ELASTIC TAPE

1. INTRODUCTION:

Woven fabrics are made in different width. Most garments or made-ups are made from the fabric 36” or wider. We commonly see the fabric for Dress Material (36” or 48”), Shirting (48”, 54” or 60”), Suiting’s (60” or 63”) or Bed Sheets (96” to 120”). On the other hand, there are woven fabric products of narrow width like straps, bands, laces, labels, ribbon, hooks & loops (Velcro) etc. with width ranging from 10 mm to 300 mm. While weaving process for wide and narrow fabric is similar, the machines used in each segment are different. Increasing customer expectations and technology innovations have led to the development of variety of machines offering different features in woven fabric of all widths.

2. PRODUCT & ITS APPLICATION:

Elastic Tapes are categorized under Narrow Fabrics. The narrow fabrics may be elastic or inelastic in nature. While inelastic narrow width fabrics are used in labels, hand tags, straps, shoe laces, Niwars etc., the elastic narrow fabrics, called Elastic Tapes, are used to hold garments firmly in place like in undergarments, trousers, top sleeves, waist-bands, wrist bands, hospital products, hair bands etc. The ability to stretch under force, stay firm for longer duration and regain the original shape upon withdrawal of force is the greatest characteristic of elastic tape leading to its multiple applications. An elastic tape eliminates the need for exact size in any application giving the manufacturers flexibility in product sizes and offering the consumers convenience of comfort and fit.

3. DESIRED QUALIFICATIONS FOR PROMOTER:

Graduate in any discipline.

4. INDUSTRY OUTLOOK & TRENDS:

Elastic is used is underwear, knitted shirts, knitted trousers, lingerie and many other garments. Elastic also offers better shape and fitting to the garments making it the essential consumable item in many products. The rise in use of knitted fabric has led to more demand for elastic tape and the trend is expected to continue.

5. MARKET POTENTIAL AND MARKETING ISSUES, IF ANY:

Constant change in fashion is throwing new challenges on fabric and garment manufacturers. The customers demand garments that make them look fit and young. Elastic plays a great role in holding garment in place. Apart from under garments, variety of sportswear, women-wear and children-wear use elastics. Garment manufacturers are competing with each other to offer products of better fit and appearance. Elastic tapes with different quality specifications of stretch, shrinkage, thermal resistance, skin friendliness, designs, patterns etc. are in great demand.

6. RAW MATERIAL REQUIREMENTS:

Traditionally, the elastic tapes were made using mainly rubber core in warp and cotton or synthetic yarn in weft. With change in technology, rubber has been replaced with Lycra or Spandex. Depending on the design, pattern & construction of the finished product, the raw material would include rubber, cotton yarn (bleached and/or dyed), synthetic yarn (bleached and/or dyed) and Lycra or spandex yarn. These materials are easily available in most industrial cities of India.

7. MANUFACTURING PROCESS:

Elastic Tapes can be made in 3 different ways namely Braiding, Knitting and Weaving. Braiding involves diagonal movement of rubber and yarn from side to

side and passing under / over each other thereby creating a net of rubber and yarn. This tape has very good stretch quality but shrinks in width when elongated. It has specific applications like trunk legs. Sometimes this elastic is also used in waist band of low priced garments. Knitting or crochet knitting uses rubber and yarn in knit construction. As knitting eliminates other processes of fabric manufacture, it is economic and simpler compared to weaving. Presence of naked rubber in knitted elastic gives it good stretch characteristic although its look and feel is not great. Woven elastics are the latest and most commonly used by the customers. Warp beams of rubber covered with yarn are made and placed on needle looms. Each loom has multiple heads and each head produces narrow fabric of varying width depending on technical specifications of the loom. Cotton or synthetic yarn is used in the west. Advanced needle looms have functionality of weaving the brand or logo in the tape. Patterns of different shapes and colors can be woven in the elastic tape in looms currently in the market.

8. MANPOWER REQUIREMENT:

The enterprise shall need 19 employees at full capacity, as detailed below:

Sr. No.	Designation of Employees	Monthly Salary ₹	Number of employees required				
			Year-1	Year-2	Year-3	Year-4	Year-5
1	Machine Operators	12,000	6	7	8	9	10
2	Helpers	8,000	3	4	4	5	5
3	Production supervisor	25,000	1	1	1	1	1
4	Accounts Executive	15,000	1	1	1	1	1
5	Stores Assistant	12,000	1	1	1	1	1
6	Office Boy	8,000	1	1	1	1	1
	Total		13	15	16	18	19

9. IMPLEMENTATION SCHEDULE:

The needle looms are available within 3-4 weeks of order placement. Other machinery is readily available. Once the location has been finalized, production can be started within 2 months. Detailed Implementation Schedule is given below:

Sr. No.	Activity	Time Required *(in months)*
1	Acquisition of premises	1
2	Construction (if applicable)	-
3	Procurement & installation of Plant & Machinery	2
4	Arrangement of Finance	1
5	Recruitment of required manpower	1
	Total time required *(some activities shall run concurrently)*	2

10. COST OF PROJECT:

A project with 3 Needle Weaving Looms and other balancing equipment shall cost ₹ 80.56 lacs as detailed below. The production is assumed to be 50 linear meters per head per hour. However, the production may vary depending on the RPM of the needle loom, number of heads, width and complexity of elastic tape construction etc. The factory can be set up in 2500 sq ft of rented premises with rental @ ₹ 25 per sq ft. Detailed cost of project is shown below:

Sr. No.	Particulars	₹ in Lacs
1	Land	-
2	Building	-
3	Plant & Machinery	56.50
4	Furniture, Electrical Installations	1.00
5	Other Assets including Preliminary / Pre-operative expenses	1.25
6	Margin for Working Capital	21.81
	Total	**80.56**

11. MEANS OF FINANCE:

Bank term loans are assumed @ 60% of fixed assets. The proposed funding pattern is as under:

Sr. No.	Particulars	₹ in Lacs
1	Promoter's contribution	45.31
2	Bank Finance	35.25
	Total	**80.56**

12. WORKING CAPITAL CALCULATION:

The project requires working capital of ₹ 50.24 lacs as detailed below:

Sr. No.	Particulars	Gross Amt	Margin %	Margin Amt	Bank Finance
1	Inventories	22.95	40%	9.18	13.77
2	Receivables	40.50	40%	16.20	24.30
3	Overheads	2.85	100%	2.85	-
4	Creditors	-16.07	40%	-6.43	-9.64
	Total	50.24		21.81	28.43

13. LIST OF MACHINERY REQUIRED:

The project requires following machinery and other assets:

Sr. No.	Particulars	UOM	Qty.	Rate (₹)	Value (₹ in Lacs)
	Plan & Machinery / equipments				
a)	***Main Machinery***				
i.	Needle Looms	Nos	6.00	7,00,000	42.00
ii.	Warping machine with creel	Nos	2.00	5,00,000	10.00
iii.	Beams, Trolley etc.	LS	1.00	2,00,000	2.00
iv.	Reeling Machine	Nos	1.00	1,00,000	1.00
b)	***Ancillary machinery***				

i.	Lab Equipments	LS	1.00	1,00,000	1.00
ii.	Strapping machine	Nos	1.00	50,000	0.50
	sub-total Plant & Machinery				**56.50**
Sr. No.	**Particulars**	**UOM**	**Qty.**	**Rate (₹)**	**Value (₹ in Lacs)**
	Furniture / Electrical installations				
a)	Computer and printer	Set	1.00	50,000	0.50
b)	Tables, Chairs	LS	1.00	50,000	0.50
	sub total				**1.00**
	Other Assets				
a)	Rent Deposits		2.00	62,500	1.25
	sub-total Other Assets				**1.25**
	Total				**58.75**

There are several manufacturers of Needle Looms and many of them have offices across India. Some machinery suppliers are listed below:

- Vishwakarma Industries, 1-2, Sayona Gold Estate,
  Maheshwari Mill Compound, Tavdipura,
  Ahmedabad 380004

- Shakti Vijay Engineering Works
  Nirmalnagar, Kesharbaug,
  Street No. 00 Plot No . 5,
  Bhavnagar 364002, (Gujarat) India.
  www.shaktivijay.com

- Susamtex Machinery
  I-4120, Phase 4, G. I. D. C., Vatva
  Ahmedabad- 382445, Gujarat, India
  www.needleloommachines.com

14. PROFITABILITY CALCULATIONS:

Sr. No.	Particulars	UOM	Year-1	Year-2	Year-3	Year-4	Year-5
1	Capacity Utilization	%	60%	70%	80%	90%	100%
2	Sales	₹. In Lacs	324.00	378.00	432.00	486.00	540.00
3	Raw Materials & Other direct inputs	₹. In Lacs	299.35	349.73	399.14	449.51	498.92
4	Gross Margin	₹. In Lacs	24.65	28.27	32.86	36.49	41.08
5	Overheads except interest	₹. In Lacs	17.13	17.13	17.13	17.13	17.13
6	Interest	₹. In Lacs	7.57	7.57	7.57	7.57	7.57
7	Depreciation	₹. In Lacs	4.31	4.31	4.31	4.31	4.31
8	**Net Profit before tax**	₹. In Lacs	**-4.37**	**-0.74**	**3.85**	**7.48**	**12.07**

The above calculations are based on assumed average sale price of ₹ 10 per meter. The direct material costs are assumed at ₹ 8 per meter of finished product. Electricity tariff is assumed at ₹ 8 per KwH.

15. BREAKEVEN ANALYSIS:

The project shall reach cash break-even at 60.13% of projected capacity as detailed below:

Sr. No.	Particulars	UOM	Value
1	Sales at full capacity	₹. In Lacs	540.00
2	Variable costs	₹. In Lacs	498.92
3	Fixed costs incl. interest	₹. In Lacs	24.70
4	BEP = FC/(SR-VC) x 100 =	% of capacity	60.13%

16. STATUTORY / GOVERNMENT APPROVALS:

The project does not require any specific government approval. Registration with MSME is optional. An Entrepreneur may be required to obtain Shops &

Establishment Registration and Professional Tax registration by local Municipal authorities. Registration under Factories Act, Provident Fund Act and ESI provisions would be required depending upon the number of employees, the location, the level of mechanization and the age of the enterprise. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

17. BACKWARD OR FORWARD INTEGRATION:

Going forward, an Entrepreneur may consider manufacture of multi colour Elastic Tapes with name, logo or embroidery. Since the machines are capable of manufacturing narrow width fabrics, no other products can be produced on these machines.

18. TRAINING CENTERS/COURSES

Udyamimitra portal (link : www.udyamimitra.in) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

Disclaimer:

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.

Source:- Udyami Mitra/Sidbi