Model Project on Technical Textiles
(Manufacturing of Coated fabric)

Table of Index

Technical Textiles-
Project on Manufacture of Coated Fabric

1.1.Introduction: The Technical Textiles previously widely termed as "Industrial fabrics" has been now redefined and named as "Technical Textiles". The Technical Textiles offers a variety of technical and functional properties and has applications in the every field and walks of life. As per Experts Committee Report ,the technical textiles are defined as,

" **Textile materials and products manufactured primarily for their technical performance and functional properties rather than their aesthetic or decorative characteristics**."

The technical textile is broadly grouped under the following 12 segments based on the functional applicability.

1	**Agrotech** (Agriculture, horticulture and forestry)	2	**Buildtech** (building and construction)
3	**Cloth tech** (technical components of shoes and clothing)	4	**Geotech** (geotextiles, civil engineering)
5	**Hometech** (components of furniture, household textiles and floor coverings)	6	**Indutech** (filtration, cleaning and other industrial)
7	**Medtech** (hygiene and medical)	8	**Mobiltech** (automobiles, shipping, railways and aerospace)
9	**Oekotech** (environmental protection)	10	**Pactech** (packaging)
11	**Protech** (personal and property protection)	12	**Sportech** (sport and leisure)

1.2.WHY MOVE ON TO TECHNICAL TEXTILES ?

In view of globalization, the Govt. of India has launched the scheme of Technology Upgradation Fund (TUF) and other measures which are resulting into transformation of the industry from low - to high - technology industry. The traditional textiles are becoming more and more competitive and will have to face tough competition in exports from China and other neighbouring countries. Obviously many companies producing traditional textiles have to continuously struggle to survive in a highly competitive global market. In these circumstances, textile manufacturers need to consider some emerging factors and redefine their strategies for production and marketing.

1.3.THE BASIC REQUIREMENTS:

Technical Textile markets are usually more application specific and demanding altogether different types of production strategies. The strict adherence to the product

specification and quality standards are the prime requirements to enter in this field. Usually, there is a need for special dialogue between the producers and the users. The user is products with specific performance and functional requirement. Therefore, the producers must peep into users requirements and translate the same in the products to the satisfaction of the user.

1.4.THE PRESENT POSITION :

Under the circumstances, it is seen that Indian textile industry is yet to take a serious view on this field and this segment is in very nascent stage in India. After the long years of efforts and persuasion by the office of the Textile Commissioner through its Regional Offices, especially in the jurisdiction of R.O.Mumbai (Maharashtra & M.P). The importance of modernization and adherence of quality norms are increasingly being felt by the decentralized powerloom sector and there is remarkable response for modernization. More number of modern looms are being installed in these areas like Tarapur, Ichalkaranji, Bhiwandi, Indore, Malegaon, Solapur, etc., all by availing subsidy under TUF Scheme and other State Government Schemes. The state-of-art hi-tech powerloom parks with all the basic infrastructure facilities are also coming up in these areas. As the result, the decentralized powerloom sector is now in a position to take up the new challenges/experiments to excel in the various domestic/export markets and also to explore the new areas such as Technical Textiles.

1.5.THIS PROJECT MEANT TO WHOM?

The R.O. of the Textile Commissioner, Mumbai had earlier prepared various project reports for decentralized powerloom sectors with various combinations and type of weaving machines and the same is widely been used by the powerloom industry, industrial development organizations and TRAs etc for preparation of specific bankable projects. In this series a new project report on the production of canvas fabrics meant for various coated fabrics, tarpaulins etc. is prepared to enable them to diverse their production capacity towards Technical Textiles. The product does not require any major change in the process and machines for the existing powerloom manufacturer who have modernized their looms. Because in this project the production of basic coating fabric will be undertaken by the unit and the coating process got carried out on the job work basis and by which heavy investment could be avoided in the initial stages and own coating plant also can be installed as II nd Phase expansion.. For

exclusive project on coated fabrics by undertaking coating process, the Expert Committee Report published by the office of the Textile Commissioner, Mumbai may be referred.

1.6.THE PROCESS SPECIFICATIONS:

The base canvass cloth used for coated fabrics are made from hard-twisted cotton yarns in 125 to 700 gsm. Low weight fabric of 125-225 gsm is used for the manufacture of shoes, medium weight fabric of 125 to 400 gsm for school bags and medium to high weight fabric from 225 to 700 gsm for the production of tarpaulins for tents and protective coverings. The details of the process flow has been shown in the figure 1.1.

1.7.TECHNOLOGY :

In the field of Technical Textiles, coated fabrics form one of the most important segments. Coating operation (also Lamination and Impregnation) is carried out to impart certain characteristics and desirable properties for the end-use application of the product. Manufacturing of coated fabrics is a technology intensive process with more than 35 different types of manufacturing (coating heads) available for use. The most popular coating methods are Roller systems, knife coating, Rotary Screen printing, Dipping coating system.

1.8. BASIC MATERIALS

1.8.1.Cloth: For the manufacturing of coated fabrics, woven fabrics of cotton, nylon, polyester, polypropelene, acrylic, rayon, wool, jute etc. are being used. In India, cotton fabrics are widely used as basic fabric for coated cloth. Cotton fabrics are resistant to strong alkali, organic solvents, bleaches and heat. Cotton is suitable for blending with other materials to achieve unique combinations not found in other materials alone.

1.8.2.Coating materials: The chemicals used for coating are PVC (Vinyl), Polyurethane (PU), Acrylic, Rubber etc. PVC is the most widely used coating material because of its low cost, versatility and performance properties. It is strong, durable abrasion and moisture resistant, and electrically non-conductive. Vinyl can be produced in almost any colour, with the end products ranging from opaque to crystal clear.

1.9. APPLICATIONS OF COATED FABRICS:

Tarpaulins find use in wide variety of applications for protecting goods from rain, sun, dust and wind. Some of the major applications are: truck and tempo covers; wagon covers; boat covers; industrial/machinery coverings; warehousing and food storage; fumigation covers; agricultural ground sheets; swimming pool covers; construction covers; temporary shelters (tents); lining of pond, reservoir, effluent tank/aqua farm.

1.10. MAJOR APPLICATIONS AND END USAGES:

1	**Hoardings and Signages,**
2	**Soft Luggage material (Nylon/Polyester),**
3	**Awnings and Canopies**
4	**Fire Retardant textiles (Coated)**
5	**Scaffoldings nets,**
6	**Tarpaulins, Tents, Umbrella fabrics, Airbags, Parachute fabrics etc.**

1.11. MARKETING SIZE AND TRENDS:

The demand for coated fabrics in the Asia Pacific region (including Japan) was estimated to be 425 million square yards (22% market share) in 2000 and is expected to reflect much higher growth rates with China and India emerging as the target markets. Non Rubber coated fabrics (PVC, PU and Acrylic) accounted for more than 80% of the total sales in 2002. (PVC (Vinyl) will continue to be the dominant coating material since Vinyl coated fabrics offer good performance at a modest price in variety of applications.

Taking a long term view the market for tarpaulins is expected to grow at a moderate rate and accordingly, the market potential is estimated at Rs.1100 crore in 2003-04 and Rs.1300 crore in 2007-08. The demand and market potential of technical textiles are on incline and is bound to grow in our country as well as in the international market estimated at 140 lack tons valued at 110 billion dollars. The Indian technical textiles -the value added coated fabric market segment which is at a take off stage has the potential for the manufacturing base to meet the growing domestic market and also emerge as an exporter to developing countries.

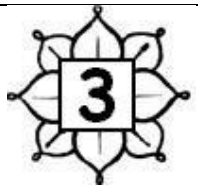
The over view of the project comprising major components of the project are shown in the table No. 1 and the detailed workings of the project could be seen on various table Nos. 1 to 15. The

entrepreneur can use this project as a base for preparing the bankable projects with their own data and details.

2.Project Over view

S.NO.	Project components & specifications	Details &Data
1	Land	1250 sq. mts.
2	Building	720 Sq mts.
3	Plant & Machinery	425.5 Lakhs
4	Total Project Cost	425.5 Lakhs
5	Installed Capacity	12 New Rapier Looms
6	Dept-Equity Ratio	2:1
7	Production (90% Utilization)	4423 mts
8	Turnover	1062.03
9	Gross Profit	230.15
10	Net Profit	107.30

11	Break Even Point	39.26
12	IRR	22.40
13	Pay back period	3.61 years
14	Labour Compliment	28
15	Installed Load	265 KVA



low Process Chart

Cone /Cheese Yarn

⇩

Doubler Winder

⇩

T.F.O.

⇩

Sectional Warping

⇩

Weaving

⇩

Inspection &Packing

⇩

Coating

⇩

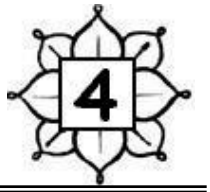
Inspection & Packing

⇩

Packing

⇩

Dispatch



4.Project Estimation

4.1Cost of Project

	Description	Cost(Lakhs)
1	Land & Building	28.60
2	Plant & Machinery	425.50
3	Preliminary &pre operative	22.71
4	Contingencies	23.84
5	Margin money	22.19
	Total	**522.83**

4.2.Means of Finance

S.No.	Description	Amount
		(Lakhs)
1	Total equity	174.28
2	Term Loan	348.55
3	**Total**	522.83
4	**Deft Equity Ratio**	**2 : 1**

4.3.Land & Building

S.No.	Description	Area	Amount
		Sq.mts	(Lakhs)
1	Land	1250	7.00
2	Work Shed@3000/-	600	18.00
3	Yarn & fabric Store	40	1.20
4	Office	20	0.60
5	Store	20	0.60
6	Gen.Shed	40	1.20
	Total		**28.60**

4.4.Plant &Machinery

S.No.	Description	Unit Price(Lac.)	No.of Machines	Total cost
1	Rapier Looms	30	12	360.00
2	T.F.O	13.5	1	13.50

3	D.Winder	5	1	5.00
4	Humidification	7	1	7.00
5	Warping M/c	20	1	20.00
6	Electrical & DG set	10	1	10.00
7	Office Equipment& computer	2	1	2.00
8	Compressor	1	1	1.00
9	Material Handling	1	1	1.00
10	Knotting Machine	6	1	6.00
	Total			**425.50**

4.5. Loom Programme

Sort	Grey Width (inch)	Reed Width (inch)	Warp Ct	Weft Ct	Reed	Pick	Warp Cr %	Weft Cr %	Warp Wt. Gms/ Linear Mt	Weft Wt. Gms/ Linear Mt	GSM
Cotton Canvas	63	65	5	5	44	32	12	10	366.833	262.024	393.285

4.6.Production Plan

Type of Loom	No.of Looms	RPM	Effiiciency %	Production / Day (L.Mts) (90%uti)	Warp* Wt./Day (Kg).	Weft* Wt./Day (Kg).
Rapier	12	450	85	4423.26	**1671.277**	**1170.589**

4.7. Yarn Requirements:

Counts	Qty (Kgs/Day)	Rate/Kg	Cost /day (Rs)	Cost/Annum (Lakhs)
Warp - 2/10s	1671.277	58	96934.06	**339.27**
Weft - 2/10s	1170.589	58	67894.18	**237.63**
Total	2841.866		164828.24	**576.90**

4.8. Stores & Spares :

Rate per M/c per Day		Cost / Day		Cost/Annum (Lakhs)
100		1200		**4.20**

4.9. Salaries & Wages :

S.No.	Description	Nos/day	Wage / Month (Rs.)	Total / Annum
1	Manager	1	25000	300000
2	Supervisor	3	7500	270000
3	Clerk	1	3000	36000
4	Weavers	6	4500	324000

5	Jobber	2	5000	120000
6	Weaving assistants	3	3000	108000
7	Gaiters	2	4500	108000
8	Warp & winding Workers	10	3000	360000
9	Watch men	3	2000	72000
	Total			**1698000**

4.10. Cost of Packing:

Sort	Mts/Day	Cost of Packing (Rs/Mts)	Cost/ Day (Rs)	Cost/Annum (Lakhs)
Cotton Canvas	4423.26	0.1	442.33	1.55

4.11.Power Requirements:

S.No.	Items	No.of M/cs	KW per M/c	Total KW	KW-Hr (24 Hrs)
1	Looms	12	7.5	90	2160
2	D.winder	1	5	5	120
3	T.F.O.	1	10	10	240
4	Warping	1	80	80	1920
5	Humidification	1	20	20	480
6	Lighting	**	**	5	120
	Total			210	**5040**

Total Connected Load	**210**Kw	or	**262.5**KVA
Maximums Demand	**189**Kw	or	**236**KVA
Transformer Requirements			**320**KVA

Power Cost :

Cost/KWH Rs.	3.50
Power Consumption as % Consumption	70
Units/ Annum	1234800
Power Cost/Annum @ 90 % utilization (Lakhs)	**38.90**

4.12.SALES :

Sort	Production/Day (mts.)	Sale Rate (Rs./Mt)	Value Loss %	Turn Over /Annum (Lakhs)
Sheeting	4423.26	70	2	**1062.03**

4.13.Summary of Salaries and Wages :

S.No	Description	1st year	2nd year	3rd year	4th year	5th year	6th year	7th year
1	Wages/ Annum (5% increment from 2nd year)	10.92	11.47	12.04	12.64	13.27	13.94	14.63
	Total	**10.92**	**11.47**	**12.04**	**12.64**	**13.27**	**13.94**	**14.63**
2	Staff Salaries per Annum(5% increment from 2nd year)	6.06	6.36	6.68	7.02	7.37	7.73	8.12
	Total	6.06	6.36	6.68	7.02	7.37	7.73	8.12
	Grand Total	**16.98**	**17.83**	**18.72**	**19.66**	**20.64**	**21.67**	**22.75**

4.14. Margin Money For Working Capital (Rs. In Lakhs)

S.No.	Particulars	Period	Amount	Bank Finance %	Bank Finance Amount	Margin Money
1	Wages	1Month	1.42	75	1.06	0.35
2	Yarn	1Mmonth	48.07	75	36.06	12.02
3	Work in progress & Finished goods	15 days	33.47	75	25.10	8.37
4	Coating cost@ Rs10/-per Mt.	1 Month	0.44	75	0.33	0.11
5	Consumable stores &Spares	2Month	0.70	75	0.53	0.18
6	Packing Materials	1Month	0.13	75	0.10	0.03
7	Factory over heads (Wages, Power .utilities, etc..)	1Month	4.79	75	3.59	1.20
8	Debtors	1 Month	66.93	100	66.93	0.00
	Total		**155.95**		**133.69**	**22.25**
	Interest on Working					
	Capital @ 11%				**14.71**	

4.15. Interest & Installments of Long term Loans:

S.No.	Particulars	Operating years						
		1	2	3	4	5	6	7
	I- Quarter							
1	Opening Balance	348.60	348.60	290.50	232.40	174.30	116.20	58.10
2	Add: increase during							
3	Less: Quarterly Installment	0.00	14.52	14.52	14.52	14.52	14.52	14.52
4	Quarterly closing balance	348.60	334.07	275.97	217.87	159.77	101.67	43.57
5	Quarterly Interest @ 6%	5.23	5.23	4.36	3.49	2.61	1.74	0.87
	II- Quarter							
1	Opening Balance	348.60	334.07	275.97	217.87	159.77	101.67	43.57
2	Less: Quarterly Installment	0.00	14.52	14.52	14.52	14.52	14.52	14.52
3	Quarterly closing balance	348.60	319.55	261.45	203.35	145.25	87.15	29.05
4	Quarterly Interest @ 6%	5.23	5.01	4.14	3.27	2.40	1.53	0.65
	III- Quarter							
1	Opening Balance	348.60	319.55	261.45	203.35	145.25	87.15	29.05
2	Add: increase during							
	half year							
3	Less: Quarterly Installment	0.00	14.52	14.52	14.52	14.52	14.52	14.52
4	Quarterly closing balance	348.60	305.02	246.92	188.82	130.72	72.62	14.52
5	Quarterly Interest @6%	5.23	4.79	3.92	3.05	2.18	1.31	0.44
	IV- Quarter							
1	Opening Balance	348.60	305.02	246.92	188.82	130.72	72.62	14.52
2	Less: Quarterly Installment	0.00	14.52	14.52	14.52	14.52	14.52	14.52
3	Quarterly closing balance	348.60	290.50	232.40	174.30	116.20	58.10	0.00
4	Quarterly Interest @ 6%	5.23	4.58	3.70	2.83	1.96	1.09	0.22
	Annual Installments	**0.00**	**58.10**	**58.10**	**58.10**	**58.10**	**58.10**	**58.10**
	Annual Interest	**20.92**	**19.61**	**16.12**	**12.64**	**9.15**	**5.66**	**2.18**
	Charges							

FINANCIAL PROJECTIONS

5.1. ESTIMATES OF COST OF PRODUCTION:

							(Rs.Lakhs)	
S.No.	Particulars	Operating years						
		1	2	3	4	5	6	7
1	Installed Looms	12	12	12	12	12	12	12
2	Capacity Utilisation %	80	90	90	90	90	90	90
3	Estimated production(Mts/day)	3931.79	4423.26	4423.26	4423.26	4423.26	4423.26	4423.26
a --	**Raw material Consumable etc.,**							
1	yarn	512.80	576.90	576.90	576.90	576.90	576.90	576.90
2	Consumable stores &spares	3.73	4.20	4.20	4.20	4.20	4.20	4.20
3	Packing materials	1.38	1.55	1.55	1.55	1.55	1.55	1.55
4	Coating Cost	137.61	154.81	154.81	154.81	154.81	154.81	154.81
	Total-(A)	**655.52**	**737.46**	**737.46**	**737.46**	**737.46**	**737.46**	**737.46**
b--	**Utilities**							
1	Power	34.57	38.90	38.90	38.90	38.90	38.90	38.90
	Total (B)	**34.57**	**38.90**	**38.90**	**38.90**	**38.90**	**38.90**	**38.90**
c --	**Wages & Salaries**							
1	Lobur wages	10.92	11.47	12.04	12.64	13.27	13.94	14.63
2	Staff Salaries	6.06	6.36	6.68	7.02	7.37	7.73	8.12
	Total (C)	**16.98**	**17.83**	**18.72**	**19.66**	**20.64**	**21.67**	**22.75**
d --	**Factory Over Heads**							
	(10% increase every year)							
1	Repairs & Maintenance	4.20	4.62	5.08	5.59	6.15	6.76	7.44
3	Insurance	2.00	2.20	2.42	2.66	2.93	3.22	3.54
4	Rent Rates Taxes	1.00	1.10	1.21	1.33	1.46	1.61	1.77
5	Misc. Expenses	1.00	1.10	1.21	1.33	1.46	1.61	1.77
	Total (D)	**8.20**	**9.02**	**9.92**	**10.91**	**12.01**	**13.21**	**14.53**
	TOTAL (A+B+C+D)	**715.28**	**803.21**	**805.00**	**806.93**	**809.00**	**811.23**	**813.64**

5.2.ESTIMATES OF WORKING RESULTS:

(Rs.Lakhs)

S.No.	Particulars	Operating years						
		1	2	3	4	5	6	7
1	Cost of production	715.28	803.21	805.00	806.93	809.00	811.23	813.64
2	Administrative Expenses	9.44	10.62	10.62	10.62	10.62	10.62	10.62
3	Administrative Salaries	6.06	6.36	6.68	7.02	7.37	7.73	8.12
4	Selling Commission	9.44	10.62	10.62	10.62	10.62	10.62	10.62
5	Sampling	0.94	1.06	1.06	1.06	1.06	1.06	1.06
6	**Cost of Goods Sold**	**741.16**	**831.87**	**833.98**	**836.25**	**838.67**	**841.27**	**844.06**
7	Domestic Sales	944.02	1062.03	1062.03	1062.03	1062.03	1062.03	1062.03
8	Export Sales	nil	nil	nil	nil	nil	nil	nil
9	**Total Sales**	**944.02**	**1062.03**	**1062.03**	**1062.03**	**1062.03**	**1062.03**	**1062.03**
	Gross operating Profit	**202.86**	**230.15**	**228.04**	**225.78**	**223.35**	**220.75**	**217.96**
	Financial Charges							
1	Interest on Term Loan-6%	20.92	19.61	16.12	12.64	9.15	5.66	2.18
2	Interest on Working Capital-11%	14.71	14.71	14.71	14.71	14.71	14.71	14.71
	Interest Cost	**35.62**	**34.32**	**30.83**	**27.34**	**23.86**	**20.37**	**16.89**
1	Profit before Depreciation	**167.24**	**195.84**	**197.21**	**198.44**	**199.50**	**200.38**	**201.08**
2	Depreciation(SLM)@ 10%	42.55	42.55	42.55	42.55	42.55	42.55	42.55
3	Profit Before Tax(PBT)	124.69	153.29	154.66	155.89	156.95	157.83	158.53
4	Corporate Tax	43.64	45.99	46.40	46.77	47.08	47.35	47.56
5	**Profit After Tax(PAT)**	**81.05**	**107.30**	**108.26**	**109.12**	**109.86**	**110.48**	**110.97**
6	Less: Dividend on Share Capital	0	0	0	0	0	0	0
7	Retained Profit	81.05	107.30	108.26	109.12	109.86	110.48	110.97
8	Add: Depreciation	42.55	42.55	42.55	42.55	42.55	42.55	42.55
9	**Net Cash Accruals**	**123.60**	**149.85**	**150.81**	**151.67**	**152.41**	**153.03**	**153.52**

5.3. CASH FLOW STATEMENT:

(Rs.Lakhs)

S.No.	Particulars								
		construction period	1	2	3	4	5	6	7
	Source of Fund								
1	Increase in share capital	174.30							
2	Profit before taxation with interest added back		160.31	187.60	185.49	183.23	180.80	178.20	175.41
3	Provision for Depreciation		42.55	42.55	42.55	42.55	42.55	42.55	42.55
4	Increase in secured Term Loans	348.60							
5	Non Convertible Debentures								
6	State subsidy								
7	Increase in bank borrowing for Working capital		133.69						
	Total (A)	**522.90**	**336.56**	**230.15**	**228.04**	**225.78**	**223.35**	**220.75**	**217.96**
	B. Dispersion of Funds								
1	Capital Expenditure	500.65							
2	Increase in Working capital		155.95	0.00	0.00	0.00	0.00	0.00	0.00
3	Decrease in secured FCL								
4	Decrease in secured rupee Loan			58.10	58.10	58.10	58.10	58.10	58.10
5	Decrease in non convertible debentures								
6	Decrease in bank borrowing for working Capital								
7	Interest on Term Loans		20.92	19.61	16.12	12.64	9.15	5.66	2.18
8	Interest on bank borrowing for working Capital		14.71	14.71	14.71	14.71	14.71	14.71	14.71
9	Normal Capital Expenditure		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Corporate Tax		43.64	45.99	46.40	46.77	47.08	47.35	47.56
11	Dividend Equity		0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	**Total (B)**	**500.65**	**235.21**	**138.40**	**135.33**	**132.21**	**129.04**	**125.82**	**122.54**
13	Opening balance of cash in hand & bank	0.00	22.25	123.60	215.35	308.07	401.64	495.95	590.88
14	**Net surplus / Deficit (A-B)**	22.25	101.35	91.75	92.71	93.57	94.31	94.93	95.42
15	Closing balance of cash in hand & bank	**22.25**	**123.60**	**215.35**	**308.07**	**401.64**	**495.95**	**590.88**	**686.30**

5.4. BALANCE SHEET:

(Rs.Lakhs)

S.No.	Particulars							
	Operating Years---->	1	2	3	4	5	6	7
	LIABILITIES							
1	Share Capital	174.30	174.30	174.30	174.30	174.30	174.30	174.30
2	Reserves& Surplus	81.05	188.35	296.61	405.74	515.60	626.08	737.05
3	Public Issue							
4	Issue of Non-Convertible Debentures							
5	Term Foreign Currency Loan(FCL)							
6	Term Rupee Loan	348.60	290.50	232.40	174.30	116.20	58.10	0.00
7	Bank Borrowing for Working capital	133.69	133.69	133.69	133.69	133.69	133.69	133.69
8	State Subsidy							
	TOTAL	**737.64**	**786.84**	**837.01**	**888.03**	**939.79**	**992.17**	**1045.04**
	ASSETS							
1	Gross Block	500.65	500.65	500.65	500.65	500.65	500.65	500.65
2	**Less**: Depreciation	42.55	85.10	127.65	170.20	212.75	255.30	297.85
3	Net Block	458.10	415.55	373.00	330.45	287.90	245.35	202.80
4	Current Assets	155.95	155.95	155.95	155.95	155.95	155.95	155.95
5	Cash & Bank Balance	123.60	215.35	308.07	401.64	495.95	590.88	686.30
	TOTAL	**737.64**	**786.84**	**837.01**	**888.03**	**939.79**	**992.17**	**1045.04**

5.5. DEBT SERVICE COVERAGE RATIO:

S.No.	Description								
	Operating Years--->	**1**	**2**	**3**	**4**	**5**	**6**	**7**	
1	Profit after Tax	81.05	107.30	108.26	109.12	109.86	110.48	110.97	
2	Add: Depreciation	42.55	42.55	42.55	42.55	42.55	42.55	42.55	
3	Add: Interest on FCL	0	0	0	0	0	0	0	
4	Add: Interest on Rupee Loan	20.92	19.61	16.12	12.64	9.15	5.66	2.18	
	TOTAL CASH IN FLOW	**144.51**	**169.46**	**166.94**	**164.31**	**161.56**	**158.70**	**155.70**	**1121.18**
5	Installment. or the year FCL	0	0	0	0	0	0	0	
6	Installment for the year Rupee loan	0	58.10	58.10	58.10	58.10	58.10	58.10	
7	Add: Interest on FCL	0	0	0	0	0	0	0	
8	Add: Interest on Rupee Loan	20.92	19.61	16.12	12.64	9.15	5.66	2.18	
	Total Cash Out Flow	**20.92**	**77.71**	**74.22**	**70.74**	**67.25**	**63.76**	**60.28**	**434.88**
9	**Annul DSCR**	**6.91**	**2.18**	**2.25**	**2.32**	**2.40**	**2.49**	**2.58**	
10	**Average DSCR**	**2.58**							
11	**Maximum DSCR**	**6.91**							
12	**Minimum DSCR**	**2.18**							

5.6. INTERNAL RATE OF RETURN:

S.No.	Operating Year	Cash out flow	Cash in flow	Net Flow
1	**0**	500.65	0.00	-500.6453
2	**1**	155.95	144.51	-11.43269
3	**2**	0	169.46	169.4606
4	**3**	0	166.94	166.9367
5	**4**	0	164.31	164.3073
6	**5**	0	161.56	161.564
7	**6**	0	158.70	158.6977
8	**7**	0	155.70	155.6982
9	Salvage Value	0	53.15	53.1504

I R R == 22.40%

5.7. Break Even Point:

S.no.	Details	Amount

1	Sales(Net) (A)	**1062.03**
2	**Variable Cost (B)**	
	> Raw Material & Consumables	737.46
	>Utilities-power	38.90
	>Interest on Working capital	14.71
	>Selling Expenses	9.44
	>Selling Commission	10.62
	>Sampling	1.06
	Total (B)	**812.19**
3	**Contribution (A-B) (C)**	**249.84**
4	**Fixed Cost**	
	>Wages & Salaries	16.98
	>Factory Over Heads	8.20
	>Administrative Expenses	9.44
	>Interest On Term Loan	20.92
	>Depreciation	42.55
	Total (D)	**98.09**
5	**Break Even Point (%)**	**39.26**
6	**Cash Break Even Point (%)**	**22.23**

6.SENSITYVITY ANALYSIS

Items	Profit after Tax (PAT) (Rs.Cr.) (assumed at 90% capacity)	Break Even (%)	Internal Rate of Return (IRR)(%)	Payback Period (Years)
NORMAL VALUES	1.073	39.26	22.40	3.61
Debt Equity Ratios				
(a) 3:1	1.056	39.71	23.00	3.35
(b) 1:1	1.110	37.17	22.15	3.58
Increase in Project Cost by 10%	1.072	39.35	22.45	3.69
Decrease in Selling Price to Rs65 per L.mtr	0.553	55.51	9.70	4.45
Increase in Selling Price to Rs.75 per L.mtr.	1.593	30.46	34.0	2.76

7.ASSUMPTIONS

S.No.	Particulars	Data
1.	Status of the Project	Sale in DTA
2.	Number of working days / annum	350
3.	Number of working Hours/day	24 hrs
4.	Capacity utilization 1st Year 2nd Year 3rd Year	 80% 90% 90%
5.	Cost of power (Grid) @ Rs./KWH	3.50
6.	Wages & Salaries - Fringe benefits	40%
7.	**(i) Interest Rates & Repayments Schedule for Long term Loan** Interest on Rupee Loan (Post TUFS effective rate) @ 8 Years of Total Repayment period (2 years moratorium + 6 years Repayment period) **ii) Interest rates for short term borrowing** Interest on Working capital	 9% 14%
8.	Expenses as % of Sales Turn over Administrative expenses Selling Expenses Selling Commission Sampling	 1% 0.5% 1.0% 0.1%
9.	Raw Material - Cotton Yarn Count 2/10s Rate Rs./kg.	 58/-
10.	Selling Price (Ex-Mill) Rs./L.Mt. 2/10s x 2/10s - Cloth width 63" 44/32	70/-