



TECHNO-ECONOMIC FEASIBILITY
REPORT OF
4 RAPIER SHUTTLELESS LOOMS

M/s Sai Balaji Textiles
Ichalkaranji



**TECHNO-ECONOMIC FEASIBILITY REPORT OF
4 RAPIER SHUTTLELEES LOOMS(WL450)**

For the Production of Dyed Cotton Shirting Cloth

**M/s Sai Balaji Textiles
Ichalkaranji**

TECHNO-ECONOMIC FEASIBILITY REPORT OF **4 RAPIER SHUTTLELESS LOOMS**

1. INTRODUCTION :

Ichalkaranji known for its concentration of power looms with more than 1 lakhs looms and one of the leading powerloom cluster of India. The weavers of this area have the expertise in producing vast varieties of fabrics ranging from plain gray sheeting to jari ornamental jacquard designed fabrics. The area is having many advantages such as textile favorable Climatic conditions, cheap labour costs, proximity to leading textile markets such as Mumbai, Ahmedabad, etc. and also equipped with sizable number of sizing and yarn & cloth processing units.

This cluster even though having larger number of looms installed, all these looms, except a few are of old plain looms of reed width 56", like other parts of country and in decentralized sector. The weaver of this area find it difficult to cater the needs of present export markets in terms of quality, cost, meeting of constantly changing cloth specification requirements etc., owing to the older technology machines. This cluster with the on going efforts of the Office of the Textile Commissioner, Ministry of Textile, Govt. of India, is now realizes the need for modernizing their looms with hi-Tech Shuttle less looms, and thus more and more shuttleless looms sheds are now coming in to existence.

Under the circumstances and the eve of Globalisation of the Textile Markets, Shri. Viveganathan has decided and proposing to install the 4 imported Rapier looms in Ichalkaranji to produce Cotton Dyed Shirting which have more demand for export and orders available plenty for both conversion and direct Export.

The advantages of the project over the present ordinary plain looms can be briefly listed as :

1. Higher production rate than the plain looms.
2. Remarkable improvement on quality.
3. Reduction in over all Wastes.
4. More productivity.
5. Low manufacturing Cost.
6. Less operating Costs.
7. Suitable to any type of fabrics from plain gray fabrics to suiting, denim etc with range of counts of yarn and fiber types.

The above advantages are resulting to conceive a viable project offering higher margin of profits.

1.2. GENERAL CHARACTERISTICS OF THE PROJECT:

a.Products :

The project was worked for the production of wider width gray fabric on job work basis with the following specifications, which has better market demands.

Description	Cloth width (Inches)	Warp	Weft	EPI	PPI	GSM
Cotton Dyed Shirting	63"	40s	40s	96	72	108

b. Marketing:

The demand for the above and similar sorts are high in the Ichalkaranji area, as the same is the basic material used in the Export garment units of the Mumbai region . Therefore the demand for these fabrics is high and there is a wide scope of getting job work for weaving of the gray sheeting.

c. Quality :

The quality of the fabric produced in the Rapier looms is very much suitable for the exports garments and is defects free, as best quality yarn is to be used and under proper supervision. Testing facilities are available at the local PSC labs both for yarn and fabrics to ensure quality requirements.

1.3. ENTREPRENEUR DETAILS :

a. **Constitution** : The unit is proposed to be started by partnership firm in the name of **M/s Sai Balaji Textiles.**

b. **Bio- data** : Shri P. Viveganathan is a Business man having wide experience in the automobiles and textile fields. He posses wider knowledge and good conducts in the textile field. He proposing to set up his unit as a member unit under "Lotus hi tech weaving park" that coming up in Ichalkaranji with all modern hi tech infrastructure facilities, which will enable him to have all the required technical and marketing assistances to run the weaving unit efficiently and also profitably. The Lotus hi tech weaving park executive authorities had taken all steps to get state and Central govt. aids & subsidies for the development of infrastructure facilities and also 20 % CLCS capital subsidies on the looms to be installed. This effects not included in the project report.

1.4. PLANT & MACHINERY : It is proposed to acquire 4 imported Shuttle less looms and other Machines suitable to the project with versatility to weave any type cloths.

1.5. POWER : It is understood from the M.S.E.B. authorities that the required power supply connection will be provided by making application, immediately after construction is over.

1.6. LABOUR : Adequate trained labour force is available in Ichalkaranji to run the unit with out any interruption.

1.7. RAW MATERIAL : Availability of yarn with required level of quality through out the year at reasonable price is not a problem in Ichalkaranji , as there is big yarn market to cater this requirements.

1.8. WATER : The water requirement is less for this industry as only drinking water for human consumption is required.

1.9 CONCLUSION : Considering the above and the working of the project shown in the various Tables, in the following chapters it can be concluded that the 4 Rapier loom project proposed by Shri P. Viveganathan is viable and loan repayments can be easily done as scheduled in the table no 13.

2.. THE PROJECT AT A GLANCE:

4 RAPIER LOOMS PROJECT : DYED COTTON SHIRTING

S.No.	Particulars	Data
1.	Installed Capacity	4 Rapier looms (WL450 China Imported)
2.	Production capacity/day Production – 90% -Utilisation	694 mts.
3.	Project Cost Dept : Equity Ratio Equity Term Loan	67.01 Lakhs 4 : 1 13.01 Lakhs. 51.46 Lakhs
4.	Sales Realisation Cost of Production Gross Profit	133.27 Lakhs 67.01 „ 31.58 „
5.	Net Profit after Financial Charges& Depreciation	13.01 Lakhs
6.	Average DSCR IRR Payback Period Break Even Point Cash Breakeven Point	1.92 29.50 % 6 years(1+5) 51.46 % 35.79 %
7.	Installed Load Labour compliment	30 KVA 10

3.. PROJECT ESTIMATION

3.1. .COST OF PROJECT

Rs.

S.no.	Description	Cost (Lakhs)
1	Land & Building	8.70
2	Plant & Machinery	49.95
3	M.S.E.B. deposits	1.00
3	Preliminary &pre operative	1.47
4	contingencies	1.53
5	Margin money	4.37
	Total	67.01

3.2.MEANS OF FINANCE:

S.No.	Description	Amount
1.	Total Equity	13.40
2.	Term Loan	53.61
	Total	67.01

Dept Equity Ratio = 4 : 1

3.3. LAND AND BUILDING:

(Rs.)

S.NO.	Description	Area (Sq.mts)	Cost (Lakhs)
1.	Land	360	1.00
2.	Weaving Shed @3000/-	160	5.60
3.	Yarn & Fabric Storage	20	0.70
4.	Office-Room	20	0.70
5.	Store-Room	20	0.70
	Total	220	8.70

3.4.PLANT AND MACHINERY

Rs.

S.no.	Description	Unit Price '000'	No.of Machines	Total cost
1	Rapier Looms (WL 450 China) 190Cms	1050	4	42.00
2	Inspection Tables	10	2	0.20
3	Humidifiers	200	1	2.00
4	Electrical & DG set	500	1	5.00
5	Office Equipment& computer	75	1	0.75
	Total			49.95

4. LOOM PROGRAMME:

Sort	Grey	Reed	Count		Reed	Pick	GSM
	Width	Width	Warp	Weft			
	(inch)	(inch)	(Ne)	(Ne)			
Yarn Dyed							
Shirting	63	65	40	40	96	72	107.93

4.2. PRODUCTION PLAN:

Type of Loom	No. of Looms	RPM	Efficiency %	Production/Day(L.Mts)
Rapier	4	450	85	693.85

5. STORES & SPARES:

Rate per M/c per Day	Cost / Day	Cost/Annum (Lakhs)
25	100	0.35

5.2.COST OF PACKING:

Sort	Mts/Day	Cost of Packing (Rs/Mts)	Cost/ Day (Rs)	Cost/Annum (Lakhs)
Dyed Cotton Shirting	693.85	0.1	69.38	0.24

5.3.POWER COST:

Total Connected Load	27Kw	or	33.75KVA
Maximum Demand	24Kw	or	30KVA
Transformer Requirements			32KVA
Power Cost :			
Cost/KWH Rs.			3.50
Power Consumption as % Connected load			70
Units/ Annum			158760
Power Cost/Annum @ 90 % utilisation(Lakhs)			5.00

5.4. SALARIES & WAGES:

Description	Nos/day	Wage / Month (Rs.)	Total / Annum
Clerk	1	2500	30000
Weavers	3	4500	162000
Jobber (Part time)	2	1000	24000
Weaving assistants	3	1000	36000
Watch man	1	3000	36000
Total			2,88,000

11. Summary of Salaries and Wages :

S.No	Description	1st year	2nd year	3rd year	4th year	5th year	6th year
1	Wages/ Annum (5% increment from 2nd year)	2.22	2.33	2.45	2.57	2.70	2.83
3	Total Staff Salaries per Annum(5% increment from 2nd year)	2.22	2.33	2.45	2.57	2.70	2.83
		0.66	0.69	0.73	0.76	0.80	0.84
	Total Grand Total	0.66	0.69	0.73	0.76	0.80	0.84
		2.88	3.02	3.18	3.33	3.50	3.68

1	Installed Looms	4	4	4	4	4	4
2	Capacity Utilisation %	90	90	90	90	90	90
3	Estimated production(Mts/day)	693.85	693.85	693.85	693.85	693.85	693.85
A --	Raw material Consumable etc.,						
1	Yarn	89.91	91.71	93.55	95.42	97.32	99.27
2	Sizing cost	2.01	2.05	2.09	2.13	2.17	2.21
3	Consumable stores &spares	0.35	0.36	0.36	0.37	0.38	0.39
4	Packing materials	0.24	0.25	0.25	0.26	0.26	0.27
	Total- (A)	92.51	94.36	96.25	98.17	100.14	102.14
B--	Utilities						
1	Power	5.00	5.10	5.20	5.31	5.41	5.52
	Total (B)	5.00	5.10	5.20	5.31	5.41	5.52
C --	Wages & Salaries						
1	Labour wages	2.22	2.33	2.45	2.57	2.70	2.83
2	Staff Salaries	0.66	0.69	0.73	0.76	0.80	0.84
	Total (C)	2.88	3.02	3.18	3.33	3.50	3.68
D --	Factory Over Heads						
	(10% increase every year)						
1	Repairs & Maintenance	0.35	0.39	0.42	0.47	0.51	0.56
2	Insurance	0.25	0.28	0.30	0.33	0.37	0.40
3	Rent Rates Taxes	0.20	0.22	0.24	0.27	0.29	0.32
4	Misc Expenses	0.50	0.55	0.61	0.67	0.73	0.81
	Total (D)	1.30	1.43	1.57	1.73	1.90	2.09
	TOTAL(A+B+C+D)	101.69	103.92	106.20	108.55	110.95	113.43

7.2.ESTIMATES OF WORKING RESULTS:

(Rs.Lakhs)

S.No.	Particulars	Operating years					
		1	2	3	4	5	6
1	Cost of production	101.69	103.92	106.20	108.55	110.95	113.43
2	Administrative Expenses	1.33	1.36	1.39	1.41	1.44	1.47

3	Administrative Salaries	0.66	0.69	0.73	0.76	0.80	0.84
4	Selling Expenses	0.67	0.68	0.69	0.71	0.72	0.74
4	Selling Commission	1.33	1.36	1.39	1.41	1.44	1.47
5	Sampling	0.13	0.14	0.14	0.14	0.14	0.15
6	Cost of Goods Sold	105.15	107.46	109.84	112.28	114.79	117.36
7	Domestic Sales	133.27	135.94	138.66	141.43	144.26	147.15
8	Export Sales	Nil	nil	nil	nil	nil	nil
9	Total Sales	133.27	135.94	138.66	141.43	144.26	147.15
	Gross Operating Profit	31.58	32.02	32.46	32.89	33.31	33.71
	Financial Charges						
1	Interest on Term Loan-11%	5.90	5.45	4.28	3.10	1.92	0.74
2	Interest on Working Capital-12%	2.10	2.10	2.10	2.10	2.10	2.10
	Interest Cost	8.00	7.55	6.37	5.19	4.02	2.84
1	Profit before Depreciation	23.59	24.47	26.08	27.69	29.29	30.88
2	Depreciation (SLM)@10%	5.00	5.00	5.00	5.00	5.00	5.00
3	Profit Before Tax(PBT)	18.59	19.47	21.09	22.70	24.30	25.88
4	Corporate Tax	5.58	5.84	6.33	6.81	7.29	7.76
5	Profit After Tax(PAT)	13.01	13.63	14.76	15.89	17.01	18.12
6	Less: Dividend on Share Capital	0	0	0	0	0	0
7	Retained Profit	13.01	13.63	14.76	15.89	17.01	18.12
8	Add: Depreciation	5.00	5.00	5.00	5.00	5.00	5.00
9	Net Cash Accruals	18.01	18.63	19.76	20.88	22.00	23.11

7.3. CASH FLOW STATEMENT:

S.No.	Particulars	Construction period	(Rs.Lakhs)					
			1	2	3	4	5	6
	Source of Fund							
1	Increase in share capital	13.40						
2	Profit before taxation with interest added back		26.59	27.03	27.46	27.89	28.31	28.72
3	Provision for Depreciation		5.00	5.00	5.00	5.00	5.00	5.00
4	Increase in secured Term	53.61						

	Loans							
5	Non Convertible Debentures							
6	State subsidy							
7	Increase in bank borrowing for Working capital		17.49					
	Total (A)	67.01	49.07	32.02	32.46	32.89	33.31	33.71
	B. Dispersion of Funds							
1	Capital Expenditure	62.64						
2	Increase in Working capital		17.42	0.00	0.00	0.00	0.00	0.00
3	Decrease in secured FCL							
4	Decrease in secured rupee Loan			10.72	10.72	10.72	10.72	10.72
5	Decrease in non convertible debentures							
6	Decrease in bank borrowing for working Capital							
7	Interest on Term Loans		5.90	5.45	4.28	3.10	1.92	0.74
8	Interest on bank borrowing for working Capital		2.10	2.10	2.10	2.10	2.10	2.10
9	Normal Capital Expenditure		0.00	0.00	0.00	0.00	0.00	0.00
10	Corporate Tax		5.58	5.84	6.33	6.81	7.29	7.76
11	Dividend Equity		0.00	0.00	0.00	0.00	0.00	0.00
12	Total (B)	62.64	30.99	24.12	23.42	22.73	22.03	21.32
13	Opening balance of cash in hand & bank	0.00	4.37	22.45	30.35	39.39	49.55	60.83
14	Net surplus / Deficit (A-B)	4.37	18.08	7.90	9.04	10.16	11.28	12.39
15	Closing balance of cash in hand & bank	4.37	22.45	30.35	39.39	49.55	60.83	73.22

7.4 PROJECTED BALANCE SHEET:

		(Rs.Lakhs)					
S.No.	Particulars						
	Operating Years---->	1	2	3	4	5	6
	LIABILITIES						
1	Share Capital	13.40	13.40	13.40	13.40	13.40	13.40
2	Reserves & Surplus	13.01	26.65	41.41	57.30	74.30	92.42
3	Term Rupee Loan	53.61	42.89	32.17	21.44	10.72	0.00

4	Bank Borrowing for Working capital	17.49	17.49	17.49	17.49	17.49	17.49
	TOTAL	97.51	100.42	104.46	109.63	115.91	123.31
	ASSETS						
5	Net Block	57.65	52.65	47.66	42.66	37.67	32.67
6	Current Assets	17.42	17.42	17.42	17.42	17.42	17.42
7	Cash & Bank Balance	22.45	30.35	39.39	49.55	60.83	73.22
	TOTAL	97.51	100.42	104.46	109.63	115.91	123.31

7.5 DEBT SERVICE COVERAGE RATIO:

S.No.	Description	1	2	3	4	5	6
	Operating Years---->	1	2	3	4	5	6
1	Annul DSCR	4.05	1.49	1.60	1.74	1.89	2.08
2	Average DSCR	1.92					
3	Maximum DSCR	4.05					
4	Minimum DSCR	1.49					

7.6 I R R == 29.5%

7.7 Break Even Point:

Break Even Point	(%)	51.46
Cash Break Even Point	(%)	35.79

8. ASSUMPTIONS

S.No.	Particulars	Data
1	Status of the Project :	Sale in DTA
2	Number Of working days /Annum	350
3	Number Of working Hours/day	24 Hrs
4	Capacity Utilisation	90%
5	Cost Of Power (Grid) @ Rs /KWH	4.50
6.	(i) Interest Rates &Repayments Schedule for Long Term Loan Interest on Rupee Loan (Post TUFs effective rate) @ 7 Years of Total Repayment period(1years)	

	<p>moratorium +6 years Repayment period)</p> <p>(ii) Interest Rates for Short term borrowing</p> <p>Interest on Working capital @</p>	<p>11%</p> <p>12%</p>
7	<p>Expenses as % of Sales Turn Over</p> <p>Administrative expenses</p> <p>Selling Expenses</p> <p>Selling Commission</p> <p>Sampling</p>	<p>1%</p> <p>0.5%</p> <p>1.0%</p> <p>0.1%</p>
8	<p>Raw Material - Cotton Yarn</p> <p>Count 40s Dyed Yarn</p> <p>Rate Rs./Kg</p>	<p>210/-</p>
10	<p>a. Selling Price (Ex-Mill) Rs./L.Mt</p> <p><u>40s X 40s- Cloth width 63 inches</u></p> <p>96 / 72</p>	<p>56/-</p>