

Textile Screen Printing

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| PRODUCT CODE | : 232300000 |
| QUALITY AND STANDARDS | : No standard available for Textile Printing |
| MONTH AND YEAR OF PREPARATION | : March, 1999 |
| PREPARED BY | : Small Industries Service Institute New Colony, Rayagada-765001 (Orissa). |

INTRODUCTION

Textile printing refers to the production of designs of any kind that could not be made on textile fabrics by normal weaving/knitting techniques. Before the printing process, the cloth should be thoroughly prepared by different wet process namely designing, scouring and bleaching. Printing is mainly done on finished fabrics, curtain clothes, ladies dress materials, bed sheets, bed covers, fabric for children garments, gents shirts etc. to improve its attractiveness, marketability etc. Screen printing can be done in single colour or in combination of different colours as per end use requirement. Colour combination is an important area by which the appearance of an ordinary fabric can be improved to a maximum extent. It is, therefore, necessary that the quality printing material, chemicals and printing screen should be good so that printed items are fully accepted in the market.

MARKET POTENTIAL

With regard to marketability of the product in general, printed items have

good market potential both in domestic and export market. In populated country like India, there is no problem of marketing printed fabrics as the requirement tends to increase and also these items will satisfy individual customer's needs and requirements in terms of colour combination, design requirements etc.

BASIS AND PRESUMPTIONS

This project is based on single shift basis and 300 working days in a year and time period for achieving maximum capacity utilisation is considered from 3rd year from the date on which production is started. The rental value for the proposed building of the project is taken as Rs. 20 per sq. mt. The costs of machinery and equipment/material indicated 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. Nonrefundable deposits, project report cost, trial production, security deposit with State Electricity Board are taken under pre-operative expenses.

Depreciation has been considered at 10% on plant and machinery, 15% on office furniture. Interest rate on capital loan has been considered as 14% per annum.

IMPLEMENTATION SCHEDULE

The implementation period for executing different types of work right from selection of site/working shed and forming of company to selection of market channel and miscellaneous work 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 3 months.

TECHNICAL ASPECTS

Process of Manufacture

The various steps involved in printing process are preparation of printing paste, printing of fabric, fixation of dye stuff by curing/steaming, washing off, calendering, folding and packing. Scoured and bleached cotton fabric as obtained from dealers is inspected to remove any objectionable faults and stretched evenly on printing table. Screens containing the designs is placed over the table and the dye paste is pressed over the screen by means of rubber squeezer. The selection of dyes and gums depends on the construction of basic cloth to be printed and their end use. After printing, the printed clothes are cured or steamed for the fixation of the colour. Later, the printed material is thoroughly washed to remove loose dye stuffs. Then, it is calendered, folded and packed for the delivery.

Quality Control and Standards

A quality printed item should have good fastness to washing, rubbing and light. This can be achieved by properly fixing the print on the cloth by curing or steaming. Dyes to be used should be of good quality and capable of giving bright shades. Printing quality is not covered by any specifications.

Production Capacity (per annum)

| Product | Qty. (Nos.) | Value (Rs.) |
|-----------------------|-------------|-------------|
| Printed Sarees (Pcs.) | 25,000 | 40,00,000 |
| Printed fabric (Mts.) | 12,500 | 5,62,500 |
| | Total | 45,62,500 |

Motive Power

Most of the processes in printing are carried by manual operations as such the requirement of power will be only for running the washing machine, drying heater, fans and lightings. Therefore, 13 HP power will be required to run the unit.

Pollution Control

Textile printing does not necessarily produce sufficient effluents (except washing section) so as to create pollution problems. However, a no objection certificate from the State Pollution Control Board is required before setting up of the project.

Energy Conservation

Wastage of energy should be minimised as much as possible so that the unit can withstand competition with similar unit.

FINANCIAL ASPECTS

A. Fixed Capital

(i) Land and Building

| | |
|---------------------------------|-------------|
| Covered area | 250 sq. mt. |
| Uncovered area | 50 sq. mt. |
| Rent per month @ Rs. 20/sq. mt. | 6,000 |

(ii) Machinery and Equipments

| Sl. No. | Description | No. | Rate (Rs.) | Amount (Rs.) |
|---------|---------------------------------------|-----|------------|-----------------|
| 1. | Printing Table with AC Top 20'×15'×3' | 4 | 14,000 | 56,000 |
| 2. | Rubber squeezers 30 cms. | 15 | 450 | 6,750 |
| 3. | Cottage steamer | 1 | 65,000 | 65,000 |
| 4. | Open width jigger | 1 | 1,20,000 | 1,20,000 |
| 5. | Cylinder drying machine | 1 | 2,23,000 | 2,23,000 |
| 6. | Baby boiler | 1 | 1,15,000 | 1,15,000 |
| 7. | Wash room trolleys | 3 | 8,500 | 25,500 |
| 8. | Dye paste stirrer | 3 | 3,000 | 9,000 |
| 9. | Weighing balance (Dial model) | 1 | 35,000 | 35,000 |
| | Total | | | 6,55,250 |

(iii) Other Fixed Assets

| | (Rs.) |
|----------------------------|-----------------|
| Erection and installation | 25,000 |
| Office furniture | 20,000 |
| Pre-operative expenses | 15,000 |
| Total | 60,000 |
| Total Fixed Capital | 7,15,250 |

B. Working Capital (per month)

(i) Staff and Labour Wages

| Sl. No. | Designation | No. | Rate (Rs.) | Amount (Rs.) |
|---------|-------------------|----------|------------|---------------|
| 1. | Manager | 1 | 6,000 | 6,000 |
| 2. | Accountant/Casher | 1 | 3,500 | 3,500 |
| 3. | Store-keeper | 1 | 2,500 | 2,500 |
| 4. | Peon | 1 | 1,500 | 1,500 |
| 5. | Watchman | 1 | 2,500 | 2,500 |
| | Total | 5 | | 14,500 |

Production Staff

| | | | | |
|----|--------------------------|---|-------|---------------|
| 1. | Printing master | 1 | 6,000 | 6,000 |
| 2. | Skilled workers | 8 | 3,000 | 24,000 |
| 3. | Artist-cum-stencil maker | 1 | 3,000 | 3,000 |
| 4. | Helpers | 2 | 2,250 | 4,500 |
| | Total | | | 37,500 |
| | <i>Perquisites@ 20%</i> | | | 10,400 |
| | G. Total | | | 62,400 |

(ii) Raw Material

| Sl. No. | Description | Qty. | Rate/ Unit(Rs.) | Amount (Rs.) |
|---------|---|--------|-----------------|-----------------|
| 1. | Mull Mull cloth bleached 5.5 mtr. × 130cm. (mts.) | 11,460 | 20 | 2,29,200 |
| 2. | Dyes (Kgs.) | 13 | 160 | 2,080 |
| 3. | Gums (Kgs.) | 46 | 22 | 1,012 |
| 4. | Chemical and Auxiliaries | LS | | 5,000 |
| 5. | Thickener (Kgs.) | 50 | 15 | 750 |
| | Total | | | 2,38,042 |

(iii) Utilities (per month)

| | (Rs.) |
|------------------------|---------------|
| (a) Electricity | 6,500 |
| (b) Water charges | 1,000 |
| (c) Coal and fire wood | 2,000 |
| Total | 93,500 |

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

| | |
|----------------------------------|---------------|
| (a) Rent | 6,000 |
| (b) Postage/stationery | 500 |
| (c) Repair and replacement | 500 |
| (d) Transport/travelling charges | 1,000 |
| (e) Insurance | 200 |
| (f) Miscellaneous expenses | 1,000 |
| (g) Screens | 3,000 |
| Total | 12,200 |

(v) Total Recurring Expenses (per month) Rs. 3,22,142

(vi) Total Working Capital for 3 months Rs. 9,66,426

C. Total Capital Investment

| | |
|-----------------------------------|----------------------|
| (i) Machinery and equipment | Rs. 7,15,250 |
| (ii) Working capital for 3 months | Rs. 9,66,426 |
| Total | Rs. 16,81,676 |

MACHINERY UTILISATION

Capacity utilisation is considered as 75% of installed capacity as the utilisation mainly depends on the skill of the labour force employed.

FINANCIAL ANALYSIS

| | |
|--|------------------|
| (1) Cost of Production (per year) | (Rs.) |
| Recurring expenses | 38,65,704 |
| Depreciation on machinery @ 10% | 58,575 |
| Depreciation on office furniture @ 20% | 4,000 |
| Interest on total investment @ 14% | 2,35,435 |
| Total | 41,63,713 |

(2) Turnover (per year) (Sales)

| Product | Nos. | Rate (Rs.) | Amount (Rs.) |
|-------------------------------------|--------|------------|------------------|
| Sarees | 25,000 | 160 | 40,00,000 |
| Printed fabric (mts.) (on job work) | 12,500 | 45 | 5,62,500 |
| Total | | | 45,62,500 |

(3) Net Profit (per year) Rs. 3,98,787

(4) Net Profit Ratio (Net profit/Turnover per year) 8.7%

(5) Rate of Return on Investment (Net profit/Total Capital Investment) 24%

(6) Break-even Point

| | |
|----------------------------------|-----------------|
| Fixed cost | (Rs.) |
| Depreciation | 62,575 |
| Rent | 72,000 |
| Interest on capital investment | 2,35,435 |
| 40% of wages of staff and labour | 2,99,520 |
| 40% of other contingent expenses | 28,800 |
| Insurance | 2,400 |
| Total | 7,00,730 |

$$\begin{aligned}
 \text{B.E.P.} &= \frac{\text{FC} \times 100}{\text{FC} + \text{Profit}} \\
 &= \frac{700730 \times 100}{700730 + 398787} \\
 &= 63.7\%
 \end{aligned}$$

Addresses of Machinery and Equipment Suppliers

1. M/s. Anil Starch Products Ltd.
P.B. No. 10009, Anil Road,
Ahmedabad-380025.
2. M/s. Supertex (India) Corp.
132, Dr. Annie Besant Road,
Mumbai-400018.
3. M/s. KAM Syndicate
Suraj Niwas, Tanulane,
Santacruz (W), Mumbai-400054.
4. M/s. S. Pritam Singh and Sons
A-115, Ground Floor,
Wazirpur Industrial Area,
New Delhi-110052.
5. M/s. Amardye Chem Ltd.
Sitadevi Temple Road,
Mumbai-400016.