

Interlock Knitted Fabric

PRODUCT CODE	: 260101001
QUALITY AND STANDARDS	: IS 13003:1991
MONTH AND YEAR OF PREPARATION	: May, 2003
PREPARED BY	: Small Industries Service Institute Opposite Okhla Industrial Estate, New Delhi-110020

INTRODUCTION

Interlock fabric is double knit fabric produced by formation and interlinking of loops by the action of two knitting needles namely cylinder needle and dial needle. Interlock fabric is manufactured on interlock knitting machines of various diameter and gauges depending upon the requirement of final products to be made from the fabric. Interlock fabric and plain knitted fabric can be distinguished by way it looks on the reverse side and GSM of knitted fabric. Generally, this fabric is manufactured by using combed cotton yarn and texturised filament yarn. In case of cotton fabric, 30-50s is combed yarn is used and in case of synthetic fabric 80-160 denier filament yarn is used. Interlock fabric is mainly manufactured on 18-30 gauge machine. Interlock knitted fabric is used for making undergarments, sports wear, children wear, babies outerwears etc.

MARKET POTENTIAL

Since very few units are established in the manufacture of interlock knitted

fabric, there is good demand from undergarment manufacturing establishments. Besides, the interlock fabric can also be used for manufacturing sports wears. Therefore, it will open up good scope for the manufacturers. Interlock fabric has got good properties as compared to plain knitted fabric in terms of sweat absorbency, GSM, porosity and strength etc. At present, cotton interlock fabric is mainly produced in Kolkata, Tirupur and Ahmedabad. The trend in exports shows a positive growth and hence, there will be no problem in marketing of quality knitted fabric.

BASIS AND PRESUMPTIONS

This project is prepared on the following assumptions:

Number of working days is considered as 300 days with single shift a day and time period for achieving the maximum capacity utilisation is considered from third year from the date on which production is started. Rental value of the building is taken as Rs. 20 per sq. mt. The costs of machinery and equipment

indicated in the project refer to a particular make and approximate to those prevailing at the time of preparation of this project. The cost of installation and electrification of machinery of the project is taken @ 10% of cost of machinery. Non-refundable deposits, project report cost, trial production, security deposit with Electricity Board are taken as pre-operative expenses.

Depreciation has been considered at 10% on plant and machinery, 15% on furniture and 20% on workshop accessories. Interest rate for capital loan has been taken @ 14% per annum. Break-even point has been calculated on full capacity utilisation.

IMPLEMENTATION SCHEDULE

The implementation period for executing different type of works of the project right from selection of site/working shed and forming of company to selection of market channel and miscellaneous works will take a total period of 5 months. However, on considering that some of the activities may be overlapping, the actual project implementation may hardly take three months.

TECHNICAL ASPECTS

Process of Manufacture

Cotton yarn of required quality on cones is purchased from spinning mills or yarn dealers. Cones are loaded into the machine and threaded through eyelets, tensioning device, stop motion and finally to the knitting needles. The cloth is knitted by running the machine, care must be taken to see any breakages in the yarn during knitting operation and breaks must be attended

to. After sufficient roll of cloth is knitted, the knitted cloth is cut and taken away from the machine. Details regarding yarn count, date of packing, manufacturer's details etc. are marked on each roll.

Quality Control and Standards

It is very important to assess the quality of raw materials visually and by testing to understand the knittability of yarn. While feeding the material, different important parameters are to be checked before starting the machine. It is necessary to keep strict control over the machine for smooth running. The fabric roll should be checked for removing any defect before packing.

Production Capacity (per annum)

Product	Quantity (kgs.)	Total Amount (Rs.)
Interlock Knitted fabric	1,21,200	1,81,80,000

Motive Power

To run this unit at full installed capacity, an electricity power of 20 HP is required.

Pollution Control

As the unit does not generate any pollution, no pollution control measures are required.

Energy Conservation

Energy can be saved by adopting proper housekeeping methods.

FINANCIAL ASPECTS

A. Fixed Capital

(i) Land and Building	
Covered area	300 sq. mt.
Uncovered area	50 sq. mt.
Rent per month @ Rs. 20/sq. mt.	Rs. 7,000

(ii) Machinery and Equipments

Sl. No.	Description	No.	Rate (Rs.)	Amount (Rs.)
1.	Interlock knitting machine 18 gauge 14" dia with motor	4	50,000	2,00,000
2.	Interlock knitting machine 18 gauge 15" dia. with motor	4	55,000	2,20,000
3.	Interlock knitting machine 20 gauge 16" dia. with motor	2	60,000	1,20,000
4.	Interlock knitting machine 20 gauge 17" dia. with motor	2	65,000	1,30,000
5.	Workshop accessories	LS	10,000	10,000
6.	Weighing balance	1	30,000	30,000
	Total			7,10,000

(iii) Other Fixed Assets (Rs.)

(a) Erection and installation	67,000
(b) Office furniture	20,000
(c) Pre-operative expenses	10,000
Total	97,000
Total Fixed Capital	8,07,000

B. Working Capital (per month)

(i) Staff and Labour Wages

Sl. No.	Designation	Nos.	Rate (Rs.)	Amount (Rs.)
1.	Manager	1	7,000	7,000
2.	Accountant/Cashier	1	3,500	3,500
3.	Store-keeper	1	2,500	2,500
4.	Peon/Watchman	2	2,300	4,600
	Total			17,600
<i>Production Staff</i>				
1.	Skilled workers	6	4,000	24,000
2.	Helpers	2	2,300	4,600
	Total			28,600
	<i>Perquisites @ 20%</i>			9,240
	G. Total			55,440

(ii) Raw Material

Sl. No.	Description	Qty. (kg)	Rate (Rs.)	Amount (Rs.)
1.	Cotton grey yarn of various counts	10,300	125	12,87,500
	Total			12,87,500

(iii) Utilities (Rs.)

Electricity	10,000
Water charges	500
Total	10,500

(iv) Other Contingent Expenses (per month) (Rs.)

(a) Rent	7,000
(b) Postage/Stationery	500
(c) Repair and replacement	5,583
(d) Transport/Travelling charges	1,000
(e) Insurance	500
(f) Miscellaneous expenses	1,000
Total	15,583

(v) Total Recurring Expenses (per month) Rs. 13,69,023

(vi) Total Working Capital for 3 months Rs. 41,07,069

C. Total Capital Investment

(i) Machinery and equipments	Rs. 8,07,000
(ii) Working capital for 3 months	Rs. 41,07,069
Total	Rs. 49,14,069

MACHINERY UTILISATION

Capacity utilisation is considered as 80% of installed capacity.

FINANCIAL ANALYSIS

(1) Cost of Production (per year)	(Rs.)
Recurring expenses	1,64,28,276
Depreciation on machinery @ 10%	67,000
Depreciation on office furniture @ 15%	3,000
Depreciation on other assets @ 20%	6,000
Interest on total investment @ 14%	6,87,969
Total	1,71,92,245

(2) Turnover (per year) (Sales)

Product	Qty. (Kgs)	Rate (Rs.)	Amount (Rs.)
Cotton knitted grey fabric	1,21,200	150	1,81,80,000
	Total		1,81,80,000

(3) Net Profit (per year) Rs. 9,87,755

(4) Net Profit Ratio (Net Profit/
Turnover per year) 5.43%

(5) Rate of Return on Investment (Net Profit/Total Capital Investment) 20%

(6) Break-even Point

Fixed Cost	(Rs.)
Depreciation	76,000
Rent	84,000
Interest on capital investment	6,87,969
40% of wages of staff and labour	2,66,112
40% of other contingent expenses	74,798
Insurance	6,000
Total	11,94,879

$$\begin{aligned} \text{B. E. P.} &= \frac{\text{FC} \times 100}{\text{FC} + \text{Profit}} \\ &= 54.74\% \end{aligned}$$

Addresses of Machinery and Equipment Suppliers

1. M/s. Bharat Machinery Works
44, Industrial Area-A,
Ludhiana.
2. M/s. Moonlight Knitting Machinery Works
Vishvakarma Colony,
Ludhiana.

3. M/s. S.T.M. Knitting Machinery Works
Near Savitry Complex,
G.T. Road,
Ludhiana.

4. M/s. T.S. Mechanical Works
Janta Nagar,
Ludhiana.

5. M/s. Raj Mechanical Works
410, Industrial Area-A,
Ludhiana.

6. M/s. Sohalson Knitting Machinery Works
Industrial Area-B,
Ludhiana.

7. M/s. Punjab Machinery Works
Vishvakarma Chowk,
Near Fire Brigade,
Ludhiana.

Raw Material Suppliers

1. M/s. Mahavir Spinning and General Mills
Hoshiarpur.

2. M/s. Abohar Co-operative Spinning Mills
Abohar.

3. M/s. Adinath Textiles Ltd.
Registered Office,
Village: Bholapur,
P.O. Sahibana,
Chandigarh Road,
Ludhiana.

4. M/s. Vardhman Spinning General Mills
Samrala Road, Ludhiana.