



**DETAILED PROJECT REPORT**  
**HING PROCESSING UNIT**  
**UNDER PMFME SCHEME**



National Institute of Food Technology Entrepreneurship and Management

Ministry of Food Processing Industries

Plot No.97, Sector-56, HSIIDC, Industrial Estate, Kundli, Sonipat, Haryana-131028

Website: <http://www.niftem.ac.in>

Email: [pmfmecell@niftem.ac.in](mailto:pmfmecell@niftem.ac.in)

Call: 0130-2281089

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**1. PROJECT SUMMARY**

1. Name of the proposed project	:	Hing Processing Unit
2. Nature of proposed project	:	Proprietorship/Company/Partnership
3. Proposed project capacity	:	2400000 Packets/annum (15, 15, 18, 18, & 20% capacity utilization in 1 <sup>st</sup> to 5 <sup>th</sup> Year respectively)
4. Raw materials	:	Asafoetida, Rice Flour
5. Major product outputs	:	Asafoetida
6. Total project cost	:	Rs.23.93 Lakh
• Land development, building & Civil Construction	:	Nil
• Machinery and equipment's	:	Rs.11.47 Lakh
• Miscellaneous Fixed Assets	:	Rs.1.90 Lakh
• Working capital	:	Rs.10.56 Lakh
8. Means of Finance		
• Subsidy (max 10 lakhs)	:	Rs.4.68 Lakh
• Promoter's contribution (min 10%)	:	Rs.2.38 Lakh
• Term loan	:	Rs.7.35 Lakh
• Working Capital Requirement	:	Rs.9.50 Lakh
9. Profit after Depreciation, Interest & Tax		
• 1 <sup>st</sup> year	:	Rs.1.01 Lakh
• 2 <sup>nd</sup> year	:	Rs.1.26 Lakh
• 3 <sup>rd</sup> year	:	Rs.5.52 Lakh
• 4 <sup>th</sup> year	:	Rs.5.93 Lakh
• 5 <sup>th</sup> year	:	Rs.9.33 Lakh
11. Average DSCR	:	3.47
12. Term loan repayment	:	5 Years with 6 months grace period

## 2. ABOUT THE PRODUCT

### 2.1. PRODUCT INTRODUCTION:

Asafoetida, also spelled asafetida, is named after the Persian aza, for mastic or resin, and for stinking, the Latin foetidus. It is a gum which comes from the sap of the ferula species' roots and stem, a giant fennel that exudes a vile odor. Asafetida is a gum that is hard-resinous, grayish-white when fresh, darkening to yellow, red and ultimately brown with age. It is sold as a gum, and more often as a fine yellow powder, often crystalline or granulated, in blocks or pieces. It is sold in the form of blocks of resin in its pure form. The odor of the pure resin is so intense that other spices and substances processed nearby can absorb the pungent scent.

Therefore, it is important to store Asafetida in an airtight jar. The mixture is sold in sealed plastic containers with a hole which enables the powder to be dusted directly. It is a standard component of lentil curries used along with turmeric, such as dal, curries, and vegetable dishes, especially those based on potato and cauliflower. In vegetarian Punjabi and South Indian cuisine, asafoetida is used where it improves the flavor of various dishes, where it is easily heated before sprinkling on the food in hot oil. At the time of tempering, the spice is applied to the food.

Early records state that this "stink finger" was brought by Alexander the Great to use as a seasoning. It was used in ancient Rome as a spice and, while not native to India, it has been used for ages in Indian medicine and cooking. It was assumed that Asafoetida strengthened the voices of the singers. In the days of the Mughal aristocracy, on the banks of the Yamuna river, the court singers of Agra and Delhi will eat a spoonful of asafoetida with butter and practice. Asafoetida, due to the presence of sulphur compounds in it, has a heavy odor and a bitter, acrid taste. It contains between 40-60% resin, 25% gum, 10% volatile essential oil and other ash-like compounds. The resin consists primarily of asaresinotennol, free of ferulic acid or mixed with it. Tapping is usually done in March and April, just before the plants flower.

This spice is used as a digestive aid, as a condiment in fruit, and as a pickle. By serving as a savory enhancer, it plays a vital flavoring role in Indian vegetarian cuisine. Asafoetida, often dried and ground (in small amounts), can be combined with salt and eaten with raw salad. Asafoetida has long been used as a medicinal herb and a food flavouring. It is also often used in modern herbalists where hysteria, certain nervous disorders, bronchitis, asthma and whooping cough are highly valued in the treatment. Antispasmodic, carminative, expectorant, laxative, sedative gum resin. In the lungs, the volatile oil in the gum is removed, making this an effective asthma treatment.

As a flavoring agent, it is used and forms a part in several spice mixtures. Asafoetida is helpful in treating respiratory conditions such as whooping cough, bronchitis, and asthma. It is regarded as a medication that expels wind from the stomach and counteracts any spasmodic conditions. It is also a stimulant for the nervous system, a digestive agent and a sedative.

## **2.2 MARKET POTENTIAL:**

In India's humongous spice market, Hing commands 6-8 percent wallet share and its presence in Indian curries is not as tangible as maybe dry red chili or mustard. In the 1920s, demand for processed hinges first shot up in most southern markets, especially around Tanjore in Tamil Nadu. This was when LG & Co set up its first offsite plant at Nagapattanam, then led by KhimjiLaljee (LaljeeGodhoo's son). In the late 1970s and early 1980s, when the company set up more manufacturing units in Chennai, Kumbakonam and Nashik, in addition to a mother plant in Mumbai, the demand period peaked once again. When the Chennai unit began, the Nagapattanam unit was closed.

For the last 100 years in India, Hathras has been a large scale producer of Asafoetida or hing. This has brought a different identity to the district. Raw Asafoetida is mostly imported from countries such as Afghanistan, Tajikistan and, among others, Uzbekistan. Asafoetida is an essential ingredient that has been used as a product for years. In the domestic and export industry, there is a strong demand for quality compounded asafoetida. There is no specific domestic demand estimate available for compounded asaphoetide. Asafoetida was exported by India to the UK,

Yemen, Belgium, Kenya, Malaysia, Oman, Switzerland, the UAE and other countries.

### **2.3 RAW MATERIAL DESCRIPTION:**

An overview of asafoetida indicates that it consists of 67.8 percent carbohydrates per 100 gm, 16.0 percent moisture, 4.0 percent protein, 1.1 percent fat, 7.0 percent minerals and 4.1 percent fibre. Apart from phosphorus, iron, carotene, riboflavin and niacin, its mineral and vitamin content contains significant calcium. The gum resin is extracted from incisions in the plants' roots and rhizomes. Sour to five-year-old plants usually grow very dense and fleshy, carrot-shaped roots.

It lays bare the upper part of the root and the stem is cut near to the crown. A dome shaped structure made of twigs and earth covers the exposed surface. From the cut surface that soon coagulates when exposed to sunlight, a milky juice exudes. The exudate gum-resin is scraped off after several days and a fresh slice of the root is cut. Upon drying, the milk juice obtained from the root becomes a brown, resin-like mass. Asafoetida, either as lumps or in powdered form, is processed and marketed. The most popular type of pure asafoetida is lump asafoetida. The trading medium is either pure resin or "compounded asafoetida," a fine powder composed of more than 50% rice flour and gum Arabic to avoid lumping. The benefit of the combined sorin is that the dosage is simpler. In order to extract the essential oil known as Asafoetida Oil, the gum-resin is often steam-distilled.



Today, the most commonly available form is compounded asafoetida, a fine powder containing 50% asafoetida resin, along with rice flour or maida (white wheat flour).

#### **Rice Flour**

Ground hing is generally cut with rice flour, and is less potent. Due to this offensive smell, the jar of asafetida should be covered tightly or otherwise its aroma can impure the nearby stored spices.

## TYPES OF RAW MATERIAL

Species are distributed to Central Asia from the Mediterranean region. In Kashmir and in some parts of Punjab, it is grown in India. Afghanistan and Iran are the main suppliers of Asafoetida to India. Two major varieties of asafoetida are found, i.e. Hing Kabuli Sufaid and Hing LalalSufaid (Milky White Asafoetida) (Red asafoetida). Asafoetida is acrid and bitterin taste and, due to the presence of sulphur compounds in it, emits a heavy, unpleasant pungent odour. The white or pale variety is water soluble, while the oil soluble variety is dark or black. Since, due to its strong flavour, pure asafoetida is not preferred, it is mixed with starch and gum and sold often in brick form as a compounded asafoetida. It is also available in free flowing (powder form) or in tablet forms

Variety	Description	Image
Hing Kabuli Sufaid (Milky White asafoetida)	The white or pale variety is water soluble.	
Hing Lal (Rd asafoetida)	The Red variety of Hing is oil soluble.	

### **3. PROCESS FLOW CHART**

Compounded Asafoetida Manufacturing Process given below:

#### **Grinding**

All the raw material are grinded separately by using industrial Grinder, Mix the ingredients in the required proportion using a Grinder machine and mixer Machine.

#### **Blending**

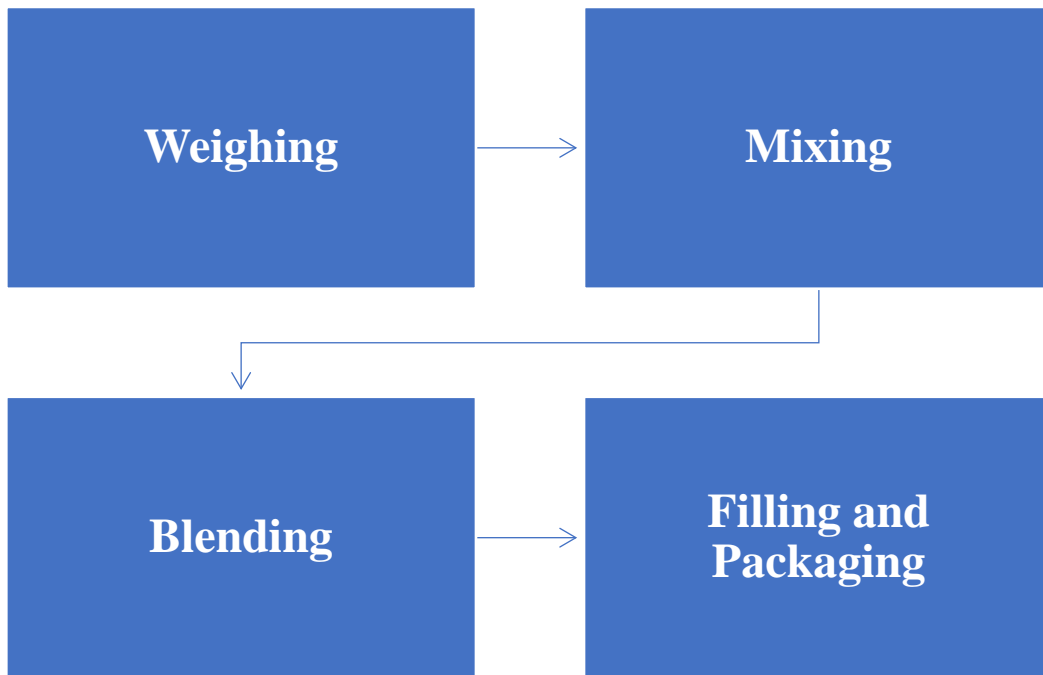
This process is where the grounded powder of the raw materials are blended into a homogenous mix.

#### **Packaging**

Now the Compounded Asafoetida or Hing powder is packed with the help of a Packaging machine, appropriate packaging material (e.g. polythene bags) is used for packaging purposes



**FLOW CHART OF PROCESS**



## **4. ECONOMICS OF THE PROJECT**

### **4.1. BASIS & PRESUMPTIONS**

1. Production Capacity of Hing taken is 400 kg per day. First year, Capacity has been taken @ 15%.
2. Working shift of 8 hours per day has been considered.
3. Raw Material stock is for 15 days and Finished goods Closing Stock has been taken for 07 days.
4. Credit period to Sundry Debtors has been given for 10 days.
5. Credit period by the Sundry Creditors has been provided for 20 days.
6. Depreciation and Income tax has been taken as per the Income tax Act, 1961.
7. Interest on working Capital Loan and Term loan has been taken at 11%.
8. Salary and wages rates are taken as per the Current Market Scenario.
9. Power Consumption has been taken at 20 KW.
10. Increase in sales and raw material costing has been taken @ 5% on a yearly basis.

## 4.2. CAPACITY, UTILIZATION, PRODUCTION & OUTPUT

### COMPUTATION OF PRODUCTION OF HING

#### Items to be Manufactured

Hing

Machine capacity Per hour	50	Kg
Total working Hours	8	
Machine capacity Per Day	400	Kg
Working days in a month	25	Days
Working days per annum	300	
Wastage Considered		
Raw material requirement	120000	Kg
Final Output per annum after wastage	120000	Kg
Final Product to be packed in 50 Grams Packet		
Number of Packets per annum	2400000	Grams




### **Production of Hing**


<b>Production</b>	<b>Capacity</b>	<b>Grams</b>
1st year	15%	3,60,000
2nd year	15%	3,60,000
3rd year	18%	4,32,000
4th year	18%	4,32,000
5th year	20%	4,80,000

### 4.3. PREMISES/INFRASTRUCTURE

The approximate total area required for complete small scale factory setup is 1200-1500 square feet for smooth production including storage area. It is expected that the premises will be on rental.

### 4.4. MACHINERY & EQUIPMENTS

Steps	Machine Name	Description	Machine Image.
<b>Weighing</b>	Weighing scale	This scale is used for weigh the raw materials for the further processing.	
<b>Mixing</b>	Mixer Grinder	Used to mix the ingredients for hing production	
<b>Blending</b>	Ribbon Blender	By using the milling machine compounded asafoetida is made into powder form.	

<b>Filling and Packaging</b>	Filling and Packaging machine	This machine is used for filling and packaging of compound hing powder.	
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Machine	Unit	Rate	Price
Weighing scale (Capacity - 500 kg )	1	16,500	16,500
Mixer Grinder (Capacity 500 kg/hr)	1	2,50,000	2,50,000
Ribbon Blender (500 kg)	1	2,20,000	2,20,000
Filling and Packaging machine (10 Pouches per minute)	2	3,30,000	6,60,000

Note: Cost of the machinery is approx. Rs.11.47 Lakhs excluding GST and other transportation cost.

#### 4.5. MISCELLANEOUS FIXED ASSETS

- Drum Sieve
- Online Inkjet Printing Machine
- Conveyor

**4.6. TOTAL COST OF PROJECT**

<b>COST OF PROJECT</b>	
	(in Lacs)
<b>PARTICULARS</b>	<b>Amount</b>
Land & Building	Owned/Rented
Plant & Machinery	11.47
Miscellaneous Assets	1.90
Working capital	10.56
<b>Total</b>	<b>23.93</b>

**4.7. MEANS OF FINANCE**

<b>MEANS OF FINANCE</b>	
<b>PARTICULARS</b>	<b>AMOUNT</b>
Own Contribution (min 10%)	2.38
Subsidy @35%(Max. Rs 10 Lac)	4.68
Term Loan @ 55%	7.35
Working Capital (Bank Finance)	9.50
<b>Total</b>	<b>23.93</b>

**4.8. TERM LOAN:** Term loan of Rs.7.35 Lakh is required for project cost of Rs.23.93 Lakh.

**4.9. TERM LOAN REPAYMENT & INTEREST SCHEDULE**

<b>REPAYMENT SCHEDULE OF TERM LOAN</b>							
						Interest	11.00%
<b>Year</b>	<b>Particulars</b>	<b>Amount</b>	<b>Addition</b>	<b>Total</b>	<b>Interest</b>	<b>Repayment</b>	<b>Closing Balance</b>
<b>1st</b>	Opening Balance						
	1st month	-	7.35	7.35	-	-	7.35
	2nd month	7.35	-	7.35	0.07	-	7.35
	3rd month	7.35	-	7.35	0.07	-	7.35
	4th month	7.35	-	7.35	0.07	-	7.35
	5th month	7.35	-	7.35	0.07	-	7.35
	6th month	7.35	-	7.35	0.07	-	7.35
	7th month	7.35	-	7.35	0.07	0.14	7.22
	8th month	7.22	-	7.22	0.07	0.14	7.08
	9th month	7.08	-	7.08	0.06	0.14	6.94
	10th month	6.94	-	6.94	0.06	0.14	6.81
	11th month	6.81	-	6.81	0.06	0.14	6.67
	12th month	6.67	-	6.67	0.06	0.14	6.54
					0.72	0.82	
<b>2nd</b>	Opening Balance						
	1st month	6.54	-	6.54	0.06	0.14	6.40
	2nd month	6.40	-	6.40	0.06	0.14	6.26
	3rd month	6.26	-	6.26	0.06	0.14	6.13
	4th month	6.13	-	6.13	0.06	0.14	5.99
	5th month	5.99	-	5.99	0.05	0.14	5.86

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6th month	5.86	-	5.86	0.05	0.14	5.72
7th month	5.72	-	5.72	0.05	0.14	5.58
8th month	5.58	-	5.58	0.05	0.14	5.45
9th month	5.45	-	5.45	0.05	0.14	5.31
10th month	5.31	-	5.31	0.05	0.14	5.17
11th month	5.17	-	5.17	0.05	0.14	5.04
12th month	5.04	-	5.04	0.05	0.14	4.90
				<b>0.64</b>	<b>1.63</b>	
<b>3rd</b>	Opening Balance					
1st month	4.90	-	4.90	0.04	0.14	4.77
2nd month	4.77	-	4.77	0.04	0.14	4.63
3rd month	4.63	-	4.63	0.04	0.14	4.49
4th month	4.49	-	4.49	0.04	0.14	4.36
5th month	4.36	-	4.36	0.04	0.14	4.22
6th month	4.22	-	4.22	0.04	0.14	4.09
7th month	4.09	-	4.09	0.04	0.14	3.95
8th month	3.95	-	3.95	0.04	0.14	3.81
9th month	3.81	-	3.81	0.03	0.14	3.68
10th month	3.68	-	3.68	0.03	0.14	3.54
11th month	3.54	-	3.54	0.03	0.14	3.40
12th month	3.40	-	3.40	0.03	0.14	3.27
				<b>0.46</b>	<b>1.63</b>	
<b>4th</b>	Opening Balance					
1st month	3.27	-	3.27	0.03	0.14	3.13
2nd month	3.13	-	3.13	0.03	0.14	3.00



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3rd month	3.00	-	3.00	0.03	0.14	2.86
4th month	2.86	-	2.86	0.03	0.14	2.72
5th month	2.72	-	2.72	0.02	0.14	2.59
6th month	2.59	-	2.59	0.02	0.14	2.45
7th month	2.45	-	2.45	0.02	0.14	2.31
8th month	2.31	-	2.31	0.02	0.14	2.18
9th month	2.18	-	2.18	0.02	0.14	2.04
10th month	2.04	-	2.04	0.02	0.14	1.91
11th month	1.91	-	1.91	0.02	0.14	1.77
12th month	1.77	-	1.77	0.02	0.14	1.63
				<b>0.28</b>	<b>1.63</b>	
<b>5th</b>	<b>Opening Balance</b>					
1st month	1.63	-	1.63	0.01	0.14	1.50
2nd month	1.50	-	1.50	0.01	0.14	1.36
3rd month	1.36	-	1.36	0.01	0.14	1.23
4th month	1.23	-	1.23	0.01	0.14	1.09
5th month	1.09	-	1.09	0.01	0.14	0.95
6th month	0.95	-	0.95	0.01	0.14	0.82
7th month	0.82	-	0.82	0.01	0.14	0.68
8th month	0.68	-	0.68	0.01	0.14	0.54
9th month	0.54	-	0.54	0.00	0.14	0.41
10th month	0.41	-	0.41	0.00	0.14	0.27
11th month	0.27	-	0.27	0.00	0.14	0.14
12th month	0.14	-	0.14	0.00	0.14	-
				<b>0.10</b>	<b>1.63</b>	

DOOR TO DOOR MORATORIUM PERIOD	60	MONTHS
REPAYMENT PERIOD	6	MONTHS
	54	MONTHS

#### 4.10. WORKING CAPITAL CALCULATIONS

<b>COMPUTATION OF CLOSING STOCK &amp; WORKING CAPITAL</b>					(in Lacs)
<b>PARTICULARS</b>	<b>1st year</b>	<b>2nd year</b>	<b>3rd year</b>	<b>4th year</b>	<b>5th year</b>
<b>Finished Goods</b>					
	5.37	5.62	7.05	7.41	8.55
<b>Raw Material</b>					
	9.00	9.54	12.10	12.74	14.88
<b>Closing Stock</b>	<b>14.37</b>	<b>15.16</b>	<b>19.15</b>	<b>20.16</b>	<b>23.43</b>

<b>COMPUTATION OF WORKING CAPITAL REQUIREMENT</b>					
<b>TRADITIONAL METHOD</b>				(in Lacs)	
<b>Particulars</b>	<b>Amount</b>	<b>Own Margin</b>		<b>Bank Finance</b>	
Finished Goods & Raw Material	14.37				
Less : Creditors	12.00				
<b>Paid stock</b>	<b>2.37</b>	<b>10%</b>	<b>0.24</b>	<b>90%</b>	<b>2.13</b>
<b>Sundry Debtors</b>	<b>8.20</b>	<b>10%</b>	<b>0.82</b>	<b>90%</b>	<b>7.38</b>
	<b>10.58</b>		<b>1.06</b>		<b>9.52</b>
<b>MPBF</b>					<b>9.52</b>
<b>WORKING CAPITAL LIMIT DEMAND ( from Bank)</b>					<b>9.50</b>
<b>Working Capital Margin</b>					<b>1.06</b>

#### 4.11. SALARY & WAGES

<b><u>BREAK UP OF LABOUR CHARGES</u></b>			
<b>Particulars</b>	<b>Wages Rs. per Month</b>	<b>No of Employees</b>	<b>Total Salary</b>
Supervisor	25,000	1	25,000
Skilled (in thousand rupees)	20,000	4	80,000
Unskilled (in thousand rupees)	10,000	4	40,000
<b>Total salary per month</b>			<b>1,45,000</b>
<b>Total annual labour charges</b>	<b>(in lacs)</b>		<b>17.40</b>

<b><u>BREAK UP OF STAFF SALARY CHARGES</u></b>			
<b>Particulars</b>	<b>Salary Rs. per Month</b>	<b>No of Employees</b>	<b>Total Salary</b>
Helper	12,000	1	12,000
Accountant	25,000	1	25,000
Administrative Staff	18,000	2	36,000
<b>Total salary per month</b>			<b>73,000</b>
<b>Total annual Staff charges</b>	<b>(in lacs)</b>		<b>8.76</b>

#### 4.12 POWER REQUIREMENT

<b>Utility Charges (per month)</b>		
<b>Particulars</b>	<b>value</b>	<b>Description</b>
Power connection required	20	KWH
consumption per day	160	units
Consumption per month	4,000	units
Rate per Unit	10	Rs.
power Bill per month	40,000	Rs.

**4.13. DEPRECIATION CALCULATION**

<b>COMPUTATION OF DEPRECIATION</b>			(in Lacs)
<b>Description</b>	<b>Plant &amp; Machinery</b>	<b>Miss. Assets</b>	<b>TOTAL</b>
Rate of Depreciation	<b>15.00%</b>	<b>10.00%</b>	
<b>Opening Balance</b>	-	-	-
Addition	11.47	1.90	13.37
Total	11.47	1.90	13.37
Less : Depreciation	1.72	0.19	1.91
<b>WDV at end of Year</b>	<b>9.75</b>	<b>1.71</b>	<b>11.46</b>
Additions During The Year	-	-	-
Total	9.75	1.71	11.46
Less : Depreciation	1.46	0.17	1.63
<b>WDV at end of Year</b>	<b>8.29</b>	<b>1.54</b>	<b>9.83</b>
Additions During The Year	-	-	-
Total	8.29	1.54	9.83
Less : Depreciation	1.24	0.15	1.40
<b>WDV at end of Year</b>	<b>7.04</b>	<b>1.39</b>	<b>8.43</b>
Additions During The Year	-	-	-
Total	7.04	1.39	8.43
Less : Depreciation	1.06	0.14	1.20
<b>WDV at end of Year</b>	<b>5.99</b>	<b>1.25</b>	<b>7.23</b>
Additions During The Year	-	-	-
Total	5.99	1.25	7.23
Less : Depreciation	0.90	0.12	1.02
<b>WDV at end of Year</b>	<b>5.09</b>	<b>1.12</b>	<b>6.21</b>

**4.14. REPAIR & MAINTENANCE:** Repair & Maintenance is 2.5% of Gross Sale.

**4.15. PROJECTIONS OF PROFITABILITY ANALYSIS**

<b><u>PROJECTED PROFITABILITY STATEMENT</u></b>					<b>(in Lacs)</b>
<b>PARTICULARS</b>	<b>1st year</b>	<b>2nd year</b>	<b>3rd year</b>	<b>4th year</b>	<b>5th year</b>
Capacity Utilisation %	<b>15%</b>	<b>15%</b>	<b>18%</b>	<b>18%</b>	<b>20%</b>
<b><u>SALES</u></b>					
<b>Gross Sale</b>					
Hing	246.12	266.40	335.65	354.24	411.84
<b>Total</b>	<b>246.12</b>	<b>266.40</b>	<b>335.65</b>	<b>354.24</b>	<b>411.84</b>
<b><u>COST OF SALES</u></b>					
Raw Material Consumed	180.00	190.80	241.92	254.88	297.60
Electricity Expenses	4.80	5.52	6.35	7.30	8.03
Depreciation	1.91	1.63	1.40	1.20	1.02
Wages & labour	17.40	19.14	21.05	22.74	24.56
Repair & maintenance	6.15	6.66	8.39	8.86	10.30
Packaging	19.94	17.32	23.16	22.67	24.71
<b>Cost of Production</b>	<b>230.20</b>	<b>241.07</b>	<b>302.27</b>	<b>317.64</b>	<b>366.22</b>
<b>Add: Opening Stock /WIP</b>	<b>-</b>	<b>5.37</b>	<b>5.62</b>	<b>7.05</b>	<b>7.41</b>
<b>Less: Closing Stock /WIP</b>	<b>5.37</b>	<b>5.62</b>	<b>7.05</b>	<b>7.41</b>	<b>8.55</b>
Cost of Sales	224.83	240.82	300.84	317.28	365.08
<b>GROSS PROFIT</b>	<b>21.29</b>	<b>25.58</b>	<b>34.81</b>	<b>36.96</b>	<b>46.75</b>
	<b>8.65%</b>	<b>9.60%</b>	<b>10.37%</b>	<b>10.43%</b>	<b>11.35%</b>
Salary to Staff	8.76	10.16	12.40	14.26	15.68
Interest on Term Loan	0.72	0.64	0.46	0.28	0.10
Interest on working Capital	1.05	1.05	1.05	1.05	1.05
Rent	3.60	3.96	4.36	4.79	5.27
selling & adm exp	6.15	8.52	10.74	10.27	14.00
<b>TOTAL</b>	<b>20.28</b>	<b>24.33</b>	<b>29.00</b>	<b>30.64</b>	<b>36.10</b>
<b>NET PROFIT</b>	<b>1.01</b>	<b>1.26</b>	<b>5.81</b>	<b>6.31</b>	<b>10.66</b>
	<b>0.41%</b>	<b>0.47%</b>	<b>1.73%</b>	<b>1.78%</b>	<b>2.59%</b>
Taxation	-	-	0.29	0.39	1.32
<b>PROFIT (After Tax)</b>	<b>1.01</b>	<b>1.26</b>	<b>5.52</b>	<b>5.93</b>	<b>9.33</b>

#### 4.16. BREAK EVEN POINT ANALYSIS

<b>BREAK EVEN POINT ANALYSIS</b>					
<b>Year</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>Net Sales &amp; Other Income</b>	246.12	266.40	335.65	354.24	411.84
Less : Op. WIP Goods	-	5.37	5.62	7.05	7.41
Add : Cl. WIP Goods	5.37	5.62	7.05	7.41	8.55
<b>Total Sales</b>	<b>251.49</b>	<b>266.65</b>	<b>337.08</b>	<b>354.60</b>	<b>412.97</b>
<b>Variable &amp; Semi Variable Exp.</b>					
Raw Material Consumed	180.00	190.80	241.92	254.88	297.60
Electricity Exp/Coal Consumption at 85%	4.08	4.69	5.40	6.21	6.83
Wages & Salary at 60%	15.70	17.58	20.07	22.20	24.14
Selling & administrative Expenses 80%	4.92	6.82	8.59	8.22	11.20
Interest on working Capital	1.045	1.045	1.045	1.045	1.045
Repair & maintenance	6.15	6.66	8.39	8.86	10.30
Packaging	19.94	17.32	23.16	22.67	24.71
<b>Total Variable &amp; Semi Variable Exp</b>	<b>231.83</b>	<b>244.91</b>	<b>308.58</b>	<b>324.07</b>	<b>375.82</b>
<b>Contribution</b>	<b>19.66</b>	<b>21.74</b>	<b>28.50</b>	<b>30.53</b>	<b>37.15</b>
<b>Fixed &amp; Semi Fixed Expenses</b>					
Electricity Exp/Coal Consumption at 15%	0.72	0.83	0.95	1.10	1.20
Wages & Salary at 40%	10.46	11.72	13.38	14.80	16.10
Interest on Term Loan	0.72	0.64	0.46	0.28	0.10
Depreciation	1.91	1.63	1.40	1.20	1.02
Selling & administrative Expenses 20%	1.23	1.70	2.15	2.05	2.80
Rent	3.60	3.96	4.36	4.79	5.27
<b>Total Fixed Expenses</b>	<b>18.65</b>	<b>20.48</b>	<b>22.69</b>	<b>24.21</b>	<b>26.49</b>
<b>Capacity Utilization</b>	<b>15%</b>	<b>15%</b>	<b>18%</b>	<b>18%</b>	<b>20%</b>
<b>OPERATING PROFIT</b>	<b>1.01</b>	<b>1.26</b>	<b>5.81</b>	<b>6.31</b>	<b>10.66</b>
<b>BREAK EVEN POINT</b>	<b>14%</b>	<b>14%</b>	<b>14%</b>	<b>14%</b>	<b>14%</b>
<b>BREAK EVEN SALES</b>	<b>238.55</b>	<b>251.25</b>	<b>268.35</b>	<b>281.25</b>	<b>294.51</b>

**4.17. PROJECTED BALANCE SHEET**

<b><u>PROJECTED BALANCE SHEET</u></b>						<b>(in Lacs)</b>
<b>PARTICULARS</b>	<b>1st year</b>	<b>2nd year</b>	<b>3rd year</b>	<b>4th year</b>	<b>5th year</b>	
<b><u>Liabilities</u></b>						
Capital						
opening balance		8.07	8.83	10.35	11.78	
Add:- Own Capital	2.38					
Add:- Retained Profit	1.01	1.26	5.52	5.93	9.33	
Less:- Drawings	-	0.50	4.00	4.50	5.00	
Subsidy/grant	4.68					
Closing Balance	8.07	8.83	10.35	11.78	16.11	
Term Loan	6.54	4.90	3.27	1.63	-	
Working Capital Limit	9.50	9.50	9.50	9.50	9.50	
Sundry Creditors	12.00	12.72	16.13	16.99	19.84	
Provisions & Other Liab	0.40	0.50	0.60	0.72	0.86	
<b>TOTAL :</b>	<b>36.51</b>	<b>36.45</b>	<b>39.85</b>	<b>40.63</b>	<b>46.32</b>	
<b><u>Assets</u></b>						
<b>Fixed Assets ( Gross)</b>	13.37	13.37	13.37	13.37	13.37	
Gross Dep.	1.91	3.54	4.94	6.14	7.16	
<b>Net Fixed Assets</b>	<b>11.46</b>	<b>9.83</b>	<b>8.43</b>	<b>7.23</b>	<b>6.21</b>	
<b>Current Assets</b>						
Sundry Debtors	8.20	8.88	11.19	11.81	13.73	
Stock in Hand	14.37	15.16	19.15	20.16	23.43	
Cash and Bank	2.48	2.58	1.08	1.43	2.95	
<b>TOTAL :</b>	<b>36.51</b>	<b>36.45</b>	<b>39.85</b>	<b>40.63</b>	<b>46.32</b>	

**4.18. CASH FLOW STATEMENT**

<b><u>PROJECTED CASH FLOW STATEMENT</u></b>					<b>(in Lacs)</b>
<b>PARTICULARS</b>	<b>1st year</b>	<b>2nd year</b>	<b>3rd year</b>	<b>4th year</b>	<b>5th year</b>
<b><u>SOURCES OF FUND</u></b>					
Own Margin	2.38				
Net Profit	1.01	1.26	5.81	6.31	10.66
Depriciation & Exp. W/off	1.91	1.63	1.40	1.20	1.02
Increase in Cash Credit	9.50	-	-	-	-
Increase In Term Loan	7.35	-	-	-	-
Increase in Creditors	12.00	0.72	3.41	0.86	2.85
Increase in Provisions & Oth lib	0.40	0.10	0.10	0.12	0.14
Sunsidy/grant	4.68				
<b>TOTAL :</b>	<b>39.24</b>	<b>3.71</b>	<b>10.72</b>	<b>8.49</b>	<b>14.67</b>
<b><u>APPLICATION OF FUND</u></b>					
Increase in Fixed Assets	13.37				
Increase in Stock	14.37	0.79	3.98	1.01	3.27
Increase in Debtors	8.20	0.68	2.31	0.62	1.92
Repayment of Term Loan	0.82	1.63	1.63	1.63	1.63
Drawings	-	0.50	4.00	4.50	5.00
Taxation	-	-	0.29	0.39	1.32
<b>TOTAL :</b>	<b>36.76</b>	<b>3.60</b>	<b>12.21</b>	<b>8.15</b>	<b>13.15</b>
Opening Cash & Bank Balance	-	2.48	2.58	1.08	1.43
Add : Surplus	2.48	0.11	-1.50	0.35	1.53
Closing Cash & Bank Balance	<b>2.48</b>	<b>2.58</b>	<b>1.08</b>	<b>1.43</b>	<b>2.95</b>



**4.19. DEBT SERVICE COVERAGE RATIO**

<b><u>CALCULATION OF D.S.C.R</u></b>					
<b>PARTICULARS</b>	<b>1st year</b>	<b>2nd year</b>	<b>3rd year</b>	<b>4th year</b>	<b>5th year</b>
CASH ACCRUALS	2.92	2.89	6.92	7.12	10.36
Interest on Term Loan	0.72	0.64	0.46	0.28	0.10
<b>Total</b>	<b>3.64</b>	<b>3.53</b>	<b>7.38</b>	<b>7.40</b>	<b>10.45</b>
<b><u>REPAYMENT</u></b>					
Instalment of Term Loan	0.82	1.63	1.63	1.63	1.63
Interest on Term Loan	0.72	0.64	0.46	0.28	0.10
<b>Total</b>	<b>1.54</b>	<b>2.27</b>	<b>2.09</b>	<b>1.91</b>	<b>1.73</b>
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.37</b>	<b>1.55</b>	<b>3.53</b>	<b>3.87</b>	<b>6.04</b>
<b>AVERAGE D.S.C.R.</b>	<b>3.47</b>				