

Knitted Socks (Cotton/Nylon)

PRODUCT CODE	: 260103/260301
QUALITY AND STANDARDS	: Nylon Socks-IS 5084:1990 Socks Cotton-IS 3329:1973
PRODUCTION CAPACITY	: Quantity: 1,50,000 Dozen Pairs Value : Rs. 4.92 Crore
MONTH AND YEAR OF PREPARATION	: May, 2003
PREPARED BY	: Small Industries Service Institute 151, Patel Road, Coimbatore-641009 (Tamil Nadu)

INTRODUCTION

In the hierarchy of human needs, clothing occupies the second top most priority coming only next to the food. The use of socks by the armed forces fighting in high altitude and in adverse climatic conditions has now been finding its ways among executives and school children. Wearing of any kind of shoes without socks is termed as incomplete. Socks are simple items and one of the basic necessities of people of all ages and income strata. Socio-economic changes and fashion awareness amongst the masses have brought in a sea change in the living styles in India.

Socks of various types and designs can be produced by using cotton yarn, acrylic yarn, polyester yarn, nylon yarn of different counts, quality and shades. The elastic portion on the top of socks is produced by using rubbered yarn or lycra yarn. This project is prepared for the manufacture of men's socks for domestic market in various sizes to

ensure that this commodity is available in a wide range. Subsequently, the unit may diversify for similar products like children socks, women stockings etc. depending upon the market demand from time to time.

MARKET POTENTIAL

The demand for the socks has been increasing gradually for the last few decades particularly in India and other developing countries. The largest consumer of socks are the Europeans and Western countries who have been using this item as part of their dresses for a very long period. The European and Western countries have been producing socks, from where these items used to be imported into India and other countries.

However, as the item has gradually become popular, the socks have also been produced in India initially to meet the domestic demand and subsequently for export purposes. Over the past few

years as the standards of living went up, the socks which were earlier worn to provide comfort to the feet have now become part of fashion commodities. The socks industry has a very bright future as its demand both in India and abroad has increased substantially.

A Survey conducted recently show that only 2% of population in India wears socks and therefore, 98% market is yet to be exploited, while consumption of socks in most advanced countries is extremely high. The existing production capacity in the country is grossly inadequate to meet the domestic and international demand. It is, therefore, feasible to set up more socks knitting units.

BASIS AND PRESUMPTIONS

The rental value for building indicated in the project is Rs. 20 per sq. mt. It may be less in small cities and backward areas. The project is based on single shift basis and 300 working days and time period for achieving maximum capacity utilisation considered from 3rd year from the date on which production is started. Costs of machinery and equipment mentioned in this report refer to a particular make and approximate to those prevailing at the time of preparation of this project. The cost of installation and electrification is taken @ 10% of cost of machinery and equipment. Non-refundable deposits, project report cost, trial production, security deposits with State Electricity Board are taken as pre-operative expenses.

Depreciation has been considered as 10% on plant and machinery, 20% on furniture and fixtures and 25% on workshop accessories. Interest on

capital loan is considered as 14% per annum. Minimum 25% of total investment is required as margin money. Break-even point has been calculated on full capacity utilisation.

IMPLEMENTATION SCHEDULE

The implementation schedule of this project may take a total period of six months approximately for starting the production.

TECHNICAL ASPECTS

Process of Manufacture

Initially, the size and design of the socks to be knitted are decided and accordingly, the machines are selected and set. After setting the machine with the required design and size, the predetermined colour yarns are loaded on the bobbin stands in the creel assembly of the machine and fed into the knitting elements of the machine.

Socks are knitted in continuous process and several operations are performed before a socks is completed. Knitting is done in stages beginning with elastic portion for which elastic yarn is used. The leg portion is knitted followed by heel and foot portion ending up with the toe portion of the socks. The toe portion of socks is closed by stitching on overlock machine. Socks thus produced will have acquired dirt which have to be removed by washing in socks washing machine containing mild detergent. After washing, socks are charged into hydroextractor to remove excess water and dried in dryer tumbler. Visual examination is done to remove any faults and finally ironed to remove wrinkles and also to provide proper shape. Socks are reversed and paired

manually by attaching pins at different places and packed in polythene bags. About 10 pairs of socks are put into paper board box for sending it to customers.

Quality Control and Standards

Strict quality control is required to be implemented/monitored in each stage of operation cycle of manufacturing process. Raw materials (Yarn) should be purchased only from reputed manufacturers and should have excellent fastness properties as the quality of socks largely depends on yarn quality. The Bureau of Indian Standards have specified following Indian standards for knitted socks.

Cotton socks– IS 3329:1973

Nylon socks– IS 5084:1990

Production Capacity (per annum)

Product	Quantity	Value (Rs.)
Plain Socks (Doz. pairs)	90,000	2,88,00,000
Terry Socks (Doz. pairs)	60,000	2,04,00,000
Total	1,50,000	4,92,00,000

Motive Power

62 HP of power is required to run this unit. For interruption-free running of the unit, a genset is proposed to be installed as stand-by arrangement.

Pollution Control

No Pollution is generated in the manufacture of socks. As such no pollution control measure is required to be undertaken.

Energy Conservation

Energy can be saved by adopting proper house-keeping methods.

FINANCIAL ASPECTS

A. Fixed Capital

(i) Land and Building

Covered area	600 sq. mt.
Uncovered area	100 sq. mt.
Rent @ Rs. 20/sq. mt.	14000

(ii) Machinery and Equipments

Sl. No.	Description	No.	Rate (Rs.)	Amount (Rs.)
1.	Automatic power socks knitting machine for the production of 3 colour jacquard socks with horizontal stripes plaiting system colour by colour motif and mesh with colour modes M1 MC3	30	2,25,000	67,50,000
2.	Automatic power socks knitting machine for the production of terry socks with 2 colour motif and horizontal stripes and broad rib elastic top upto 23 steps	20	1,25,000	25,00,000
3.	Power driven overlock machine (high speed)	8	50,000	4,00,000
4.	Rotor cabinet socks setting machine with built-in boiler and 36 frames	1	4,55,000	4,55,000
5.	Garment washing machine 50 kg.	2	1,65,000	3,30,000
6.	Hydroextractor 25 kg.	1	75,000	75,000
7.	Dryer Tumbler 25 kg.	1	1,40,000	1,40,000
8.	Wash room trolleys	3	10,000	30,000
9.	Steam press (Central boiler type)	2	2,00,000	4,00,000

Sl. No.	Description	No.	Rate (Rs.)	Amount (Rs.)
10.	30 KVA Generator Set complete	1	1,00,000	1,00,000
11.	Personal Computer (Pentium III Processor)	1	60,000	60,000
12.	Course/Wales checker	1	15,000	15,000
13.	Laendro meter	1	50,000	50,000
14.	Other miscellaneous assets	LS	20,000	20,000
Total				1,13,25,000

(iii) Other Fixed Assets		(Rs.)
(a)	Erection and installation	11,18,000
(b)	Electrification	1,00,000
(c)	Office furniture	40,000
(d)	Pre-operative expenses	50,000
Total		13,08,000
Total Fixed Capital		1,26,33,000

B. Working Capital (per month)

(i) Staff and Labour Wages

Sl. No.	Designation	Nos.	Rate (Rs.)	Amount (Rs.)
1.	Marketing Manager	1	8,000	8,000
2.	Mercandiser/ Coordinators	1	6,000	6,000
3.	Sales Officer	1	5,000	5,000
4.	Accountant/Cashier	1	4,000	4,000
5.	Computer operator	1	3,000	3,000
6.	Store-keeper	1	3,000	3,000
7.	Clerks/Typists	1	2,500	2,500
8.	Peons	1	2,500	2,500
9.	Watchman	2	2,500	5,000
Total				39,000
<i>Production Staff</i>				
1.	Production Manager	1	8,000	8,000
2.	Supervisors	2	4,500	9,000
3.	Skilled workers	32	3,500	1,12,000
4.	Pressing man	8	3,000	24,000
5.	Unskilled workers	15	2,500	37,500
Total				1,90,500

Sl. No.	Designation	Nos.	Rate (Rs.)	Amount (Rs.)
<i>Perquisites @ 20%</i>				45,900
G. Total				2,75,400

(ii) Raw Material

Sl. No.	Description	Qty.	Rate/unit (Rs.)	Amount (Rs.)
1.	Cotton yarn/ Acrylic yarn	6000 (kg)	150	9,00,000
2.	Nylon Yarn	1500 (kg)	280	4,20,000
3.	Elastic Yarn	300 (kg)	350	90,000
4.	Detergent for washing	LS		4,000
5.	Packing material	LS		13,000
Total				14,27,000

(iii) Utilities (per month)		(Rs.)
Electricity bill		30,000
Water charges		2,000
Fuel for generator		6,000
Total		38,000

(iv) Other Contingent Expenses (per month)		(Rs.)
(a) Rent		14,000
(b) Postage/stationery		2,000
(c) Repair and maintenance		20,000
(d) Transport/travelling charges		1,000
(e) Insurance		3,000
(f) Telephone Bills		2,000
(g) Miscellaneous expenses		2,000
Total		44,000

(v) Total Recurring Expenses (per month) Rs. 17,84,400

(vi) Total Working Capital for 3 months Rs. 53,53,200

C. Total Capital Investment

(i) Machinery and equipment	Rs. 1,26,33,000
(ii) Working capital for 3 months	Rs. 53,53,200
Total	Rs. 1,79,86,200

MACHINERY UTILISATION

Capacity utilisation is considered as 75% of installed capacity. However, it can be improved when the unit reaches its second year of operation. Maximum capacity utilisation can be achieved in third year from the date on which the production is started.

FINANCIAL ANALYSIS

(1) Cost of Production (per year)	(Rs.)
Recurring expenses	2,14,12,800
Depreciation on machinery @ 10%	11,18,000
Depreciation on office furniture @ 20%	8,000
Depreciation on equipments @ 25%	31,250
Interest on total investment @ 14%	25,18,068
Total	2,50,88,118

(2) Turnover (per year) (Sales)

Product	Qty.	Rate/Dz Pair (Rs.)	Amount (Rs.)
Plain Socks (Doz. pairs)	90,000	198	1,78,20,000
Terry Socks (Doz. pairs)	60,000	340	1,22,40,000
Total			3,00,60,000

(3) Net Profit (per year) Rs. 49,71,882

(4) Net Profit Ratio (Net profit/Turnover per year) 16%

(5) Rate of Return on Investment (Net Profit/Total Capital Investment) 27.64%

(6) Break-even Point

Fixed Cost	(Rs.)
Depreciation	11,57,250
Rent	1,68,000
Interest on capital investment	25,18,068
40% of wages of staff and labour	13,21,920
40% of other expenses	2,11,200
Insurance	36,000
Total	54,12,438

$$\begin{aligned} \text{B.E.P.} &= \frac{\text{FC} \times 100}{\text{FC} + \text{profit}} \\ &= 52.12\% \end{aligned}$$

Addresses of Machinery and Equipment Suppliers

1. M/s. Vishit Synthetics (P) Ltd.
Saritaderahan, Opp. Jaihind Press, Ashram Road, Ahmedabad-380009.
2. M/s. Meghaylen Synthetics Pvt. Ltd.
10, Jasvillem, Illrd Floor, 9, New Marine Lines, Mumbai-400020.
3. M/s. Crompton Pvt. Ltd.
29, Chitalsar Nagpada, S.V. Road, Thane-400607.
4. M/s. Suryalan Synthetic Inds. (P) Ltd.
216, Jolly Bhavan, 10, Sir V. Thackeray Marg. Mumbai-400020.