



BAMBOO MAT BOARD

Introduction

Bamboo is a traditional building material throughout the world's tropical and sub-tropical regions. Bamboo is a renewable and versatile resource, with high strength and low weight. That's why it is widely used in different forms of construction, particularly for housing in rural areas. Bamboo mat board (BMB) is a plywood-like wooden board made from layers of woven bamboo mats that have been pressed together. It is usually made of three layers of mats and is about 3 mm thick. It can be produced in a range of standard sizes. Bamboo mat board can be used for panelling, ceilings, prefabricated shelters, packing cases, storage bins, roofs, doors and door panels, furniture and household utensils such as trays and plates. BMB is also used in concrete formwork. The production of mats is labour intensive and difficult to mechanise. Bamboo mat board has enormous income generating potential for the rural poor and particularly for women, who make up the vast majority of weavers.

This project profile is for setting up of a Bamboo Mat Board making unit, based on 300 working days per annum and 8 working hours per day. The installed production capacity of the unit per annum is as follows;

Bamboo Mat Board - 32,000 Nos

The model DPR has been prepared on the basis of existing market rates.

Market Potential

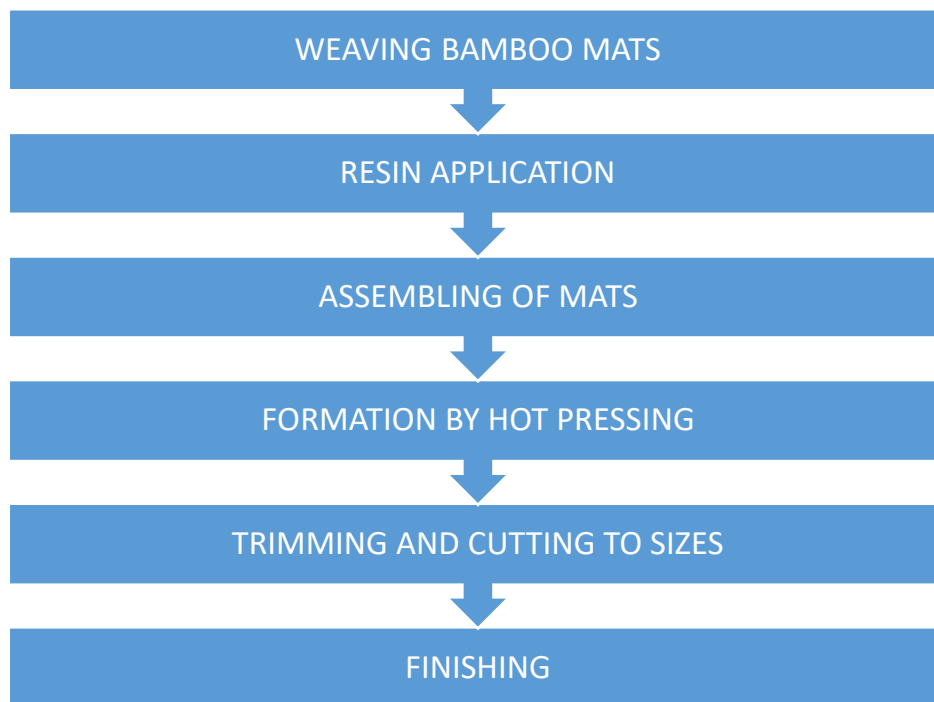
Bamboo is gaining importance as a replacement for wood in flooring, roofing panels and other housing components (such as windows, doors and partition panels), in furniture and in packing cases. Some of these products are made of bamboo mat board, some have a core of bamboo mats with thin veneer facings and others are made of laminated bamboo slabs/strips of different sizes and shapes (bamboo parquet and floorboards). In some products, wood veneer or shavings are used to give a wood-like appearance to the surface. The market for bamboo mat board is large and ever increasing although figures are not presently available. The wide range of uses to which it is put means the market has considerable potential for expansion and BMB also has significant export potential.

Product Uses:-

The uses of bamboo mat boards are:-

- Bamboo mat boards will be used for **low-cost housing**, for crates, and for building grain storage rooms and bins presently made out of wood and plywood.

Manufacturing Process



Cost of Project

Particulars	Amount (Rs.in Lakhs)
Owned land	-
Civil works and Buildings (3000 sq. feet @RS 800)	24.00
Plant and machinery (Annexure)	12.87
Miscellaneous Fixed Assets (Annexure)	1.75
D G Set (15 KVA)	2.50
Escalation & Contingencies	2.06
Preliminary & Preoperative Expenses	2.31
Sub-total(A)	45.48
Working Capital Margin @40% of Total WC Requirement	6.24
Total Project Cost	51.72
Total Working Capital Required (B)	15.60
MEANS OF FINANCE	
Total Funds Required (A+B)	61.08
<u>Loan Component</u>	
TERM LOAN (60% of A)	27.29
WORKING CAPITAL (60% of B)	9.36
Total	36.65
Equity	24.43
Total	61.08

Detailed Cost Element

SL. NO.	Particulars	Amount (Rs. in Lakhs)
1	Bamboo Cross Cutting Machine	0.35
2	External Knot Removing Machine	0.43
3	Radial Splitter Machine	1.65
4	Internal Knot Removing Machine	0.50
5	Bamboo Sliver Making Machine	0.59
6	Bamboo Mat Weaving Machine	2.50
7	Hydraulic Hot Press Machine	1.35
8	Drying Chamber	2.00
9	Air Cooling Blower	0.50
10	Scissor lift	0.50
11	Resin Kettle, Resin Applicator, Sprayer, Miscellaneous Hand Tools and Equipments	2.50
	Total	12.87

Contingencies and Escalations

It has been assumed at approximately 5% at cost.

Preliminary Expenses

Particulars	Amount (Rs. in Lakhs)
Incorporation Expenses	0.15
Project Report Preparation and Consultation	0.35
Feasibility and Engineer's/Architect's Report and Plans	0.60
Legal Charges - Drafting for agreements, contracts, stamp paper, notary and affidavit cost	0.05
Security guard and others	0.56
Interest Cost for period before commercial operations	0.60
Total	2.31

Salary

Designation	Manpower	Amount (Rs. in Lakhs)
Manager	1	2.40
Workers	8	11.52
Office staff cum accountant	1	2.16
Security Guard	1	1.20

Profitability Statement

Particulars	Amount (Rs. in lakhs)				
	Year- 1	Year- 2	Year- 3	Year- 4	Year- 5
A. INCOME					
Production Capacity (MT per annum)	32000	32000	32000	32000	32000
Capacity utilisation	65%	70%	75%	80%	85%
Production During the year	20800	22400	24000	25600	27200
Annual turnover	62.40	67.20	72.00	76.80	81.60
Total income during the year	62.40	67.20	72.00	76.80	81.60
B. OPERATING EXPENSES					
Raw Material	16.77	18.06	19.35	20.64	21.93
Salary	17.28	18.14	19.05	20.00	21.00
Repair & Maintenance	1.25	1.34	1.44	1.54	1.63
Power & utilities	8.51	8.94	9.38	9.85	10.34
Depreciation and Amortisation	2.67	2.67	2.67	2.51	2.51
Total Operating Expenses	46.48	49.16	51.90	54.55	57.42
Operating Profit (A-B)	15.92	18.04	20.10	22.25	24.18
C. FINANCIAL EXPENSES					
Interest on Term Loan	2.21	1.74	1.31	0.88	0.45
Interest on WC Loan	0.80	0.80	0.80	0.80	0.80
D. Other Expenses					
Administrative and general Expenses	1.25	1.34	1.44	1.54	1.63
Total Expenses	4.25	3.88	3.54	3.21	2.88
Profit Before Tax	11.67	14.17	16.56	19.04	21.30
Provision for Tax	2.92	3.54	4.14	4.76	5.32
Profit after Tax (PAT)	8.75	10.63	12.42	14.28	15.97
Dividend Declared	0.00	0.00	0.00	0.00	0.00
Retained Profit	8.75	10.63	12.42	14.28	15.97

Breakeven Point

Break Even Point (BEP)		Amount (Rs. In Lakhs)				
SL	Particulars	Year - 1	Year - 2	Year - 3	Year - 4	Year - 5
A.	Net Sales	62.40	67.20	72.00	76.80	81.60
B.	Variable Cost					
	Raw Material	16.77	18.06	19.35	20.64	21.93
	Power and Utility	8.51	8.94	9.38	9.85	10.34
	Total Variable Cost	25.28	27.00	28.73	30.49	32.27
C.	Contribution (A-B)	37.12	40.20	43.27	46.31	49.33
D.	Fixed cost					
	Salary	17.28	18.14	19.05	20.00	21.00
	Interest on Term Loan	2.21	1.74	1.31	0.88	0.45
	Interest on WC Loan	0.80	0.80	0.80	0.80	0.80
	Repair & Maintenance	1.25	1.34	1.44	1.54	1.63
	Depreciation and Amortization	2.67	2.67	2.67	2.51	2.51
	Total Fixed Cost	24.20	24.69	25.27	25.73	26.40
E.	Breakeven Point	65%	61%	58%	56%	54%
F.	Cash BEP	58%	55%	52%	50%	48%

Debt-Service Coverage Ratio

		Amount (Rs. In lakhs)				
SL	Particulars	Year - 1	Year - 2	Year - 3	Year - 4	Year - 5
i	Profit	8.75	10.63	12.42	14.28	15.97
ii	Depreciation	2.67	2.67	2.67	2.51	2.51
iii	Interest	2.21	1.74	1.31	0.88	0.45
A	Total (i + ii + iii)	13.63	15.03	16.40	17.68	18.94
i	Interest	2.21	1.74	1.31	0.88	0.45
ii	Principal repayment	4.56	5.04	5.04	5.04	5.04
B	Total (i + ii)	6.77	6.78	6.35	5.92	5.49
	DSCR (A / B)	2.01	2.22	2.58	2.99	3.45

Interest on Term Loan and Principal Repayment

Refer Annexure I for Loan Repayment Schedule.

We have assumed the repayment tenure of term loan for a period of 5 years, Rate of interest being 8.5% p.a.

Address of Vendors

Name of the Vendor	Address and Contact Number
M/s B Sen Barry & Company	65/11, New Rohtak Road, New Delhi-110005, (India). Phone: 91-11-65702298, 65702299, 28720553, 28726429. E-Mail: info@bsenbarry.com.
M/s Industrial Equipment	Mahapurush Damodardev Path, Paltan Bazaar, Guwahati, Assam 781001. Phone: 0361 254 1063.
M/s Archana Machinery Stores	M S Road, Fancy Bazar, Guwahati – 781001. Phone: +(91)-361-2545780

ANNEXURE - 1

Year	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Annually
I													
Principal													
Opening	27.29	27.29	27.29	27.29	27.29	26.72	26.15	25.58	25.01	24.44	23.87	23.30	
Repaid					0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	4.56
Closing	27.29	27.29	27.29	27.29	26.72	26.15	25.58	25.01	24.44	23.87	23.30	22.73	
Interest	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.18	0.18	0.17	0.17	0.17	2.21
II													
Principal													
Opening	22.73	22.31	21.89	21.47	21.05	20.63	20.21	19.79	19.37	18.95	18.53	18.11	
Repaid	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	5.04
Closing	22.31	21.89	21.47	21.05	20.63	20.21	19.79	19.37	18.95	18.53	18.11	17.69	
Interest	0.16	0.16	0.16	0.15	0.15	0.15	0.14	0.14	0.14	0.13	0.13	0.13	1.74
III													
Principal													
Opening	17.69	17.27	16.85	16.43	16.01	15.59	15.17	14.75	14.33	13.91	13.49	13.07	
Repaid	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	5.04
Closing	17.27	16.85	16.43	16.01	15.59	15.17	14.75	14.33	13.91	13.49	13.07	12.65	
Interest	0.13	0.12	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.09	1.31
IV													
Principal													
Opening	12.65	12.23	11.81	11.39	10.97	10.55	10.13	9.71	9.29	8.87	8.45	8.03	
Repaid	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	5.04
Closing	12.23	11.81	11.39	10.97	10.55	10.13	9.71	9.29	8.87	8.45	8.03	7.61	
Interest	0.09	0.09	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.88
V													
Principal													
Opening	7.61	7.19	6.77	6.35	5.93	5.51	5.09	4.67	4.25	3.83	3.41	2.99	
Repaid	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	5.04
Closing	7.19	6.77	6.35	5.93	5.51	5.09	4.67	4.25	3.83	3.41	2.99	2.57	
Interest	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.45