HYPOTHECATION OF ASSETS CREATED OUT OF BANK FINANCE
4	COLLATERAL SECURITY	GUARANTEE COVER UNDER CREDIT GUARANTEE SCHEME OF CGFTMSE
5	MAXIMUM REPAYMENT SCHEME	7 YEARS
6	MORATORIUM PERIOD	1 YEAR
7	CONSTITUTION	PARTNERSHIP
8	TOTAL PROJECT COST	30.00 LACS
9	TOTAL FIXED INVESTMENT	19.20 LACS
10	EQUITY	10.50 LACS
11	BANK LOAN (TERM)	12.48 LACS
12	WORKING CAPITAL REQUIREMENT	10.80 LACS
13	MANPOWER REQUIREMENT	12
14	BREAK EVEN POINT	63.38 % @ 80 % CAPACITY UTILIZATION
15	DSRC	4.21 : 1

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PROJECT COST SUMMARY			
S.NO	PARTICULARS		AMOUNT(LACS)
1	LAND BARI BRAHMNA JAMMU		LEASED
2	Civil Works		LEASED
3	Plant and Machinery		16.30
4	Miscellaneous Fixed Assets		0.60
5	Preliminary & Preoperative expenses		2.30
6	Working Capital Requirement		10.80
			30.00
MEANS OF FINANCE			
1	Seed Capital (Maximum for this Category)		10.50
2	Loan from Bank (65 %)		19.50
DETAILS OF LOANS			
A	Long Term Investment		19.20
1	Promoters Contribution/Seed Money		6.72
2	Term Loan From Bank		12.48
B	Working Capital Requirement		10.80
1	Promoters Contribution/Seed Money		3.78
2	Working Capital Finance From Bank		7.02

POLLUTION NORMS

The Stitching of Woven Sacks are mostly carried out on AUTOMATIC MACHINE. Besides other machines envisaged in the project report, which forms the basic operation for the proposed programme.

The technology involved for the manufacture of NON WOVEN FABRIC BAGS is simple the process of transformation of woven fabric in the form of bags of desired specifications is free of pollution and are controlled within the prescribed norms constituted for such types of ventures.

1: Apart from the other recommendations, the promoter has agreed in principle that he will strictly adhere pollution norms as and when shall be implemented and shall use all possible devices to prevent pollution measures.

2: The machines provided in the project report shall be housed in acoustic proof room and shall be provided with anti –vibration mounting/pads in order to reduce the pitch of the noise within the prescribed norms, therefore, the promoter is advised to purchase machinery from the approved manufacture having BIS certifications both for quality as well as safety measures, while as the captive power i.e. D'G set as and when installed shall be provided with canopies and other certified equipment's, which would reduce the emission level within the prescribed norms, therefore, the cost to be incurred for such equipment's has been worked out and is provided under Misc. fixed head of the project report.

3: Adequate provisions of toilets, septic and soakage pit has been made to take care of human wastage and the waste water before discharging in the main drainage system, hence, there is no effluents discharged in the form of solid, liquid and gaseous and the plant, thus is considered free from the pollution aspects.

SEED CAPITAL ASSISTANCE

The Promoter is setting up the unit under Sher-E-Kashmir Employment & Welfare Programme for the Youth (SKEWPY), an initiative of Government of Jammu and Kashmir for unemployed youth of J&K State. Under the Scheme, the Promoters, being a graduate and professional, will be eligible for Seed Capital equivalent to 35% of the Project Cost of Rs. 30.00 lakhs upto a maximum of Rs.10.50 Lacs. The Seed Capital Scheme is implemented through J&K Entrepreneurship Development Institute (JKEDI). Loan assistance of Rs.19.50 lakhs at 65% of the Project Cost is proposed to be sanctioned by J&K Bank Ltd. at 9.00% rate of Interest.

CONCLUSION

On critical examination and analysis of various indicators, it may be stated that the proposed unit is a bankable proposition, deserving the support and favorable consideration of Institution/Bank(s)

Manpower

The category wise break-up manpower including salary as shown at **Annexure**. A Manager who would be assisted by his selected staff member to look after accounts as well as procurement of raw material and sale of the product would look after the operations of the factory. Regarding technical staff, the production function would be looked after by a production foreman/supervisor who would be assisted by machine and other skilled operators to look after various jobs. The unit would provide employment opportunities to 12 numbers of persons including those required under administrative categories on permanent basis. The break up of requirement, monthly salary, annual salary as well as total cost on manpower. Necessary provision of perks and annual increase in salaries made in the estimates. It may be mentioned that except for the technical staff all the manpower will be recruited from local sources, if need arises, the same could be recruited from the neighboring states.

NAME, STYLE & STATUS

The venture shall be set-up under the name and style of **M/S PIONEER PRINTING AND PACKAGINGS** . It will be provided will all possible facilities in order to check the emissions and particulate matters within the prescribed norms.

BACK GROUND OF THE PROMOTER

M/S " PIONEER PRINTING AND PACKAGINGS " a Partnership concern

The promoters are potential entrepreneur having business background and is a qualified Person. At present, He has an experience of at least **5 years**, now associated with relevant venture. Having gained a vast experience cultivated in this business in terms of the transitions and interactions with the various departments. The promoter has gained in-depth knowledge of NON WOVEN FABRIC BAGS MANUFACTURING Industry. Being enterprising, experienced, enthusiastic, believer of self-made personality... The reasons behind his successful entrepreneurship, as he believes in determination, will, singleness of a purpose and hard work. As one of the key factors to any industrial venture for its success is its marketing cell and a well-planned and organized marketing division of a particular industrial unit makes it rise and shine. The promoter has gained a lot of experience in the field of marketing, decided to manufacture the Quality products and exploit his own experience to fetch institutional market. The idea for undertaking proposed NON WOVEN FABRIC BAGS Manufacture venture was conceived after undergoing into the details of the market potential and its growing demand in the Domestic market, the entrepreneur intends to give a new dimension to the proposed venture with modern facilities available at present in the valley and to bring the product cost effective, marketable, therefore, the proposed products would be taken over by the modern technology to increase the production quantitatively as well as qualitatively with minimum processing losses . On the other hand, for the production of the proposed item, he will be assisted by trained technical / managerial and skilled work force to be recruited to give the quality produce. He also believes in strong teams by selecting talented people, providing coaching and feed back, empowerment / growth assignments, learning and self development. Owing to the above facts, his venture into the above said field is justified and hence recommended. Finding that the demand for NON WOVEN FABRIC BAGS is increasing at a faster rate and their exists few such unit in the State, therefore, the promoter has found tremendous potential on concentrating on the proposed activity, therefore conceived the present project as envisaged herein after. The financial strength and capability of the promoter is expected to be encouraged by the financial institutions to provide the quantum of financial assistance as worked out in the project report for undertaking the proposed program.

BACKGROUND OF THE PROJECT

M/S PIONEER PRINTING AND PACKAGINGS is in process of setting up a small-scale unit for manufacturing of NON WOVEN FABRIC BAGS . The unit is proposed to be located at BARI BRAHMNA JAMMU DISTRICT JAMMU on leased land measuring 3000 sq ft having built in shed **at industrial estate Bari Brahmna Jammu on a monthly rent.** Where all the basic infrastructural facilities viz.: water distribution network with overhead tank, main and internal link roads, power distribution network with all electrical peripherals etc has already been provided by J&K Govt.. The proposed project as such would not face any difficulty for its smooth operation, The requirement of land for the envisaged program could be worked out on the basis of covered area besides marginal area for future expansions and internal infrastructural facilities to ensure the proposed venture to operate prompt and smoothly, therefore, about 3000 sq ft of land is sufficient for carrying out the proposed line of activity.

It has been assumed in the project report that the unit will operate at 60% of the installed capacity during the first operating year which will subsequently increase to 80% in the 3rd year and so on. Depending upon the efficiency of the promoter and his marketing ability, the unit may be able to operate at higher production level than what has been envisaged in the report. Low capacity utilization of 60 % during the first year has been assumed to access the viability of the unit under not so favorable condition. However in case of excess capability utilization, the viability of the unit will improve accordingly. However, in case of excess capacity utilization of the plant, the viability of the unit will improve accordingly. The promoter is fully aware with the Industrial Culture.

DETAILS AND ESTIMATED COST OF CIVIL WORLKS

The shed is already built by JKSIDCO which they are providing on lease.

<u>DETAILS OF PRELIMINARY & PRE-OPERATIVE EXPENSES</u>		
<u>S.NO</u>	<u>PARTICULARS</u>	<u>AMOUNT(LACS)</u>
1	Traveling & Conveyance	0.04
2	Printing & Stationary	0.04
3	Professional Charges	0.04
4	Misc. Expenses	0.08
5	Lease Premium of the Land and shed	1.00
6	Interest during Moratorium	1.12
		2.30

<u>DETAILS OF MISC. FIXED ASSETS</u>		
<u>S.No.</u>	<u>Particulars</u>	<u>Amount(Lacs)</u>
1	Furniture/Fixture	0.20
2	Computer with printer	0.30
3	Fire Fighting Equipments	2 No. @ Rs. 5000
		0.10
	Total	0.60

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DETAILS AND ESTIMATED COST ON PLANT AND MACHINERY

While arriving at the requirement of various types of equipment and machinery required for the plant, due consideration has been given to the following points.

- Minimum wastage.
- High productivity.
- Maximum flexibility in operation.
- Adequate stand by provision where ever necessary.

The production plant and equipment proposed have been selected for the envisaged production capacity and incorporates features that permit smooth operation of the plant. After making a preliminary study of the source of supply of such equipment it has been identified that all the equipments will be available indigenously and no imports will be necessary.

The concern is expected to purchase the requisite machinery from reputed authorized dealer, who would also assist in the installation of plant and machinery. For estimating the cost on plant and machinery the quotations provided to us by the promoter has been taken into account.

The details of plant & machinery is as follows: –

DETAILS OF PLANT & MACHINERY

<u>S.NO</u>	<u>PARTICULARS</u>	<u>Qty/Nos</u>	<u>Rate</u>	<u>Amount(RS. LACS)</u>
1	AUTOMATIC NON WOVEN FABRICS BAG MAKING MACHINE WITH T SHITRT DEVICE AND TOUCH SCREEN DISPLAY COMPLETE WITH STANDARD ACCESSORIES	1 SET	14.75	14.75
2	HYDRAULIC PUNCHING MACHINE	1 SET	1.20	1.20
	TAXES			0.32
	TOTAL COST OF MACHINERY			16.30

PROFORMA INVOICE ENCLOSED

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INSTALLED CAPACITY AND PRODUCTION PROGRAMME

Keeping in view the climatic conditions and other factors prevailing in the valley into consideration, the operational hours shall be assumed as:-

STATEMENT OF CALCULATION OF RAW MATERIAL

1	NON WOVEN FABRIC	50 MT @ RS. 110.00 PER KG	Rs. 55.00 Lacs
TOTAL PURCHASES			RS. 55.00 LACS

DETAILS OF INSTALLED CAPACITY

The installed capacity of the Plant is estimated as:

Operational Base:

Working per day

2 Shift.

Working day per annum

300 Days

Number of Working Hours

8

WASTAGE

5%

Production per annum, Bags of Different Sizes and quality

47500 KGS

Average Rate per Bag

Rs. 170.00 PER KG

Total Revenue per annum

Rs. 80.75 LACS

SALES REALIZATION AND PURCHASES IN PHASED MANNER

YEAR	CAPACITY	SAL/WAG	PURCHASE	UTILITIES	SALES
	UTILISATION		(Lacs)		(lacs)
1ST	60.00	5.27	33.00	1.34	48.45
2ND	70.00	6.15	38.50	1.56	56.53
3RD	80.00	7.03	44.00	1.78	64.60
4TH	80.00	7.03	44.00	1.78	64.60
5TH	90.00	7.91	49.50	2.01	72.68
6TH	90.00	7.91	49.50	2.01	72.68
7TH	100.00	8.79	55.00	2.23	80.75
8TH	100.00	8.79	55.00	2.23	80.75

ESTIMATED COST OF UTILITIES PER ANNUM

The main utilities for running the unit successfully are water and electricity.

• **Power**

• **Water**

1	Total connected load	= 25 hp or 18.64 KW
2.	Total power load after taking load factor (0.89)	= 16.59 KW
3.	Power consumption per annum	= 79630 Kwhr
4.	From PDD (80%) @ 2.00 Kwhr	= Rs 1.27 lacs /
5.	From own generator	= Rs 0.95 lacs/
	Total	= Rs 2.22 lacs/

B) Water

The departmental Water supply shall mostly be utilized for drinking and sanitation purposes, which is available at cheaper rates from P.H.E Department. However under certain unfavorable conditions Rs 1,000 / annum has been kept on account of water

Total cost on Utilities (A + B) Rs 2.23 Lacs

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REPAIRS AND MAINTENANCE PER ANNUM.

On the basis of norms available from similar plants in actual operation provision has been made for annual cost of maintenance and repairs for the proposed items of fixed out lay. It has been taken as 2%, 3%, 4%, 5%, 5%, 6%, 6% and 6% for 1st, 2nd, 3rd, 4th, 5th, 6th, 7th and 8th year to keep the fixed assets in working conditions.

REPAIRS AND MAINTENANCE PER ANNUM.

<u>Year</u>	<u>Percentage</u>	<u>Building</u>	<u>P&M</u>	<u>MFA</u>	<u>Total</u>	<u>R & M</u>
1st	2%	0.00	16.30	0.60	16.90	0.34
2nd	3%	0.00	16.30	0.60	16.90	0.51
3rd	4%	0.00	16.30	0.60	16.90	0.68
4th	5%	0.00	16.30	0.60	16.90	0.85
5th	5%	0.00	16.30	0.60	16.90	0.85
6th	6%	0.00	16.30	0.60	16.90	1.01
7th	6%	0.00	16.30	0.60	16.90	1.01
8th	6%	0.00	16.30	0.60	16.90	1.01

DETAILS OF ADMINISTRATIVE EXPENSES PER ANNUM

It is taken as 0.50% of net sales in every year which includes printing, traveling, telegraph, petty expenses, audit fee, telephone bills, legal fee, bank charges and other sundry expenses both for the basic program shall be worked out as:

<u>Year</u>	<u>Capacity Utilization</u>	<u>Sales</u>	<u>%</u>	
1 st	60.00	48.45	0.5	0.24
2 nd	70.00	56.53	0.5	0.28
3 rd	80.00	64.60	0.5	0.32
4 th	80.00	64.60	0.5	0.32
5 th	90.00	72.68	0.5	0.36
6 th	90.00	72.68	0.5	0.36
7 th	100.00	80.75	0.5	0.40
8 th	100.00	80.75	0.5	0.40

DETAILS OF SELLING EXPENSES PER ANNUM

It is taken as 1 % of net sales in every year, which includes sales promotion expenses, advertising expenses, commission to intermediaries, carriage outwards, discount, brokerage and annual Lease Rent Lacs etc.

<u>Year</u>	<u>Cap. Utiliz</u>	<u>Sales</u>	<u>%</u>	<u>Selling expenses/annum</u>
1 st	60.00	48.45	1	0.48
2 nd	70.00	56.53	1	0.57
3 rd	80.00	64.60	1	0.65
4 th	80.00	64.60	1	0.65
5 th	90.00	72.68	1	0.73
6 th	90.00	72.68	1	0.73
7 th	100.00	80.75	1	0.81
8 th	100.00	80.75	1	0.81

DETAILS OF WORKING CAPITAL REQUIREMENT AT DIFFERENT LEVELS.

YEAR	CAPACITY	SAL/WAG	PURCHASE	UTILITIES	SALES	Repair	Admn.	Selling	WIP	F.Goods
	UTILISATION		(Lacs)		(lacs)	Maint.	Expen.	Expen.		
1ST	60.00	5.27	33.00	1.34	48.45	0.34	0.24	0.48	39.61	40.34
2ND	70.00	6.15	38.50	1.56	56.53	0.51	0.28	0.57	46.21	47.06
3RD	80.00	7.03	44.00	1.78	64.60	0.68	0.32	0.65	52.82	53.79

<u>S.no</u>	<u>Particulars</u>	-	<u>Margin</u>	<u>1st</u>		<u>2nd</u>		<u>3rd</u>	
			%	<u>60.00</u>		<u>70.00</u>		<u>80.00</u>	
		<u>Days</u>		<u>Amount</u>	<u>Margin</u>	<u>Amount</u>	<u>Margin</u>	<u>Amount</u>	<u>Margin</u>
1	Stock of Raw Material	30	0%	3.30	0.00	3.85	0.00	4.40	0.00
2	Stock of work in progress	1	0%	0.13	0.00	0.15	0.00	0.18	0.00
3	Stock of finished goods	25	0%	3.36	0.00	3.92	0.00	4.48	0.00
4	Sundry debtors	30	0%	4.85	0.00	5.65	0.00	6.46	0.00
5	Working expenses	30	100%	0.15	0.15	0.15	0.15	0.15	0.15
6	Sundry Creditors	9	0%	0.99		1.16		1.32	
7	Working capital requirement			10.80		12.57		14.35	
8	Margin money				3.78		3.78		3.78
9	Working capital limit			7.02		8.79		10.57	

FUNDING OF CAPITAL EXPENDITURE

The total capital investment cost of the project is estimated at Rs.30.00 Lakhs, which shall be financed for term loan as per the projections made in the report subject to furnishing of latest cost comparative quotations from the authorized dealers besides contribution from the promoters during the implementation of the project, the specific details interalia as:

S.no	Particulars	Amt.(Lacs)
1	Seed Capital	10.50
2	Long term borrowings	12.48

A: Equity

The share capital of the unit has been fixed at Rs. 10.50 Lakhs comprising 35 % of promoter contribution and seed capital. The unit has to raise share capital within this limit. The promoters shall arrange equity from the seed capital

B: Term loan

Term loan requirement to the extent of Rs. 12.48 Lakhs for the purpose of purchases of plant & machinery and misc. fixed assets shall be made available from the financial institutions or commercial banks well operating in the valley on the basis that the unit being proven technically feasible and financially viable. As the policies are liberal for such type of ventures to avail packages/incentives to encourage the entrepreneurs to promote industrial culture in the backward area of the country. The state Govt. is equally eager to give all possible support to the development of industry in the area, where the unit is being established more so when the promoter share is only 35 % of the capital formulation, which is higher than the normal requirement of funding, insisted upon by the bankers.

INTEREST CALCULATION

It is proposed to raise the sum of Rs 12.48 Lacs as long term loans from financial institutions to meet the capital cost of the project. For the purpose of calculating the interest on long-term loans an interest rate of 9.00 % per annum is taken into consideration in the project report.

A: Interest on long term loan

<u>S.no</u>	<u>Particulars</u>	<u>Amt.(Lacs)</u>
		12.48
01.	Long term borrowings	
02.	Rate of interest	9.00%
03.	Installment	Rs. 1.78 Lacs Per Annum
04.	Repayment schedule	7 years
05	Moratorium Period	12 Months

YEAR	INT T/Loan	T.Loan	Decrease	Yr.Term	Rem. Term
		Payment	Term Loan	Loan Paym.	Loan
1	1.12	0.00	0.00	0.00	12.48
2	1.12	1.78	1.78	1.78	10.70
3	0.96	1.78	3.57	1.78	8.91
4	0.80	1.78	5.35	1.78	7.13
5	0.64	1.78	7.13	1.78	5.35
6	0.48	1.78	8.91	1.78	3.57
7	0.32	1.78	10.70	1.78	1.78
8	0.00	1.78	12.48	1.78	0.00

B: INTEREST ON WORKING CAPITAL LIMIT

To meet the working capital requirements of the project, the promoters will have to make arrangements for cash credit facilities with the nationalized bank.

RATE OF INTEREST	9.00%
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YEAR	INT W/C	Increase w/ Cap	Increase Curr. Asse	Current Assets	Working Capital
1	0.63	7.02	10.80	10.80	7.02
2	0.79	1.77	1.77	12.57	8.79
3	0.95	1.77	1.77	14.35	10.57
4	0.95	0.00	0.00	14.35	10.57
5	0.95	0.00	0.00	14.35	10.57
6	0.95	0.00	0.00	14.35	10.57
7	0.95	0.00	0.00	14.35	10.57
8	0.95	0.00	0.00	14.35	10.57

COMPUTATION OF DEPRECIATION CALCULATION

For the purpose of claiming extra depreciation and amortization, the preoperative expenses and contingencies will be capitalized with the cost of fixed assets. The distribution of pre-operative expenses and contingencies has been done approximately in proportion to the cost of all the fixed assets (except land and site development). In the estimation of cost of sales and in books of accounts of the firm the normally adopted practice is to depreciate the various assets by straight-line method.

For income tax purposes, the depreciation of depreciable assets (all fixed assets except land and site development) is carried out by written down value method.

COMPUTATION OF DEPRICIATION

<u>S.no</u>	<u>Particulars</u>	<u>Building</u>	<u>P&M</u>	<u>MFA</u>	<u>Total</u>
1	Cost Price	0.00	16.30	0.60	16.90
2	Preliminary & Preoperative exp.	0.00	2.22	0.08	2.30
	Total	0.00	18.52	0.68	19.20

Depreciation under WDV method

BUILDING

Rate of depreciation		6.25%		
		Cost	Dep	WDV
1st	Year	0.00	0.00	0.00
2nd	Year	0.00	0.00	0.00
3rd	Year	0.00	0.00	0.00
4th	Year	0.00	0.00	0.00
5th	Year	0.00	0.00	0.00
6th	Year	0.00	0.00	0.00
7th	Year	0.00	0.00	0.00
8th	Year	0.00	0.00	0.00

Depreciation under WDV method

Plant & Machinery

Rate of depreciation		10%		
		Cost	Dep	WDV
1st	Year	18.52	1.85	16.67
2nd	year	16.67	1.67	15.00
3rd	Year	15.00	1.50	13.50
4th	Year	13.50	1.35	12.15
5th	Year	12.15	1.21	10.93
6th	Year	10.93	1.09	9.84
7th	Year	9.84	0.98	8.86

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8th	Year	8.86	0.89	7.97
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Depreciation under WDV method

Misc. Fixed Assets

	Rate of depreciation		15%	
		Cost	Dep	WDV
1st	Year	0.68	0.10	0.58
2nd	Year	0.58	0.09	0.49
3rd	Year	0.49	0.07	0.42
4th	Year	0.42	0.06	0.36
5th	Year	0.36	0.05	0.30
6th	Year	0.30	0.05	0.26
7th	Year	0.26	0.04	0.22
8th	Year	0.22	0.03	0.19

Depreciation under WDV method

		<u>Building</u>	<u>P&M</u>	<u>M F A</u>	<u>Total</u>
	Rate of depreciation	6.25%	10%	15%	
1st	Year	0.00	1.85	0.10	1.95
2nd	Year	0.00	1.67	0.09	1.75
3rd	Year	0.00	1.50	0.07	1.57
4th	Year	0.00	1.35	0.06	1.41
5th	Year	0.00	1.21	0.05	1.27
6th	Year	0.00	1.09	0.05	1.14
7th	Year	0.00	0.98	0.04	1.02
8th	Year	0.00	0.89	0.03	0.92

Depreciation under SL Method

	Rate of depreciation	5.00%	10 %	10%	Total
	Amount of depreciation	0.00	1.85	0.07	1.92

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Projected Profitability Statement

The annual cost of sales and profitability during the first eight years of operation of the plant is estimated in the following table.

S.no	Particulars	Operating Years							
		1 st	2nd	3rd	4th	5th	6th	7th	8th
1	Year of operation								
2	Capacity Utilization (%)	60.00	70.00	80.00	80.00	90.00	90.00	100.00	100.00
3	Sales realization	48.45	56.53	64.60	64.60	72.68	72.68	80.75	80.75
A:	<u>Cost of production</u>								
1	Raw Material	33.00	38.50	44.00	44.00	49.50	49.50	55.00	55.00
2	Salary & wages	5.27	6.15	7.03	7.03	7.91	7.91	8.79	8.79
3	Utilities	1.34	1.56	1.78	1.78	2.01	2.01	2.23	2.23
4	Repairs & Maintenance	0.34	0.51	0.68	0.85	0.85	1.01	1.01	1.01
5	Administrative expenses	0.24	0.28	0.32	0.32	0.36	0.36	0.40	0.40
6	Selling expenses	0.48	0.57	0.65	0.65	0.73	0.73	0.81	0.81
7	Total	40.68	47.57	54.46	54.63	61.35	61.52	68.25	68.25
8	Gross profit	7.77	8.96	10.14	9.97	11.32	11.15	12.50	12.50
B:	<u>Financial expenses</u>								
1	Interest on term loan	1.12	1.12	0.96	0.80	0.64	0.48	0.32	0.00
2	Interest on WCL	0.63	0.79	0.95	0.95	0.95	0.95	0.95	0.95
3	Depreciation (SLM)	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92
4	Total	3.67	3.83	3.83	3.67	3.51	3.35	3.19	2.87
5	Profit before tax	4.10	5.12	6.31	6.30	7.81	7.80	9.31	9.63
6	Taxation	0.00	0.00	0.00	0.00	0.00	0.78	0.93	1.93
7	Profit after tax	4.10	5.12	6.31	6.30	7.81	7.02	8.38	7.71
8	Withdrawals	0.00	0.00	0.00	0.50	1.00	1.00	2.00	2.00
9	Profit carried to B/S	4.10	5.12	6.31	5.80	6.81	6.02	6.38	5.71
10	Cumulative profit	4.10	9.22	15.53	21.32	28.13	34.15	40.53	46.24
11	Add back depreciation	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92
12	Total cash surplus	6.02	11.14	17.45	23.24	30.05	36.07	42.45	48.16
C:	<u>Less payment</u>								
1	Term Loan	0.00	1.78	1.78	1.78	1.78	1.78	1.78	1.78
2	Withdrawals	0.00	0.00	0.00	0.50	1.00	1.00	2.00	2.00
3	Total payments	0.00	1.78	1.78	2.28	2.78	2.78	3.78	3.78
4	Net Cash accruals	6.02	9.36	15.66	20.96	27.27	33.29	38.67	44.38

PAY BACK PERIOD

Pay back period is the length of time in which, the unit recovers its initial investment. It may also be defined as the number of months or years required for the unit to generate commutative gross operating surplus equal to the fixed capital investment in the project. The payback period of the unit is estimated in the following table.

<u>Year</u>	<u>CFAT</u>	<u>Cumulative Cash inflow</u>	
1st	6.02		6.02
2nd	7.04		13.06
3rd	8.23		21.29
4th	8.22		29.50
5th	9.73		39.23
6th	8.94		48.17
7th	10.30		58.47
8th	9.63		68.10
<u>4 year</u>	<u>+</u>	<u>3</u>	<u>Months</u>

DETAILED DEBT SERVICE COVERAGE:

The debt service coverage ratio shows the ability of the unit to repay interest and principal amount of composite loans.

<u>S.no</u>	<u>Particulars</u>		<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>
<u>A</u>	<u>Source of funds</u>									
1	Profit after tax		4.10	5.12	6.31	6.30	7.81	7.02	8.38	7.71
2	Depreciation		1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92
3	Interest on term loan		1.12	1.12	0.96	0.80	0.64	0.48	0.32	0.00
	Total A		7.14	8.16	9.19	9.02	10.37	9.42	10.62	9.63
<u>B</u>	<u>Disposition of funds</u>									
4	Repayment of term loan		0.00	1.78	1.78	1.78	1.78	1.78	1.78	1.78
	Total B (3+4)		1.12	2.91	2.75	2.59	2.42	2.26	2.10	1.78
C	Debt service coverage ratio		6.36	2.81	3.35	3.49	4.28	4.16	5.05	5.40
<u>D</u>	<u>Average DSCR</u>		<u>4.21</u>							

BREAK EVEN ANALYSIS AT 80% UTILIZATION

The break even point analysis of the plant is developed from the assumed plant efficiency, fixed cost of sales, variable cost of sales and sales revenue.

<u>BREAK EVEN ANALYSIS</u>		80.00	PERCENT
<u>S.no</u>	<u>Particulars</u>	<u>Amount.(Lacs)</u>	
A	Sales realization	64.60	
B	<u>Variable cost</u>		
1	Raw material	44.00	
2	Utilities	1.78	
3	Selling expenses	0.65	
4	Interest on WCL	0.95	
	Total	47.38	
C	Contribution (A-B)	17.22	
D	<u>Semi-variable/ fixed costs</u>		
1	Salary & wages	7.03	
2	Repairs & maintenance	0.68	
3	Administrative expenses	0.32	
4	Interest on term loan	0.96	
5	Depreciation	1.92	
	Total	10.91	
	B. E. P.	%	63.38

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PROJECTED CASH FLOW STATEMENT

The following table gives the cash flow analysis of 8 years of operation of the plant. A cash flow statement is basically an analysis of sources of availability of funds, extent of the utilization and availability of surplus funds or their deficit at the end of each year of operation.

S.no	Particulars	Const period	1st	2nd	3rd	4th	5th	6th	7th	8th
	Capacity utilization (%)		60.00	70.00	80.00	80.00	90.00	90.00	100.00	100.00
A	Source of funds									
1	Profit before interest, tax but after depn.		5.85	7.04	8.22	8.05	9.40	9.23	10.58	10.58
2	Depreciation		1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92
3	Increase in Share Capital	10.50								
4	Increase in Term loan	12.48								
5	Increase in WCL		7.02	1.77	1.77	0.00	0.00	0.00	0.00	0.00
	Total (A)	22.98	14.79	10.73	11.91	9.97	11.32	11.15	12.50	12.50
B	Application of funds									
1	Capital expenditure	19.20								
2	Prelim / Pre-operative expenses									
3	Increase in current assets		10.80	1.77	1.77	0.00	0.00	0.00	0.00	0.00
4	Decrease in term loan		0.00	1.78	1.78	1.78	1.78	1.78	1.78	1.78
5	Interest on term loan		1.12	1.12	0.96	0.80	0.64	0.48	0.32	0.00
5a	Interest on WCL		0.63	0.79	0.95	0.95	0.95	0.95	0.95	0.95
6	Taxation		0.00	0.00	0.00	0.00	0.00	0.78	0.93	1.93
7	Withdrawal		0.00	0.00	0.00	0.50	1.00	1.00	2.00	2.00
	Total (B)	19.20	12.55	5.47	5.47	4.04	4.38	5.00	5.99	6.66
C	Opening Balance		3.78	6.02	11.28	17.72	23.65	30.60	36.76	43.28
D	Net Surplus	3.78	2.24	5.26	6.44	5.93	6.95	6.16	6.52	5.84
E	Closing Balance	3.78	6.02	11.28	17.72	23.65	30.60	36.76	43.28	49.12

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PROJECTED BALANCE SHEET

The balance sheet of a unit is a very important feature of the working of the unit. In a healthy unit, there is always a growth in total assets and liabilities every year. In a projected balance sheet on the liabilities side the reserves and surplus and on the assets side the cash and bank balances should show healthy growth.

S.no	Particulars	Year	1st	2nd	3rd	4th	5th	6th	7th	8th
A:	<u>Liabilities</u>									
1	Seed Capital		10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50
2	Reserves & Surplus		4.10	9.22	15.53	21.32	28.13	34.15	40.53	46.24
3	Term Loan		12.48	10.70	8.91	7.13	5.35	3.57	1.78	0.00
4	WCL		7.02	8.79	10.57	10.57	10.57	10.57	10.57	10.57
	Total		34.10	39.21	45.51	49.52	54.55	58.78	63.38	67.31
B:	<u>Assets</u>									
1	Gross Block		19.20	17.28	15.36	13.44	11.52	9.60	7.68	5.76
2	Depreciation		1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92
3	Net Block		17.28	15.36	13.44	11.52	9.60	7.68	5.76	3.84
4	Current Assets		10.80	12.57	14.35	14.35	14.35	14.35	14.35	14.35
5	Cash and bank balance		6.02	11.28	17.72	23.65	30.60	36.76	43.28	49.12
	Total		34.10	39.21	45.51	49.52	54.55	58.78	63.38	67.31