

**PROJECT PROFILE FOR AUTOMATIC COIR FIBRE  
DYEING/BLEACHING UNIT**

<b>PRODUCT</b>	<b>:</b>	<b>BLEACHED COIR FIBRE</b>
<b>PRODUCTION CAPACITY (P.A) (100% CAPACITY)</b>	<b>:</b>	<b>300 TON</b>
<b>VALUE</b>	<b>:</b>	<b>RS. 105 LAKHS</b>
<b>MONTH &amp; YEAR OF PREPARATION</b>	<b>:</b>	<b>JUNE 2018</b>
<b>PREPARED BY</b>	<b>:</b>	<b>COIR BOARD, MINISTRY OF MSME, GOVT OF INDIA</b>

**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 50°C 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 PRESUMPTIONS**

- The Project Profile is based on 8 working hours for 1 shift 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**

		<b>Amount</b>
• Land	:	Lease/owned
• Building	:	Rs. 500000/-
• Machinery & Equipments	:	Rs.1595000/-
• Working Capital		Rs. 405000/-
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<b>Total</b>	<b>:</b>	<b>Rs. 2500000/-</b>
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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.		
<b>Total</b>			<b>1595000.00</b>

**ii) Means of Finance**

• Promoters Capital	5%	:	Rs. 125000/-
• Bank Term loan	95%	:	Rs.1990000/-
• WC Loan from Bank	95%	:	Rs. 385000/-
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<b>Total</b>		<b>:</b>	<b>Rs.2500000/-</b>
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• **DETAILS OF THE PROFITABILITY OF THE PROJECT**

Rs.in Lakhs

<b>Years</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
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	<i>ton</i>	210	240	270	270	300
<b>Annual Sales Realization</b>	Rs. 35000	73.50	84.00	94.50	94.50	105.00
<b>Cost of Production</b>						
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

<b>Cost of Production</b>		<b>62.41</b>	<b>71.30</b>	<b>80.20</b>	<b>80.22</b>	<b>89.12</b>
<b>Gross Profit</b>		<b>11.09</b>	<b>12.7</b>	<b>14.3</b>	<b>14.28</b>	<b>15.88</b>
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
<b>Total</b>		<b>5.17</b>	<b>5.37</b>	<b>5.1</b>	<b>3.94</b>	<b>3.66</b>
<b>Net Profit</b>		<b>5.93</b>	<b>7.33</b>	<b>9.20</b>	<b>10.34</b>	<b>12.22</b>

- ESTIMATION OF BREAK EVEN POINT**

Rs in Lakhs

<b>Particulars</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	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

<b>Particulars</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	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

<b>Particulars</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	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