**PROJECT PROFILE FORAUTOMATIC COIR FIBRE DYEIG/BLEACHING UNIT**

**PRODUCT : BLEACHED COIR FIBRE**

**PRODUCTION CAPACITY (P.A)**

**(100% CAPACITY) : 300 TON**

**VALUE : RS. 105 LAKHS**

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

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

 **GOVT OF INDIA**

**INTRODUCTION**

Chemical cleaning of fabric prior to dyeing and printing is in the general sense is called bleaching. Bleaching of coir fibre/yarn is essential for improving the colour. This is widely used in coir industry for the purpose of ornamentation of coir products. There are certain shades of dyestuffs to be used in the production of coir matting /carpets, which require bleaching of yarn to improve penetration and brightness especially in the case of pastel shades. It is estimated that about 20% of the coir yarn / fibre used for the manufacture of coir mats, mattings, rugs and carpets are made out of bleached coir yarn in the coir industry.

**PROCESS OF MANUFACTURE**

Bleaching of coir fibre / yarn is generally being carried out using hydrogen peroxide. Generally the chemicals used for bleaching are hydrogen peroxide and sodium silicate. Mechanized bleaching yield uniform and leveled bleaching, high production. A material to liquor ratio of 1:12 to 1:15 for coir yarn and 1:20 to 1:24 for coir fibre is used.

Fill up the required quantity of water in the stainless steel vat .Hanks of sorted coir yarn are opened and knots are loosened and arranged in the carrier for better penetration of bleaching liquor. The required quantity of bleaching liquor is poured in to the tub .Coir yarn is entered into the vat for bleaching at 500C and allowed to continue at boil for 45 minutes to 1 hour. Heating is then discontinued and the stock allowed to cool in the bath for 30 minutes, after which the material is taken out, rinsed in cold water, two or three times. After the bleaching operation, hydro-extractors are used to drive out of the major part of the mechanically held up water and finally these materials are dried on the endless conveyor drier, for efficient drying. The drier is designed to drive away the moisture in the coir yarn uniformly with the hot air emerging from the steam-heated coils with the help of powerful blowers.

**BASIS AND PRESUMTIONS**

* The Project Profile is based on 8 working hours for1 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 day : 1 Ton per day

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. 35000 per ton

Rate of Average cost of raw material : Rs. 23000 per ton

Interest on term Loan : 12.50%

Interest on working capital : 12.50%

**Manpower requirement**

 Supervisor : 1

 Unskilled worker : 4

Total HP required : 8 HP

**FINANCIAL ASPECTS**

**i) Cost of Project**

 **Amount**

* Land : Lease/owned
* Building : Rs. 500000/-
* Machinery &Equipments : Rs.1595000/-
* Working Capital Rs. 405000/-

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

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|  |  |  |  |
| --- | --- | --- | --- |
| **Sl.****No** | **Description of machines &equipments** | **Qty** | **Amount (Rs)** |
|  | SS Tub having thermic fluid system for heating tub capacity 200 kg  |  |  |
|  | Hydro extractor 2 HP |  |  |
|  | Drier 5 HP |  |  |
|  | Weighing Balance, chemical mixing tank, Pipe line etc. |  |  |
| **Total** |  | **1595000.00** |

**ii) Means of Finance**

* Promoters Capital 5% : Rs. 125000/-
* Bank Term loan 95% : Rs.1990000/-
* WC Loan from Bank 95% : Rs. 385000/- -------------------

**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/shift |  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |  |  |
| Number of shift/day |  | 1 | 1 | 1 | 1 | 1 |
| Working days per annum |  | 300 | 300 | 300 | 300 | 300 |
| Installed production capacity per annum |  | 300 | 300 | 300 | 300 |  |
| Capacity utilization |  | 70% | 80% | 90% | 90% | 100% |
| Annual production quantity | *ton* | 210  | 240  | 270  | 270  | 300  |  |  |
| **Annual Sales Realization** | Rs. 35000 | 73.50  | 84.00  | 94.50  | 94.50  | 105.00  |
| Cost of Production  |
| Cost of raw material |  Rs. 23,000  | 48.30  | 55.20  | 62.10  | 62.10  | 69.00  |
| Bleaching chemicals |  Rs. 4,000  |  8.40  | 9.60  | 10.80  | 10.80  | 12.00  |
| Spares, Repairs & maintenance | 1% | 0.16  | 0.18  | 0.19  | 0.21  | 0.23  |  |  |
| Power Cost |  | 0.41  | 0.47  | 0.53  | 0.53  | 0.59  |
| Insurance |  | 0.10  | 0.10  | 0.10  | 0.10  | 0.10  |
| Wages & salary |  | 5.04  | 5.76  | 6.48  | 6.48  | 7.20  |
| **Cost of Production** |  | **62.41**  | **71.30**  | **80.20**  | **80.22**  | **89.12**  |
| **Gross Profit** |  | **11.09** | **12.7** | **14.3** | **14.28** | **15.88** |
| Administrative & selling expenses | 1.00% | 0.74  | 0.84  | 0.95  | 0.95  | 1.05  |
| Interest on Term Loan |  | 2.10  | 2.20  | 1.82  | 0.66  | 0.28  |
| Interest on Working capital |  | 0.48  | 0.48  | 0.48  | 0.48  | 0.48  |  |
| Depreciation of machinery |  | 1.60  | 1.60  | 1.60  | 1.60  | 1.60  |
| Depreciation of building |  | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| **Total** |  | **5.17** | **5.37** | **5.1** | **3.94** | **3.66** |
| **Net Profit** |  | **5.93** | **7.33** | **9.20** | **10.34** | **12.22** |

* **ESTIMATION OF BREAK EVEN POINT**

Rs in Lakhs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Particulars** | **1** | **2** | **3** | **4** | **5** |
|  | 70% | 80% | 90% | 90% | 100% |
| Break-even point | 45% | 41% | 34% | 26% | 21% |
| Break even Production (Ton) | 94 | 97 | 91 | 69 | 63 |

* **DEBT SERVICE COVERAGE RATIO**

 Rs in Lakhs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Particulars** | **1** | **2** | **3** | **4** | **5** |
|  | 70% | 80% | 90% | 90% | 100% |
| DSCR | 2.66 | 2.12 | 2.60 | 3.41 | 4.25 |
| Average DSCR | 3.01 |  |  |  |  |
| DSCR weighted average | 2.90 |  |  |  |  |

* **WORKING CAPITAL REQUIREMENTS**

 Rs in Lakhs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Particulars** | **1** | **2** | **3** | **4** | **5** |
|  | 70% | 80% | 90% | 90% | 100% |
| Variable Cost | 62.41 | 71.30 | 80.20 | 80.22 | 89.12 |
| Fixed Cost | 5.17 | 5.37 | 5.1 | 3.94 | 3.66 |
| Working capital gap | 4.05 | 4.64 | 5.23 | 5.26 | 5.87 |