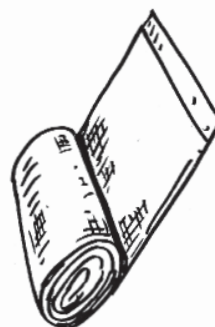
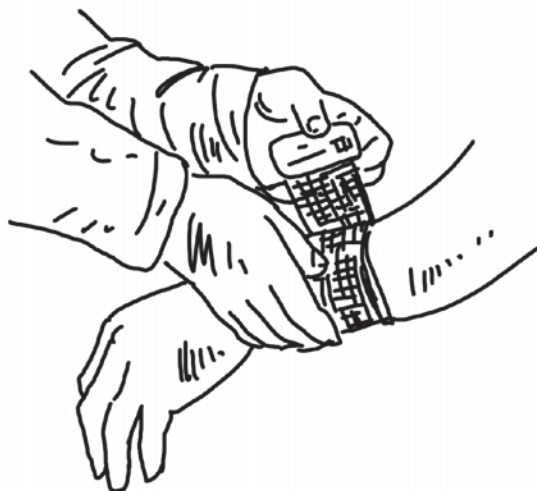


SURGICAL BANDAGE



1.0 INTRODUCTION

Surgical Bandages are used extensively in health care institutions. The uses of bandages range from simple dressing of superficial wounds to holding together fractured bones or body parts for rehabilitation and recovery. Surgical bandages are manufactured from white bleached cotton gauge cloth of suitable quality. Surgical bandage come in roll form in length of 3 to 4 meter. Surgical Cotton also known as absorbent cotton wool or purified cotton is used at large in surgery as a dressing material for burns & wounds as a cotton bedding for maintaining a uniform temperature in inflamed parts and therefore finds applications in hospitals, dispensaries, nursing homes, etc. Good quality absorbent cotton is characterized by its uniform quality. With the establishment of large number of primary health centres in rural areas, the demand for surgical bandages has increased considerably. This item is regulated under the drugs Control Act and a manufacturing license under the provision of the act, will have to be obtained. There is good scope for new investment.

This project profile is for setting up of a Surgical Bandage Making unit with installed capacity of 6 Lakhs meters per annum, 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;

2.0 MARKET POTENTIAL

The demand of Surgical bandage is directly related with the increase in population and expansion of public health services. The demand for such items increases with the

increase in population and number of hospitals, dispensaries, nursing homes, health care centres etc. Progressive increase in health amenities offered by Government and coming up of new hospitals and health care centres in private sector even at small towns are contributing to the growth of surgical bandage industry. Government hospitals and large nursing homes are the largest consumer for the surgical products. With the development of medical facilities and growing awareness towards personal hygiene, the surgical products industry registered steady growth rate in past and is picking up pace with the spread of education and upward economic growth of towns and villages.

3.0 PROCESS DETAILS

The process of making bandage cloth involves:-

Feed bandage cloth into a rolling machine

Rolling of cloth

Cutting into suitable width

Sterilization

Packing.

4.0. COST OF THE PROJECT

The estimated project cost is given below:

		(Rs. in lacs)
Particulars	Amount (Rs)	
Land & Site Development	Own Land/On Lease	
Building & Civil works	4.95	
Plant & Machinery	2.92	
Misc. Fixed assets	0.39	
Preliminary & pre-operative expenses	0.70	
Contingencies & escalation @ 3%	0.25	
Working capital	1.03	
TOTAL	10.24	

4.1 Land & Site Development: Nil. Covered Area: 1,500 Sq. Ft.

4.2 Building & Civil Works: Details of building & civil works are given below.

Particulars	Area (Sqft)	Rate (Rs)	Amount (Rs)
Factory Shed	1500	275	412500
Sub total			412500
Add: Electrification, water supply and sanitation @ 20%			82500
TOTAL			495000
Say (Rs. in lacs)			4.95

4.3 Plant & Machinery: Details of plant & machinery are given below.

Particulars	Qty	Amount (Rs)
Winding Machine	1	240000
Bandage Rolling Machine	1	
Electric Boiler	1	
Autoclave	1	
Bandage Printing Machine	1	
Tools and equipment	LS	25000
Sub total		265000
Add: Installation, transportation, etc @ 10%		26500
TOTAL		291500
Say (Rs. in lacs)		2.92

4.4 Misc. Fixed assets: Details of miscellaneous fixed assets are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Furniture & fixtures	LS	--	20000
Miscellaneous items	LS	--	15000
Sub total			35000
Add: Installation, transportation, etc @ 10%			3500
TOTAL			38500
Say (Rs. in lacs)			0.39

4.5 Contingencies & escalation: Contingencies & escalation has been assumed at 3% of the cost of land & site development, building & civil works, plant & machinery and miscellaneous fixed assets.

4.6 Preliminary & pre-operative expenses: Details of preliminary & pre-operative expenses are given below.

		(Rs. In lacs)
Particulars		Amount (Rs)
Travelling expenses		10000
Professional & other fees		19000
Interest during implementation		26400
Miscellaneous expenses		15000
TOTAL		70400
Say (Rs. in lacs)		0.70

4.7 Working capital: Details of working capital are given below.

		(Rs. in lacs)		
	Period (Days)	Total Current Assets		
		Year 1	Year 2	Year 3
Raw materials	15	0.51	0.60	0.68
Power & utility	30	0.05	0.06	0.07
Salary	30	0.43	0.44	0.44
Finished Goods	15	0.77	0.85	0.94
Receivables	15	0.81	0.95	1.08
Total		2.58	2.89	3.21
Working capital margin in Year 1 (40%)	1.03			

5.0 MEANS OF FINANCE

The means of finance for the project is estimated as below.

		(Rs. in lacs)	
Particulars	Percent	Amount	
<u>EQUITY</u>			
A. Equity from Promoters	40%	4.10	
B. Subsidy from Central/State Govt.	-		
<u>DEBT</u>			
Term Loan from Banks/Financial Institutions	60%	6.14	
TOTAL	100%	10.24	

6.0 PROFITABILITY STATEMENT

		(Rs. in lacs)				
Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
<u>A. INCOME</u>						
Production Capacity (Metres/annum)	600000	600000	600000	600000	600000	600000
Capacity utilisation	60%	70%	80%	80%	80%	80%
Production/annum at capacity utilisation	360000	420000	480000	480000	480000	480000
Total income/annum	19.80	23.10	26.40	26.40	26.40	26.40
<u>B. OPERATING EXPENSES</u>						
Raw Materials	12.42	14.49	16.56	16.56	16.56	16.56
Power & Utility	0.63	0.73	0.84	0.84	0.84	0.84
Salary	5.28	5.31	5.33	5.36	5.39	5.41
Repair & Maintenance	0.11	0.12	0.12	0.12	0.12	0.13
Other Expenses	0.40	0.07	0.08	0.08	0.08	0.08

Total Operating Expenses	18.84	20.71	22.93	22.95	22.98	23.01
Operating profit	0.96	2.39	3.47	3.45	3.42	3.39
C. FINANCIAL EXPENSES						
Depreciation	0.34	0.34	0.34	0.34	0.34	0.34
Interest on Term Loan	0.49	0.45	0.35	0.25	0.15	0.05
Interest on Working Capital Loan	0.12	0.14	0.15	0.15	0.15	0.15
Net Profit	0.00	1.46	2.63	2.70	2.77	2.84
Net cash accruals	0.35	1.80	2.97	3.04	3.11	3.18
Principal Repayment	0.00	1.23	1.23	1.23	1.23	1.23

6.1 Production capacity and Sales Realisation: Total production of **Surgical Bandage** at 100% capacity utilization is estimated as below.

Surgical Bandage (In Meters)			600000 Metres
Total production per annum at 100% capacity (in Meter)			600000 Metres
Products	Qty	Average Rate Per Unit (Rs.)	Amount (Rs)
Surgical Bandage (In Metres)	600000 Meters	5.5 Per Meter	3300000
Total Sale Turnover per annum at 100% capacity			3300000

6.2 Raw materials: Total expenses on raw materials at 100% capacity utilization are estimated as below.

Products	Qty	Average Rate Per Unit (Rs.)	Amount (Rs)
Bleached Gauge Cloth	650000 Meters	3 Per Meter	1950000
Packaging Material	LS	LS	120000
Expenses on Raw Material per annum at 100% capacity			2070000

6.3 Power & Utility: Total expenses on power & utility at 100% capacity utilization is estimated as below.

Particulars	Quantity	Power (Kw)	Total (Kw)
Plant & Machinery	--	10.00	10.00
General Lighting	10	0.10	1.00
Total power requirement/ day (Kw)			11.00
No. of hrs/day	8		
No. of days/annum	300		
Annual power requirement (kwh)	26400		
Rate per unit (Rs)	3.50		
Expenses on power (Rs)	92400		
Expenses on other Utility (Rs)	12000		
Expenses on power & utility at 100% capacity (Rs)	104400		

6.4 Salary: Total expenses on salary in the 1st year are estimated as given below. It is assumed that salary expenses will increase @ 0.5% every subsequent year.

Particulars of Employees	Numbers	Salary/ Month (Rs)	Cost/ annum (Rs)
Manager	1	10000	120000
Chemist	1	5000	60000
Sale Person	3	5000	180000
Skilled workers	2	4000	96000
Unskilled workers	2	3000	72000
Expenses on salary in the 1st year (Rs)			528000

6.5 Repair & Maintenance: Total expenses on repair & maintenance in the 1st year is estimated as given below. It is assumed that expenses on repair & maintenance will increase @ 2% every subsequent year.

(Rs. in lacs)			
Particulars	Cost (Rs)	Rate	Amount (Rs)
Building & Civil works	4.95	1.00%	0.05
Plant & Machinery	2.92	2.00%	0.06
Misc. Fixed assets	0.39	1.50%	0.01
Expenses on repair & maintenance in year 1			0.11

6.6 Other Expenses: Other expenses have been assumed at 2% of sales realisation.

6.7 Depreciation: Depreciation has been calculated by straight line method. The details of calculation are given below.

(Rs in lacs)			
Description	Cost (Rs)	Rate	Amount/ annum (Rs)
Building & Civil works	4.95	3.34%	0.17
Plant & Machinery	2.92	5.28%	0.15
Misc. Fixed assets	0.39	6.33%	0.02
TOTAL			0.34

6.8 Interest on term loan & principal repayment: Interest rate has been assumed at 8%. Duration of Loan repayment has been considered for a period of 6 years including moratorium period of 1 year with equal monthly instalments. The details of calculation are given below.

(Rs in lacs)							
Month	Year	1	2	3	4	5	6
Month 1	Opening balance	6.14	6.14	4.92	3.69	2.46	1.23
	Repayment	0.00	0.10	0.10	0.10	0.10	0.10
	Interest (8%)	0.04	0.04	0.03	0.02	0.02	0.01
	Closing balance	6.14	6.04	4.81	3.58	2.36	1.13
Month 2	Opening balance	6.14	6.04	4.81	3.58	2.36	1.13
	Repayment	0.00	0.10	0.10	0.10	0.10	0.10
	Interest	0.04	0.04	0.03	0.02	0.02	0.01
	Closing balance	6.14	5.94	4.71	3.48	2.25	1.02
Month 3	Opening balance	6.14	5.94	4.71	3.48	2.25	1.02
	Repayment	0.00	0.10	0.10	0.10	0.10	0.10
	Interest	0.04	0.04	0.03	0.02	0.02	0.01
	Closing balance	6.14	5.84	4.61	3.38	2.15	0.92
Month 4	Opening balance	6.14	5.84	4.61	3.38	2.15	0.92
	Repayment	0.00	0.10	0.10	0.10	0.10	0.10
	Interest	0.04	0.04	0.03	0.02	0.01	0.01

	Closing balance	6.14	5.73	4.51	3.28	2.05	0.82
Month 5	Opening balance	6.14	5.73	4.51	3.28	2.05	0.82
	Repayment	0.00	0.10	0.10	0.10	0.10	0.10
	Interest	0.04	0.04	0.03	0.02	0.01	0.01
	Closing balance	6.14	5.63	4.40	3.17	1.95	0.72
Month 6	Opening balance	6.14	5.63	4.40	3.17	1.95	0.72
	Repayment	0.00	0.10	0.10	0.10	0.10	0.10
	Interest	0.04	0.04	0.03	0.02	0.01	0.00
	Closing balance	6.14	5.53	4.30	3.07	1.84	0.61
Month 7	Opening balance	6.14	5.53	4.30	3.07	1.84	0.61
	Repayment	0.00	0.10	0.10	0.10	0.10	0.10
	Interest	0.04	0.04	0.03	0.02	0.01	0.00
	Closing balance	6.14	5.43	4.20	2.97	1.74	0.51
Month 8	Opening balance	6.14	5.43	4.20	2.97	1.74	0.51
	Repayment	0.00	0.10	0.10	0.10	0.10	0.10
	Interest	0.04	0.04	0.03	0.02	0.01	0.00
	Closing balance	6.14	5.32	4.10	2.87	1.64	0.41
Month 9	Opening balance	6.14	5.32	4.10	2.87	1.64	0.41
	Repayment	0.00	0.10	0.10	0.10	0.10	0.10
	Interest	0.04	0.04	0.03	0.02	0.01	0.00
	Closing balance	6.14	5.22	3.99	2.76	1.54	0.31
Month 10	Opening balance	6.14	5.22	3.99	2.76	1.54	0.31
	Repayment	0.00	0.10	0.10	0.10	0.10	0.10
	Interest	0.04	0.03	0.03	0.02	0.01	0.00
	Closing balance	6.14	5.12	3.89	2.66	1.43	0.20
Month 11	Opening balance	6.14	5.12	3.89	2.66	1.43	0.20
	Repayment	0.00	0.10	0.10	0.10	0.10	0.10
	Interest	0.04	0.03	0.03	0.02	0.01	0.00
	Closing balance	6.14	5.02	3.79	2.56	1.33	0.10
Month 12	Opening balance	6.14	5.02	3.79	2.56	1.33	0.10
	Repayment	0.00	0.10	0.10	0.10	0.10	0.10
	Interest	0.04	0.03	0.03	0.02	0.01	0.00
	Closing balance	6.14	4.92	3.69	2.46	1.23	0.00
Principal Repayment		0.00	1.23	1.23	1.23	1.23	1.23
Interest		0.49	0.45	0.35	0.25	0.15	0.05

7.0 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

Year	1	2	3	4	5	6
Profit After Tax (Net Profit)	0.00	1.46	2.63	2.70	2.77	2.84
Depreciation	0.34	0.34	0.34	0.34	0.34	0.34
Interest	0.49	0.45	0.35	0.25	0.15	0.05
Total	0.84	2.25	3.32	3.29	3.26	3.23
Interest	0.49	0.45	0.35	0.25	0.15	0.05
Loan repayment	0.00	1.23	1.23	1.23	1.23	1.23
Total	0.49	1.68	1.58	1.48	1.38	1.28
DSCR	1.71	1.34	2.11	2.23	2.36	2.52

Average DSCR = 2.05

8.0 BREAK EVEN POINT (BEP)**(Rs. in lacs)**

Year	1	2	3
A. Net sales	19.80	23.10	26.40
B. Variable cost			
Raw Materials	12.42	14.49	16.56
Power & Utility	0.63	0.73	0.84
Other expenses	0.40	0.07	0.08
Interest on Working Capital Loan	0.12	0.14	0.15
Total variable cost	13.57	15.43	17.63
C. Contribution (A-B)	6.23	7.67	8.77
D. Fixed & Semi-fixed Costs			
Salary	5.28	5.31	5.33
Repair & maintenance	0.11	0.12	0.12
Interest on Term Loan	0.49	0.45	0.35
Depreciation	0.34	0.34	0.34
Total fixed cost	6.23	6.21	6.14
E. BREAK EVEN POINT	99.93%	80.99%	70.04%
F. BEP at operating capacity	59.96%	56.69%	56.03%
G. Cash BEP	56.65%	53.55%	52.89%

9.0 INTERNAL RATE OF RETURN (IRR)**(Rs. in lacs)**

Year	0	1	2	3	4	5	6
CASH OUTFLOW							
Capital Expenditure	8.50	0.00	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	2.58	0.31	0.32	0.00	0.00	0.00
Total (A)	8.50	2.58	0.31	0.32	0.00	0.00	0.00
CASH INFLOW							
Profit After Tax		0.00	1.46	2.63	2.70	2.77	2.84
Add: Depreciation		0.34	0.34	0.34	0.34	0.34	0.34
Add: Interest		0.49	0.45	0.35	0.25	0.15	0.05
Add: Salvage Value							
Total (B)	0.00	0.84	2.25	3.32	3.29	3.26	3.23
NET FLOW (B-A)	-8.50	-1.74	1.94	3.00	3.29	3.26	3.23

IRR = 20%

Sl. No.	Name of the Machinery Suppliers	Communication Address
1.	M/s Dadiwala Engg. Works	18, Industrial Area (DLF), Najafgarh Road, New Delhi.
2.	M/s Reliance Engg Works	Municipal Industrial Estate, 2 nd Floor, Gate No. 60, West Baptist Road, Mumbai, Pin- 400 008
3.	M/s Honest Machinery Works	Beri Wali Gali, Bara Hindu Road, Delhi.