**PROJECT PROFILE FOR COIR MAT SHEARING/STENCILLING UNIT**

**PRODUCT : PVC MAT NO2 SIZE**

**PRODUCTION CAPACITY (P.A)**

**(100% CAPACITY) : 900000 PIECES**

**VALUE : RS. 1602.00 LAKHS**

**MONTH & YEAR OF PREPARATION : JUNE 2018**

**PREPARED BY : COIR BOARD, MINISTRY OF MSME,**

 **GOVT OF INDIA**

* **INTRODUCTION**

The shearing process is aimed so as to cut the top portion of the pile structure uniformly. Trimming is performed after shearing. The process of printing is used to achieve ornamentation and improve the aesthetic sense of the final product. The designs and patterns with attractive shade are applied on coir products by printing for achieving value addition and marketability. Designs suitable for various seasons, meeting with the trends and tastes of consumers of different countries is important. The designs are made available to the product sector as design cards for incorporating them to their products.

* **PROCESS OF MANUFACTURE**

The PVC Mats of NO2 size are purchased from the market and sheared and printed. Shearing machine does the shearing. In the shearing machine, there is a cutting arrangement, which consist of highly revolving spiral blade and a fixed ledger blade. The mat is pressed in between the feed rollers and the cutting edge and cutting arrangement during the shearing process. During the passage, the upper portion of the mat comes in to contact with the cutting arrangement and shearing takes place. The distance between the feed roller and cutting arrangement can be adjusted according to the pile height of the mat produced. The shearing is conducted after smoking so as to keep the uniformity of the brush structure.

In trimming, the brush at the edges of the mat is cut uniformly so as to offer a neat edge to the mat using big scissors. Trimming can also be done by a trimming machine, which works almost in the same principle as for shearing machine.

The printing method most commonly adopted in the coir industry is stenciling with the use of stencils. The organic or inorganic pigments in suitable formulation may be used in the printing of coir as they are opaque and do not have the shortcoming of being masked by the colour of the surface on which they are deposited. The use of ready mixed paints, diluted to the required consistency with suitable thinners or the application of pigments dispersed in film forming components based on aqueous emulsion lead to prints of improved fastness characteristics. The printing requires limited quantity of dyestuffs, as it is impressed on the top surface only.

The computer aided design help in developing various patterns for the coir products effectively and meticulously. The design and the colour are sketched with the help of certain software in the computer. The computer-aided design enables a pre-manufacturing outlook of the proposed design. With the assistance of CAD, maximum speed, accuracy and efficacy can be achieved in evolving designs and drawing and preparing additional copies of the designs.

**BASIS AND PRESUMTIONS**

* The Project Profile is based on 8 working hours for single shifts in a day and 25 days in a month and the Break Even efficiency has been calculated on 70%, 80%, 90%, 90% and 100% capacity utilization.
* The rate of interest both for fixed asset and working capital have been taken as 12.5% p.a.
* **TECHNICAL ASPECTS**

Installed Production capacity per machine per day : 3000 pieces

Number of Shift per day : 1

Working days p.a : 300 days

Capacity Utilization

-First year : 70%

-Second year : 80%

-Third year : 90%

-Fourth year : 90%

-Fifth year : 100%

Rate of Average Sales Realization : Rs. 178 Per mat

Rate of Average cost (Raw materials) : Rs. 145 per mat

Interest on term Loan : 12.50%

Interest on working capital : 12.50%

**Manpower requirement**

 Supervisor : 1

 Skilled worker : 22

 Unskilled workers : 10

 Miscellaneous workers : 10

* **FINANCIAL ASPECTS**

**i) Cost of Project**

 **Amount**

* Land : Lease/owned
* Work shed : Leased
* Machinery &Equipment : Rs.1879000/-
* Working Capital : Rs. 621000/-

 **---------------------- Total : Rs. 2500000/-**

 **----------------------**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl.****No** | **Description of machines &equipments** | **Qty** | **Amount (Rs)** |
| 1 | Compressor 15 HP | 1 |  320000.00 |
| 2 | Gun | 20 |  100000.00 |
| 3 | Shearing machine 5 HP | 2 |  600000.00 |
| 4 | Trimming machine 1 HP | 2 |  350000.00 |
| 5 | Printing Table/ Structures etc |  |  200000.00 |
| 6 | Effluent treatment plant (ETP) |  |  309000.00 |
| **Total** |  | 1879000.00 |

**ii) Means of Finance**

* Promoters Capital 5% : Rs. 125000/-
* Bank Term loan 95% : Rs.1785000/-
* WC Loan from Bank 95% : Rs. 590000/- ---------------------

**Total : Rs.2500000/-**

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**DETAILS OF THE PROFITABILITY OF THE PROJECT**

 Rs.in Lakhs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Years** |  | **1** | **2** | **3** | **4** | **5** |
| Installed Production capacity per machine/day | Nos | 3000.00 | 3000.00  | 3000.00  | 3000.00  | 3000.00  |
| Number of shift/day |  | 1 | 1 | 1 | 1 | 1 |
| Working days per annum |  | 300 | 300 | 300 | 300 | 300 |
| Installed production capacity per annum | Nos | 900000  | 900000  | 900000  | 900000  | 900000  |
| Capacity utilization |  | 70% | 80% | 90% | 90% | 100% |
| Annual production quantity |  | 630000  | 720000  | 810000  | 810000  | 900000  |
| **Annual Sales Realization** | Rs. 178 | **1121.40**  | **1281.60**  | **1441.80**  | **1441.80**  | **1602.00**  |
| Cost of Production  |
| Cost of raw material |  Rs.145  | 913.50  | 1044.00  | 1174.50  | 1174.50  | 1305.00  |
| Chemicals required for stenciling |  | 126.00 | 144.00 | 162.00 | 162.00 | 180.00 |
| Spares, Repairs & maintenance | 1% | 0.19 | 0.21 | 0.23 | 0.25 | 0.28 |
| Power cost |  | 0.71 | 0.81 | 0.91 | 0.91 | 1.02 |
| Wages & salary |  | 60.65 | 69.31 | 77.98 | 77.98 | 86.64 |
| **Cost of Production** |  | **1101.05**  | **1258.33**  | **1415.62**  | **1415.64**  | **1572.93**  |
| **Gross Profit** |  | **20.35** | **23.27** | **26.18** | **26.16** | **29.07** |
| Lease rent |  | 1.20 | 1.40 | 1.60 | 1.80 | 2.00 |
| Administrative & selling expenses | 1.00% | 11.21 | 12.82 | 14.42 | 14.42 | 16.02 |
| Interest on Term Loan |  | 1.85 | 2.00 | 1.67 | 0.57 | 0.24 |
| Interest on Working capital |  | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Depreciation of machinery |  | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 |
| **Total** |  | **16.88** | **18.84** | **20.31** | **19.41** | **20.88** |
| **Net Profit** |  | **3.48** | **4.45** | **5.88** | **6.76** | **8.19** |

* **ESTIMATION OF BREAK EVEN POINT**

Rs in Lakhs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Particulars** | **1** | **2** | **3** | **4** | **5** |
| Capacity utilization | 70% | 80% | 90% | 90% | 100% |
| Break-even point | 82% | 80% | 77% | 73% | 71% |
| Break even Production | 518158  | 577893  | 622787  | 594558  | 639786  |

* **DEBT SERVICE COVERAGE RATIO**

Rs in Lakhs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Particulars** | **1** | **2** | **3** | **4** | **5** |
| Capacity utilization | 70% | 80% | 90% | 90% | 100% |
| DSCR | 2.30 | 1.82 | 2.22 | 2.93 | 3.66 |
| Average DSCR | 2.59 |  |  |  |  |
| DSCR weighted average | 2.48 |  |  |  |  |

* **WORKING CAPITAL REQUIREMENTS**

Rs in Lakhs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Particulars** | **1** | **2** | **3** | **4** | **5** |
| Capacity utilization | 70% | 80% | 90% | 90% | 100% |
| Variable Cost | 1101.05  | 1258.33  | 1415.62  | 1415.64  | 1572.93  |
| Fixed Cost | 16.88 | 18.84 | 20.31 | 19.41 | 20.88 |
| Working capital gap | 6.21 | 7.10 | 8.00 | 8.04 | 8.95 |