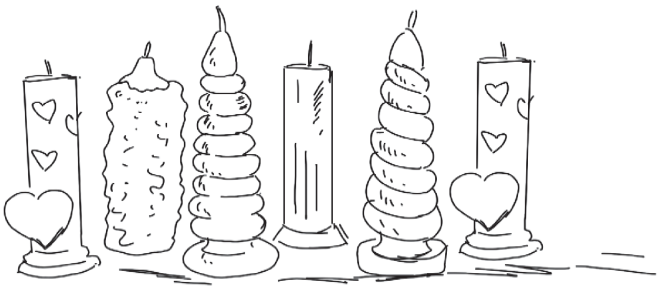
WAX CANDLE/DESIGNER CANDLES



1.0 INTRODUCTION

Wax candles are one of the important consumer goods and are used for lighting purposes. It is considered as an essential item to households in view of frequent power cuts particularly during night time. They are also used on religious and festive occasions. Candles are normally used in households, restaurants, hostels, offices, churches etc. Wax candles are cylindrical structures made of wax and are available in ordinary as well as fancy shapes & sizes. They vary in size from a few mm to about 15 cms in dia and from 4 to 100 cms in length and are available in both white as well as coloured shades.

This project profile is of setting up of a Wax Candle/Wax Designer Candle Making Unit with production capacity of 10 Tons per annum, based on 300 working days per annum and 8 working hours per day.

2.0 MARKET POTENTIAL

The demand for candles is increasing day by day due to its various usages. Artistic and decorative candles also have very good expected potential in important functions. Being an item of common consumption, huge demand exists from areas where people experience regular power cut problem. Moreover, the demand increases during festivals like Diwali, Christmas etc. Good demand exists for fancy and decorative candles in metropolitan cities, as people use them to celebrate birthdays, anniversaries etc.

3.0 PROCESS DETAILS

The production process comprises of the following different process.

Paraffin wax and stearic acid (5 to 10% of wax) are melted in a mild steel or aluminium vessel in a furnace. The dye (wax soluble) is mixed to the molten mass and stirred to disperse it uniformly. The wick is inserted in the candle moulding machine and the molten mass is poured in the channels leading to the upper parts of the mould. After that, the moulds are cooled by circulating water. The candles are allowed to set and subsequently removed by ejections, the wick threads are cut and candles are packed.

The process flowchart is shown below;

PARAFFIN WAX ADDITIVES
↓
MELT IN VESSEL
↓
PREPARE MOULDS WITH WICK IN PLACE
↓
POUR MOLTEN WAX AND ALLOW IT TO COOL
↓
EJECT CANDLES FROM MOULDS
↓
PACKING/DESPATCH

4.0. COST OF THE PROJECT

The estimated project cost is given below:

(Rs. in lacs)

Particulars	Amount (Rs)
Land & Site Development	**Rented**
Building & Civil works	**0.00**
Plant & Machinery	**0.66**

Misc. Fixed assets	**0.50**
Preliminary & pre-operative expenses	**0.32**
Contingencies & escalation @ 3%	**0.03**
Working capital	**0.89**
TOTAL	**2.40**

4.1 Land & Site Development: Nil. Covered Area: 500 Sq. Ft.
4.2 Building & Civil Works: Nil.
4.3 Plant & Machinery: Details of plant & machinery are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Moulds of Different Sizes	100	425	42500
Heating Furnace	1	5000	5000
Weighing Scale	1	2500	2500
Tools and Equipment like Wax Mixing vessels etc.	LS	--	10000
		Sub total	**60000**
Add: Installation, transportation, etc @ 10%			6000
		TOTAL	**66000**
		Say (Rs. in lacs)	**0.66**

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

Particulars	Qty	Rate (Rs)	Amount (Rs)
Electrification	LS	–	10000
Furniture & fixtures	LS	–	20000
Miscellaneous items	LS	–	15000
		Sub total	**45000**
Add: Installation, transportation etc @ 10%			4500
		TOTAL	**49500**
		Say (Rs. in lacs)	**0.50**

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	5000
Professional & other fees	10000
Interest during implementation	2310
Miscellaneous expenses	15000
TOTAL	32310
Say (Rs. in lacs)	**0.32**

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	60	1.24	1.44	1.65
Power & utility	30	0.01	0.01	0.01
Salary	30	0.15	0.15	0.15
Finished Goods	15	0.40	0.45	0.51
Receivables	15	0.42	0.49	0.56
Total		**2.21**	**2.55**	**2.88**
Working capital margin in Year 1 (40%)	**0.89**			

5.0 MEANS OF FINANCE

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

(Rs. in lacs)

Particulars	Percent	Amount
EQUITY		
A. Equity from Promoters	**40%**	**0.96**
B. Subsidy from Central/State Govt.	**-**	
DEBT		
Term Loan from Banks/Financial Institutions	**60%**	**1.44**
TOTAL	**100%**	**2.40**

6.0 PROFITABILITY STATEMENT

(Rs. in lacs)

Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
A. INCOME					
Production Capacity (Ton/annum)	10	10	10	10	10
Capacity utilisation	60%	70%	80%	80%	80%
Production/annum at capacity utilisation	**6**	**7**	**8**	**8**	**8**
Total income/annum	**10.20**	**11.90**	**13.60**	**13.60**	**13.60**
B. OPERATING EXPENSES					
Raw Materials	7.52	8.78	10.03	10.03	10.03
Power & Utility	0.09	0.11	0.12	0.12	0.12
Salary	1.86	1.87	1.88	1.89	1.90
Repair & Maintenance	0.02	0.02	0.02	0.02	0.02
Other Expenses	0.20	0.24	0.27	0.27	0.27
Total Operating Expenses	**9.70**	**11.01**	**12.32**	**12.33**	**12.34**
Operating profit	**0.50**	**0.89**	**1.28**	**1.27**	**1.26**
C. FINANCIAL EXPENSES					
Depreciation	0.07	0.07	0.07	0.07	0.07
Interest on Term Loan	0.11	0.09	0.07	0.04	0.01
Interest on Working Capital Loan	0.11	0.12	0.14	0.14	0.14
Net Profit	**0.32**	**0.73**	**1.14**	**1.16**	**1.18**
Net cash accruals	**0.39**	**0.80**	**1.21**	**1.23**	**1.24**
Principal Repayment	0.16	0.32	0.32	0.32	0.32

6.1 Production capacity and Sales Realisation: Total production of **Wax Candles/Designer Wax Candles** at 100% capacity utilization is estimated as below.

Wax Candles/Designer Candles	10 Ton
Total production per annum at 100% capacity	**10 Ton**

Products	Qnty	Average Rate Per Unit (Rs.)	Amount (Rs)
Wax Candles/Designer Candles	10 Ton	170000	1700000

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

Products	Qnty	Average Rate Per Unit (Rs.)	Amount (Rs)
Paraffin Wax	11	105000	1155000
Dies, Colour Wicks, Lubricating Oil, Aroma Oil etc.	LS	LS	75000
Packaging Material	LS	LS	24000
Total Sales per annum at 100% capacity			**1254000**

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	--	1.00	1.00
General Lighting	5	0.10	0.50
Total power requirement/ day (Kw)			1.50

No. of hrs/day	8
No. of days/annum	300
Annual power requirement (kwh)	3600
Rate per unit (Rs)	3.50
Expenses on power (Rs)	12600
Expenses on other Utility(Rs)	2400
Expenses on power & utility at 100% capacity (Rs)	**15000**

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	5000	60000
Skilled Workers	2	4000	96000
Unskilled workers	1	2500	30000
Expenses on salary in the 1st year (Rs)			**186000**

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	0.00	1.00%	0.00
Plant & Machinery	0.66	2.00%	0.01
Misc. Fixed assets	0.50	1.50%	0.01
Expenses on repair & maintenance in year 1			**0.02**

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	0.00	3.34%	0.00
Plant & Machinery	0.66	5.28%	0.03
Misc. Fixed assets	0.50	6.33%	0.03
TOTAL			**0.07**

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 5 years including moratorium period of 6 months with equal monthly instalments. The details of calculation are given below.

Month	Year	1	2	3	4	5
Month 1	Opening balance	1.44	1.28	0.96	0.64	0.32
	Repayment	0.00	0.03	0.03	0.03	0.03
	Interest (8%)	0.01	0.01	0.01	0.00	0.00
	Closing balance	**1.44**	**1.25**	**0.93**	**0.61**	**0.29**
Month 2	Opening balance	1.44	1.25	0.93	0.61	0.29
	Repayment	0.00	0.03	0.03	0.03	0.03
	Interest	0.01	0.01	0.01	0.00	0.00
	Closing balance	**1.44**	**1.23**	**0.91**	**0.59**	**0.27**
Month 3	Opening balance	1.44	1.23	0.91	0.59	0.27
	Repayment	0.00	0.03	0.03	0.03	0.03
	Interest	0.01	0.01	0.01	0.00	0.00
	Closing balance	**1.44**	**1.20**	**0.88**	**0.56**	**0.24**
Month 4	Opening balance	1.44	1.20	0.88	0.56	0.24
	Repayment	0.00	0.03	0.03	0.03	0.03
	Interest	0.01	0.01	0.01	0.00	0.00
	Closing balance	**1.44**	**1.17**	**0.85**	**0.53**	**0.21**
Month 5	Opening balance	1.44	1.17	0.85	0.53	0.21
	Repayment	0.00	0.03	0.03	0.03	0.03
	Interest	0.01	0.01	0.01	0.00	0.00
	Closing balance	**1.44**	**1.15**	**0.83**	**0.51**	**0.19**
Month 6	Opening balance	1.44	1.15	0.83	0.51	0.19
	Repayment	0.00	0.03	0.03	0.03	0.03
	Interest	0.01	0.01	0.01	0.00	0.00
	Closing balance	**1.44**	**1.12**	**0.80**	**0.48**	**0.16**
Month 7	Opening balance	1.44	1.12	0.80	0.48	0.16
	Repayment	0.03	0.03	0.03	0.03	0.03

	Interest	0.01	0.01	0.01	0.00	0.00
	Closing balance	**1.41**	**1.09**	**0.77**	**0.45**	**0.13**
Month 8	Opening balance	1.41	1.09	0.77	0.45	0.13
	Repayment	0.03	0.03	0.03	0.03	0.03
	Interest	0.01	0.01	0.01	0.00	0.00
	Closing balance	**1.39**	**1.07**	**0.75**	**0.43**	**0.11**
Month 9	Opening balance	1.39	1.07	0.75	0.43	0.11
	Repayment	0.03	0.03	0.03	0.03	0.03
	Interest	0.01	0.01	0.00	0.00	0.00
	Closing balance	**1.36**	**1.04**	**0.72**	**0.40**	**0.08**
Month 10	Opening balance	1.36	1.04	0.72	0.40	0.08
	Repayment	0.03	0.03	0.03	0.03	0.03
	Interest	0.01	0.01	0.00	0.00	0.00
	Closing balance	**1.33**	**1.01**	**0.69**	**0.37**	**0.05**
Month 11	Opening balance	1.33	1.01	0.69	0.37	0.05
	Repayment	0.03	0.03	0.03	0.03	0.03
	Interest	0.01	0.01	0.00	0.00	0.00
	Closing balance	**1.31**	**0.99**	**0.67**	**0.35**	**0.03**
Month 12	Opening balance	1.31	0.99	0.67	0.35	0.03
	Repayment	0.03	0.03	0.03	0.03	0.03
	Interest	0.01	0.01	0.00	0.00	0.00
	Closing balance	**1.28**	**0.96**	**0.64**	**0.32**	**0.00**
Principal Repayment		**0.16**	**0.32**	**0.32**	**0.32**	**0.32**
Interest		**0.11**	**0.09**	**0.07**	**0.04**	**0.01**

7.0 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

Year	1	2	3	4	5
Profit After Tax (Net Profit)	0.32	0.73	1.14	1.16	1.18
Depreciation	0.07	0.07	0.07	0.07	0.07
Interest	0.11	0.09	0.07	0.04	0.01
Total	**0.50**	**0.89**	**1.28**	**1.27**	**1.26**
Interest	0.11	0.09	0.07	0.04	0.01
Loan repayment	0.16	0.32	0.32	0.32	0.32
Total	**0.27**	**0.41**	**0.38**	**0.36**	**0.33**
DSCR	**1.84**	**2.17**	**3.32**	**3.52**	**3.76**

Average DSCR = 2.95

8.0 BREAK EVEN POINT (BEP)

(Rs. in lacs)

Year	1	2	3
A. Net sales	**10.20**	**11.90**	**13.60**
B. Variable cost			
Raw Materials	7.52	8.78	10.03
Power & Utility	0.09	0.11	0.12
Other expenses	0.20	0.24	0.27
Interest on Working Capital Loan	0.11	0.12	0.14
Total variable cost	**7.92**	**9.24**	**10.56**
C. Contribution (A-B)	**2.28**	**2.66**	**3.04**
D. Fixed & Semi fixed Costs			

Salary	1.86	1.87	1.88
Repair & maintenance	0.02	0.02	0.02
Interest on Term Loan	0.11	0.09	0.07
Depreciation	0.07	0.07	0.07
Total fixed cost	**2.06**	**2.05**	**2.03**
E. BREAK EVEN POINT	**90.49%**	**77.05%**	**66.87%**
F. BEP at operating capacity	**54.29%**	**53.94%**	**53.49%**
G. Cash BEP	**52.55%**	**52.19%**	**51.75%**

9.0 INTERNAL RATE OF RETURN (IRR)

(Rs. in lacs)

Year	0	1	2	3	4	5
CASH OUTFLOW						
Capital Expenditure	1.19	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	2.21	0.33	0.33	0.00	0.00
Total (A)	**1.19**	**2.21**	**0.33**	**0.33**	**0.00**	**0.00**
CASH INFLOW						
Profit After Tax		0.32	0.73	1.14	1.16	1.18
Add: Depreciation		0.07	0.07	0.07	0.07	0.07
Add: Interest		0.11	0.09	0.07	0.04	0.01
Add: Salvage Value						
Total (B)	**0.00**	**0.50**	**0.89**	**1.28**	**1.27**	**1.26**
NET FLOW (B-A)	**-1.19**	**-1.71**	**0.56**	**0.94**	**1.27**	**1.26**

IRR = 28%