PROJECT PROFILE FOR AUTOMATIC COIR SPINNING UNIT

PRODUCT	**:**	**COIR YARN**
PRODUCTION CAPACITY (P.A)		
(100% CAPACITY)	**:**	**192 TONS**
VALUE	**:**	**RS.86.40 LAKHS**
MONTH & YEAR OF PREPARATION	**:**	**JUNE 2018**
PREPARED BY	**:**	**COIR BOARD, MINISTRY OF MSME, GOVT OF INDIA**

- ## INTRODUCTION

The production turnover in the case of hand and ratt spinning was less. The efforts to maximize the productivity of the yarn resulted in the introduction of automatic spinning machine units. The automatic spinning machine units are capable of production of yarns of runnage varying from 50 to 300 meter per kg and twists from 10 to 30 twists per feet.

- ## PROCESS OF MANUFACTURE

Bales of coir fibre are the raw material for the automatic spinning machine. These fibres are soaked in water for one hour and cleaned in the willowing machine. These cleaned fibres are passed in to the feeder of the slivering machine where the fibres are parallelised and drawn by draw rollers are twisted and the twisted parallelized fibres called slivers are taken on to drum. These slivers are fed on to the feeder of the spinning machine and are combed and made to fall on to "W" tray. Core threads of nylon/cotton/HDPE/LDPE passing in the tray are used as carrier agent for the coir fibres. These fibres are entwined on to the thread and are twisted by the grip nozzle/rollers to form the single strand.

Two such strands are doubled and wounded on to a bobbin to form the yarn of required twist and runnage. The automatic spinning machine facilitates spinning of any variety of yarn according to the requirement of the industry by varying the parameters of the

machine to vary the twist, runnage. The yarns thus formed are wound in the form of balls for easy transportation. Automatic spinning machine with multiple heads has increased the production of coir yarn and wages of the spinners.

- **BASIS AND PRESUMTIONS**
  - The Project profile is based on 8 working hours for 2 shifts in a day and 25 days in a month and the Break Even efficiency has been calculated on 70%, 75%, 80%, 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 shift/machine	:	0.08 MT per shift
Number of Double head spinning machine		
(Conveyor feeding)	:	4
Number of Shift per day	:	2
Working days p.a	:	300 days
Yield wastage	:	10%
Capacity Utilization		
-First year	:	70%
-Second year	:	75%
-Third year	:	80%
-Fourth year	:	90%
-Fifth year	:	100%

Rate of Average Sales Realization	:	Rs. 45000/- per ton
Rate of Average cost of raw material	:	Rs.25000/-
Interest on term Loan	:	12.50%
Interest on working capital	:	12.50%

Manpower requirement

Supervisor	:	1
Skilled worker	:	8
Semi/unskilled workers	:	14
Admin & sales personal	:	3
Total HP required	:	10 HP

All the machineries and equipments mentioned in the Project profile are of indigenous make and are of medium price.

- **FINANCIAL ASPECTS**

i) Cost of Project

		Amount
• Land	:	Lease/owned
• Work shed	:	Rs. 400000/-
• Machinery &Equipments	:	Rs.1672000/-
• Working Capital		Rs. 428000/-

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

Sl. No	Description of machines &equipments	Qty	Amount (Rs)
1	Willowing machine 1.5 HP motor	1	90000.00
2	Double Head Double Combing 2 Ply Coir Yarn Spinning Machine with 1.5hp 1440 Rpm Motor	4	790000.00
3	Autofeed for Double Head Spinning Machine with 0.5hp Motor 1440 RPM and Gear Box Coupled with 0.5 Hp Motor and Panel Board	4	540000.00
4	Auto rewinding machine	2	90000.00
	Electrical fittings& other miscellaneous equipments		162000.00
Total			1672000.00

ii) Means of Finance

- Promoters Capital 5% : Rs. 125000/-
- Bank Term loan 95% : Rs.1968000/-
- WC Loan from Bank 95% : Rs. 407000/-

Total **: Rs. 2500000/-**

- **DETAILS OF THE PROFITABILITY OF THE PROJECT**

Rs.in Lakhs

Years		**1**	**2**	**3**	**4**	**5**
Installed Production capacity/machine/shift	Tons	0.08	0.08	0.08	0.08	0.08
Number of machines		4	4	4	4	4
Number of shift/day		2	2	2	2	2
Working days per annum		300	300	300	300	300
Installed production capacity per annum		192	192	192	192	192
Capacity utilization		70%	75%	80%	90%	100%
Annual production quantity	Tons	134	144	154	173	192
Annual Sales Realization	Rs. 45000	**60.48**	**64.80**	**69.12**	**77.76**	**86.40**
Cost of Production						
Raw material requirement	Tons	148	158	169	190	211
Cost of raw material	Rs. 25000	36.96	39.60	42.24	47.52	52.80
Power cost		0.96	1.03	1.10	1.24	1.37
Spares, Repairs & maintenance	2%	0.33	0.37	0.40	0.45	0.49
Wages & salary		11.09	11.88	12.67	14.26	15.84
Insurance		0.06	0.06	0.06	0.06	0.06
Cost of Production		**49.40**	**52.94**	**56.4**	**63.52**	**70.56**
Gross Profit		**11.08**	**11.86**	**12.72**	**14.24**	**15.84**
Administrative & selling expenses		0.60	0.65	0.69	0.78	0.86
Interest on Term Loan		2.07	2.18	1.81	0.65	0.28
Interest on Working capital		0.51	0.51	0.51	0.51	0.51
Depreciation of machinery		1.67	1.67	1.67	1.67	1.67
Depreciation of building		0.20	0.20	0.20	0.20	0.20
Total		**5.05**	**5.21**	**4.19**	**3.03**	**3.52**
Net Profit		**6.03**	**6.65**	**8.53**	**11.21**	**12.32**

- **ESTIMATION OF BREAK EVEN POINT**

Rs in Lakhs

Particulars	1	2	3	4	5
Capacity utilization	70%	75%	80%	90%	100%
Break-even point	64%	61%	52%	32%	24%
Break even Production	86	88	80	55	47

- **DEBT SERVICE COVERAGE RATIO**

Rs in Lakhs

Particulars	1	2	3	4	5
Capacity utilization	70%	75%	80%	90%	100%
DSCR	2.74	2.03	2.35	3.51	4.37
Average DSCR	3.00				
DSCR weighted average	2.87				

- **WORKING CAPITAL REQUIREMENTS**

Rs in Lakhs

Particulars	1	2	3	4	5
Capacity utilization	70%	75%	80%	90%	100%
Variable Cost	49.40	52.94	56.4	63.52	70.56
Fixed Cost	5.05	5.21	4.19	3.03	3.52
Working capital Gap	4.28	4.60	4.93	5.56	6.19