

# UP MSME 1-Connect

## PROJECT REPORT

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**PROJECT:**

N-95 Mask making Unit

# PROJECT REPORT

Of

## N-95 MASK

### PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **N-95 Mask making Unit**.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

**PROJECT AT A GLANCE**

- 1 Name of the Entrepreneur : xxxxxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxxxx  
Pin: xxxxxxxx State: xxxxxxxxxxxx  
Mobile xxxxxxxx
- 5 Product and By Product : SURGICAL N95 MASK
- 6 Name of the project / business activity proposed : SURGICAL N 95 MASK MANUFACTURING UNIT
- 7 Cost of Project : Rs.222.7 Lakhs
- 8 Means of Finance  
Term Loan Rs.145 Lakhs  
Own Capital Rs.60 Lakhs  
Unsecured Loan Rs.17.7 Lakhs
- 9 Debt Service Coverage Ratio : 1.78
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 30%
- 13 Employment : 35 Persons
- 14 Power Requirement : 40.00 HP
- 15 Major Raw materials : Spun Bound Polypropylene Roll, MeltBrown Fabric, Activated Carbon sheet Roll etc
- 16 Estimated Annual Sales Turnover (Max Capacity) : 1,068.38 Lakhs
- 17 Detailed Cost of Project & Means of Finance

**COST OF PROJECT**

(Rs. In Lakhs)

Particulars	Amount
	Own/Rented
Land	
Building /Shed 5000 Sq ft	16.75
Plant & Machinery	180.00
Furniture & Fixtures	1.50
Pre-operative Expenses	0.50
IDCP	7.98
Working Capital Margin	15.97
<b>Total</b>	<b>222.70</b>

**MEANS OF FINANCE**

Particulars	Amount
Own Contribution	60.00
Unsecured Loan	17.70
Term Loan	145.00
<b>Total</b>	<b>222.70</b>

# **4-Layered Face Mask with Exhalation Valve** **(N-95)**



## **INTRODUCTION**

Face Mask refers to a group of items which may have different shape and construction, but are used to cover up the entire or a portion of face. The face masks have a wide range of application ranging from fashion accessory to biological contamination protection.

One class of face mask is used for medical purposes, this class includes various mask ranging from surgical masks to biological contamination protection masks. This report focuses on one such mask which belongs to particulate respirator type mask and sub-class of 4-Layered N-95 Mask with Exhalation Valve for low biological contamination.

A respirator type mask is designed to filter in air that is to be inhaled by the user through the mask which itself is a single or multi-layer filter.

“N-95” is a filtration rating in which “N” means “Not Oil Resistant” and “95” is actual filtration capability, that is capable of 95% filtration of particles having particle size “0.3 micron”, just for reference influenza viruses have particle size in between 60 to 140nm i.e. 0.06 to 0.14 microns.

N95-Masks are simply mask having a filtration layer with N-95 filtration specification they can be single and multi-layered but as these masks are used for pollution protection and extremely low biological contamination protection mask, they usually have at least 3 layers.

This report discusses a special type of N-95 Mask designed to be used as personal protective gear in case of biological contamination; in terms of construction it's a 4-layered particulate respirator type mask with exhalation valve.



Exhalation valve is a device which essentially allows exhalation through the valve rather than the particulate respirator, thus making it easy to breath and exhale; any filter has definite life and if the mask is forced to operate in both directions, which happens in case of masks without exhalation valves, then their life will be reduced and there is also high probability that their effectiveness will also reduce.

These masks are not free fit masks, each individual user must get his mask's sealing performance checked at time of initial use and later on at time of every reequip user must ensure a good seal himself or seek help from someone who can evaluate the seal.

## **RAW MATERIAL**

- 1) Spun-Bound Polypropylene Roll
- 2) Activated Carbon Sheet Roll
- 3) Melt Blown Polypropylene Roll
- 4) Polyamide Elastic Band Reel
- 5) Packaging Material
- 6) Exhalation Valve Parts (External, Internal & Check Valve Casing and Diaphragm)

## **MACHINE REQUIRED**

The manufacturing of N-95 mask involves welding, blanking and packaging thus the machines required are;

### **1) Light Duty Punching Press**



It's a machine which is used to punch or blank the given soft metal sheet like aluminum sheet.

## **2) N-95 Face Mask Making Machine with Exhalation Valve Mounting Station**



It's a fully automatic machine which is used to manufacture 4-Layered N-95 masks with exhalation valve, the machine includes a roll feeding section, mask body making section, nose clip welding section, elastic ear loop welding section, mask upper body welding section and exhalation valve mounting section.

## **3) Mask Packaging Machine**



This machine simply packs the mask within a plastic packaging.

## **MANUFACTURING PROCESS**

The aluminum sheet is feed to light duty punching press which punches out nose clip from the aluminum sheet, these blanks are then placed in nose clip welding section, while two spun-bound polypropylene rolls, a activated carbon sheet roll and a melt blown polypropylene roll are placed in roll feeding section at appropriate location, exhalation valve parts are placed in exhalation valve mounting section and at last polyamide elastic band reel is placed in ear loop welding section of 4-layered N95 mask making machine.

The 4-layered N95 mask making machine unrolls the sheet of spun-bound polypropylene, activated carbon and melt blown polypropylene simultaneously from their respective rolls and pulls them into mask body making section.

All these layers are cut from their respective rolls and welded at edges and some regions of mid sections, so as to obtain the mask's body, the hole for exhalation valve is also made during this process; the outer most layer is made of spun bound polypropylene sheet and acts as external non-woven fabric sheet of mask, second layer is made of activated carbon sheet and thus form activated carbon layer of the mask, the third layer is made of melt blown polypropylene sheet and acts as N95 filtration layer of mask, while forth layer is made of another spun-bound polypropylene sheet and form inner skin contact layer of mask.

The mask bodies are then moved internally to nose clip welding section where previously punched aluminum strips are welded to mask's body at appropriate location, followed by which masks are moved to ear loop welding section of



machine where polyamide elastic band are cut and welded to form two ear loops at left and right extremes of mask.

These masks are then feed to upper body welding section, where a weld is made along center of mask so as to allow the mask to easily fold and unfold at time of use; then mask are feed to another welding section where a weld is made along the circumference of hole, from where the material is removed to compensate exhalation valve.

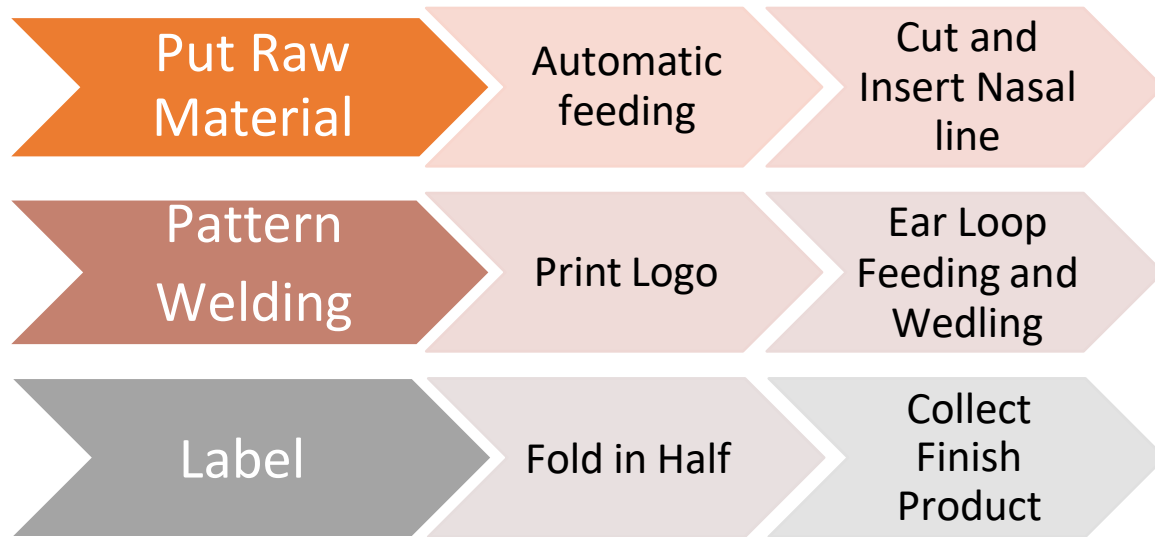
The masks are then feed to exhalation valve mounting section where various parts of exhalation valve are assembled while mask is being held appropriately in a fixture; therefore, finished masks are obtained from machine.

These 4-Layered N-95 Masks with Exhalation Valves are feed to mask packaging machine which simply packs them into an appropriate packaging followed by which, the masks are placed in cartons and sent for sale.

### **Main Electrical Parts**

<b>Mask Machine Configuration List</b>		<b>Ear Loop Machine Configuration List</b>	1. 2 variable-frequency motors	<b>Conveyor</b>
1. 1 variable-frequency motor	2. 2 Ultrasonic devices	2. 4 Stepper motors	3. 12~16 pcs cylinders	2 speed motors
3. 1 PLC controller	4. 2 electronic eyes	4. 6 Ultrasonic devices	5. 10 electronic eyes	

## **WORKING PROCESS FLOW**

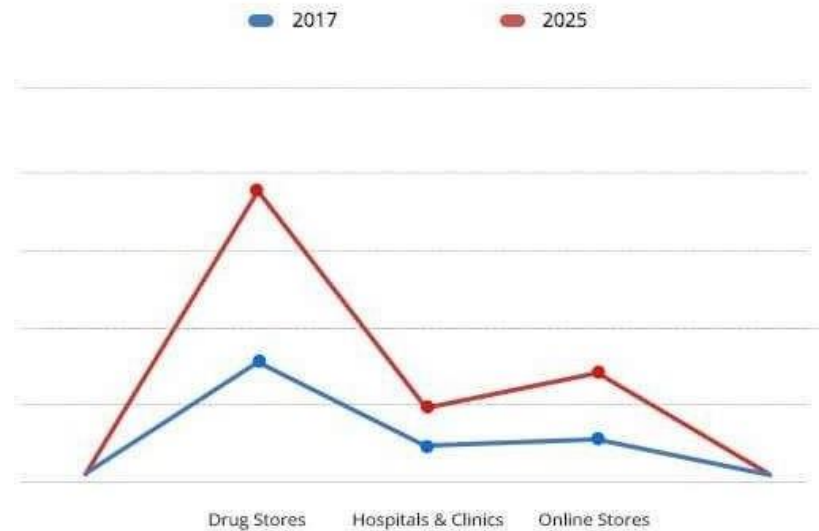


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## **MARKET OVERVIEW**

The India surgical mask market accounted for ₹4,060 million approx. in 2017, and is projected to reach ₹ 6,650 million approx. by 2025, registering a CAGR of 6.1% from 2018 to 2025. Surgical masks are made of natural fiber, such as cotton or disposable linen or synthetic materials, such as polypropylene.

## INDIA SURGICAL MASKS MARKET BY DISTRIBUTION CHANNEL



**Drug Stores** held a dominant position in 2017.

The India surgical mask market is driven by various factors, such as increase in elderly population, increase in adoption of surgical mask in the general population, and surge in prevalence of contagious and chronic diseases such as tuberculosis, asthma and **Corona Virus**. Furthermore, rise in the number of medical device manufacturing companies is also anticipated to supplement the growth of the surgical masks industry.

Online stores are the fastest growing distributors of surgical masks, followed by hospitals and drug stores. Online delivery of surgical masks via e-commerce is expected to significantly drive the sales during the forecast period, owing to convenience in providing the customers with bulk orders and ease of delivering the orders directly at the doorsteps. Online stores are followed by hospitals & clinics and drug stores in the distribution of surgical mask to the consumer.

## **SWOT ANALYSIS**

### **STRENGTHS**

- ✓ Huge Market
- ✓ Strong Financial Position
- ✓ High Quality
- ✓ Growing Private Hospital Sector
- ✓ Use of Modern Technology

### **WEAKNESS**

- ✓ Expansion in healthcare Masks capacity may exert pricing pressure
- ✓ Untapped Rural Markets
- ✓ Less Advertisement Effort
- ✓ Inability to pass on full impact of any cost increase

### **OPPURTUNITY**

- ✓ Demand for Surgical Masks to stay healthy
- ✓ Demand for healthcare Masks to grow by European
- ✓ Customized medical masks to provide growth driver
- ✓ Government Initiatives and Policies
- ✓ E-Commerce

### **THREATS**

- ✓ Highly Competitive Market
- ✓ Volatility of Profit

## **PROJECT INFRASTRUCTURE**

### **+ LAND AND BUILDING**

Approximate 16.75 Lakh Rupees shall be Incurred for the Construction of the Building or Civil Work Required for the Manufacturing Unit of Surgical N 95 Masks.

### **+ MANPOWER**

Following Manpower is required for starting a Manufacturing Unit of Surgical N 95 Masks: -

- 1 Supervisor
- 1 Plant Operator
- 12 Unskilled Worker
- 10 Skilled Worker
- 1 Helper
- 1 Security Guard
- 1 Manager
- 1 Accountant cum Store Keeper
- 4 Sales Executive

### **+ POWER AND FUEL**

Proper Arrangements for the Electricity Connection Load has been made by the Concern from the Electricity Board.

In Addition to the Connection Load taken, Arrangements for DG Set shall also be done.

## **BANK TERM LOAN AND WORKING CAPITAL**

Rate of Interest is assumed to be at 11.00%

## **DEPRECIATION**


Depreciation has been calculated as per the provisions of Income Tax Act, 1961.

## **LICENCES AND REGISTRATIONS**

 GST Registration

 MSME Udyog Aadhar

 Trademark or Brand name as may be required by the Manufacturer

 Barcode Registration in case of E-Commerce.

 IEC Code for Import Export.

## **FINANCIAL ASPECTS**

**PROJECTED CASH FLOW STATEMENT**

PARTICULARS	I	II	III	IV	V
<b>SOURCES OF FUND</b>					
Own Contribution	60.00	-			
Unsecured Loan	10.00	7.70			
Ney Profit	22.20	31.93	49.91	62.94	82.06
Depriciation & Exp. W/off	29.98	25.51	21.77	18.58	15.86
Increase In Cash Credit	47.91				
Increase In Term Loan	145.00	-	-	-	-
Increase in Creditors	9.14	1.75	1.88	2.02	2.15
Increase in Provisions	2.00	0.20	0.22	0.24	0.27
<b>TOTAL :</b>	<b>326.24</b>	<b>67.08</b>	<b>73.78</b>	<b>83.78</b>	<b>100.34</b>
<b>APPLICATION OF FUND</b>					
Increase in Fixed Assets	206.73	-	-	-	-
Increase in Stock	35.90	6.89	7.42	7.95	8.48
Increase in Debtors	37.12	8.50	2.60	4.58	11.31
Repayment of Term Loan	16.11	32.22	32.22	32.22	32.22
Taxation	5.55	9.58	14.97	18.88	24.62
Drawings	12.00	16.00	20.00	22.00	24.00
<b>TOTAL :</b>	<b>313.41</b>	<b>73.19</b>	<b>77.22</b>	<b>85.63</b>	<b>100.63</b>
Opening Cash & Bank Balance	-	12.83	6.72	3.29	1.44
Add : Surplus	12.83 -	6.10 -	3.43 -	1.85 -	0.29
Closing Cash & Bank Balance	<b>12.83</b>	<b>6.72</b>	<b>3.29</b>	<b>1.44</b>	<b>1.15</b>

**PROJECTED BALANCE SHEET**

PARTICULARS	I	II	III	IV	V
<b>SOURCES OF FUND</b>					
<b>Capital Account</b>					
Opening Balance	-	64.65	71.00	85.94	108.00
Add: Additions	60.00	-	-	-	-
Add: Net Profit	16.65	22.35	34.94	44.06	57.45
Less: Drawings	12.00	16.00	20.00	22.00	24.00
<b>Closing Balance</b>	<b>64.65</b>	<b>71.00</b>	<b>85.94</b>	<b>108.00</b>	<b>141.44</b>
CC Limit	47.91	47.91	47.91	47.91	47.91
Term Loan	128.89	96.67	64.44	32.22	-
Unsecured Loan	10.00	17.70	17.70	17.70	17.70
Sundry Creditors	9.14	10.89	12.77	14.78	16.93
Provisions	2.00	2.20	2.42	2.66	2.93
<b>TOTAL :</b>	<b>262.59</b>	<b>246.36</b>	<b>231.18</b>	<b>223.28</b>	<b>226.92</b>
<b>APPLICATION OF FUND</b>					
<b>Fixed Assets ( Gross)</b>	<b>206.73</b>	<b>206.73</b>	<b>206.73</b>	<b>206.73</b>	<b>206.73</b>
Gross Dep.	29.98	55.50	77.27	95.85	111.70
Net Fixed Assets	176.74	151.23	129.46	110.88	95.02
<b>Current Assets</b>					
Sundry Debtors	37.12	45.62	48.22	52.80	64.10
Stock in Hand	35.90	42.79	50.21	58.16	66.64
Cash and Bank	12.83	6.72	3.29	1.44	1.15
<b>TOTAL :</b>	<b>262.59</b>	<b>246.36</b>	<b>231.18</b>	<b>223.28</b>	<b>226.92</b>
	-	-	-	-	-



**PROJECTED PROFITABILITY STATEMENT**

PARTICULARS	I	II	III	IV	V
<b>A) SALES</b>					
Gross Sale	556.80	684.34	803.71	931.73	1,068.38
<b>Total (A)</b>	<b>556.80</b>	<b>684.34</b>	<b>803.71</b>	<b>931.73</b>	<b>1,068.38</b>
<b>B) COST OF SALES</b>					
Raw Mateiral Consumed	391.68	466.56	547.20	633.60	725.76
Electricity Expenses	2.51	2.82	3.13	3.45	3.76
Repair & Maintenance	1.39	6.84	8.04	9.32	10.68
Labour & Wages	42.24	50.69	63.36	72.86	80.15
Depreciation	29.98	25.51	21.77	18.58	15.86
Other Overheads & Consumables	27.84	34.22	40.19	46.59	53.42
<b>Cost of Production</b>	<b>495.64</b>	<b>586.64</b>	<b>683.69</b>	<b>784.39</b>	<b>889.63</b>
<b>Add: Opening Stock /WIP</b>	<b>-</b>	<b>16.32</b>	<b>19.46</b>	<b>22.85</b>	<b>26.48</b>
<b>Less: Closing Stock /WIP</b>	<b>16.32</b>	<b>19.46</b>	<b>22.85</b>	<b>26.48</b>	<b>30.36</b>
Cost of Sales (B)	479.32	583.50	680.30	780.76	885.76
<b>C) GROSS PROFIT (A-B)</b>					
	77.48	100.83	123.41	150.97	182.63
	<b>13.91%</b>	<b>14.73%</b>	<b>15.36%</b>	<b>16.20%</b>	<b>17.09%</b>
D) Bank Interest (Term Loan )	7.75	12.85	9.30	5.76	2.22
ii) Interest On Working Capital	5.27	5.27	5.27	5.27	5.27
E) Salary to Staff	8.84	9.73	10.70	11.77	12.95
F) Selling & Adm Expenses Exp.	33.41	41.06	48.22	65.22	80.13
<b>TOTAL (D+E)</b>	<b>55.28</b>	<b>68.91</b>	<b>73.50</b>	<b>88.02</b>	<b>100.56</b>
<b>H) NET PROFIT</b>					
	22.20	31.93	49.91	62.94	82.06
	<b>4.0%</b>	<b>4.7%</b>	<b>6.2%</b>	<b>6.8%</b>	<b>7.7%</b>
I) Taxation	5.55	9.58	14.97	18.88	24.62
<b>J) PROFIT (After Tax)</b>	<b>16.65</b>	<b>22.35</b>	<b>34.94</b>	<b>44.06</b>	<b>57.45</b>

**COMPUTATION OF MANUFACTURING OF SURGICAL N95 MASK**

Items to be Manufactured Surgical N 95 Mask

Manufacturing Capacity per day		9,600	Pcs
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		28,80,000	Pcs
Year		Capacity	SURGICAL N95 MASK
		Utilisation	
I		40%	11,52,000
II		45%	12,96,000
III		50%	14,40,000
IV		55%	15,84,000
V		60%	17,28,000

**COMPUTATION OF RAW MATERIAL**

Item Name	Quantity of Raw Material	Unit	Unit Rate of	Total CostPer Annum (100%)
PP Spun Bond Non woven Fabrics	40,000.00	Kg	150.00	60,00,000.00
Melt Blown Non Woven Fabric	35,000.00	Kg	2,200.00	7,70,00,000.00
Activated Carbon sheet Roll	30,000.00	Kg	150.00	45,00,000.00
Exhalation Valve	28,80,000.00	Pcs	3.00	86,40,000.00
Consumables and Packaging Material	lumsun			20,00,000.00
<b>Total</b>				<b>9,81,40,000.00</b>

Total Raw material in Rs lacs	981.40
Cost per Mask at 100% Capacity	34.00

Raw Material Consumed	Capacity Utilisation	Rate	Amount (Rs.)
I	40%	34.00	391.68
II	45%	36.00	466.56
III	50%	38.00	547.20
IV	55%	40.00	633.60
V	60%	42.00	725.76

**COMPUTATION OF CLOSING STOCK & WORKING CAPITAL**

PARTICULARS	I	II	III	IV	V
<b>Finished Goods</b>					
(10 Days requirement)	16.32	19.46	22.85	26.48	30.36
<b>Raw Material</b>					
(15 Days requirement)	19.58	23.33	27.36	31.68	36.29
<b>Closing Stock</b>	<b>35.90</b>	<b>42.79</b>	<b>50.21</b>	<b>58.16</b>	<b>66.64</b>

**COMPUTATION OF WORKING CAPITAL REQUIREMENT**

Particulars	Amount	Margin(25%)	Net Amount
Stock in Hand	35.90		
Less:			
Sundry Creditors	9.14		
<b>Paid Stock</b>	<b>26.76</b>	<b>6.69</b>	<b>20.07</b>
Sundry Debtors	37.12	9.28	27.84
<b>Working Capital Requirement</b>			<b>47.91</b>
Margin			15.97
MPBF			47.91
<b>Working Capital Demand</b>			<b>47.91</b>

**BREAK UP OF LABOUR**

Particulars	Wages		Total	
	Per Month	No of Employees	Salary	
Supervisor	20,000.00	1	20,000.00	
Plant Operator	15,000.00	1	15,000.00	
Skilled Worker	12,000.00	12	1,44,000.00	
Unskilled Worker	10,000.00	12	1,20,000.00	
Helper	6,000.00	1	6,000.00	
Security Guard	7,500.00	2	15,000.00	
			3,20,000.00	
Add: 10% Fringe Benefit			32,000.00	
Total Labour Cost Per Month			3,52,000.00	
Total Labour Cost for the year ( In Rs. Lakhs)		29	42.24	

**BREAK UP OF SALARY**

Particulars	Salary		Total	
	Per Month	No of Employees	Salary	
Manager	15,000.00	1	12,000.00	
Accountant cum store keeper	15,000.00	1	15,000.00	
Sales	10,000.00	4	40,000.00	
Total Salary Per Month			67,000.00	
Add: 10% Fringe Benefit			6,700.00	
Total Salary for the month			73,700.00	
Total Salary for the year ( In Rs. Lakhs)		6	8.84	

**COMPUTATION OF DEPRECIATION**

Description	Land	Building/shed	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		10.00%	15.00%	10.00%	
Opening Balance	Leased		-	-	-
Addition	-	16.75	180.00	1.50	198.25
	-	16.75	180.00	1.50	198.25
IDCP & Pre Operative Exp		0.67	7.24	0.06	8.48
TOTAL		17.42	187.24	1.56	206.73
Less : Depreciation	-	1.74	28.09	0.16	29.98
WDV at end of 1st year	-	15.01	159.15	1.40	176.74
Additions During The Year		-	-	-	-
	-	15.01	159.15	1.40	176.74
Less : Depreciation	-	1.50	23.87	0.14	25.51
WDV at end of IIrd Year	-	13.51	135.28	1.26	151.23
Additions During The Year		-	-	-	-
	-	13.51	135.28	1.26	151.23
Less : Depreciation	-	1.35	20.29	0.13	21.77
WDV at end of IIIrd year	-	12.16	114.99	1.14	129.46
Additions During The Year		-	-	-	-
	-	12.16	114.99	1.14	129.46
Less : Depreciation	-	1.22	17.25	0.11	18.58
WDV at end of IV year	-	10.94	97.74	1.02	110.88
Additions During The Year		-	-	-	-
	-	10.94	97.74	1.02	110.88
Less : Depreciation	-	1.09	14.66	0.10	15.86
WDV at end of Vth year	-	9.85	83.08	0.92	95.02

**REPAYMENT SCHEDULE OF TERM LOAN**

11.0%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	145.00	-	145.00	3.99	-	145.00
	Iind Quarter	145.00	-	145.00	3.99	-	145.00
	IIIrd Quarter	145.00	-	145.00	3.99	8.06	136.94
	Ivth Quarter	136.94	-	136.94	3.77	8.06	128.89
				15.73	16.11		
II	Opening Balance						
	Ist Quarter	128.89	-	128.89	3.54	8.06	120.83
	Iind Quarter	120.83	-	120.83	3.32	8.06	112.78
	IIIrd Quarter	112.78	-	112.78	3.10	8.06	104.72
	Ivth Quarter	104.72	-	104.72	2.88	8.06	96.67
				12.85	32.22		
III	Opening Balance						
	Ist Quarter	96.67	-	96.67	2.66	8.06	88.61
	Iind Quarter	88.61	-	88.61	2.44	8.06	80.56
	IIIrd Quarter	80.56	-	80.56	2.22	8.06	72.50
	Ivth Quarter	72.50	-	72.50	1.99	8.06	64.44
				9.30	32.22		
IV	Opening Balance						
	Ist Quarter	64.44	-	64.44	1.77	8.06	56.39
	Iind Quarter	56.39	-	56.39	1.55	8.06	48.33
	IIIrd Quarter	48.33	-	48.33	1.33	8.06	40.28
	Ivth Quarter	40.28	-	40.28	1.11	8.06	32.22
				5.76	32.22		
V	Opening Balance						
	Ist Quarter	32.22	-	32.22	0.89	8.06	24.17
	Iind Quarter	24.17	-	24.17	0.66	8.06	16.11
	IIIrd Quarter	16.11	-	16.11	0.44	8.06	8.06
	Ivth Quarter	8.06	-	8.06	0.22	8.06	-
				2.22	32.22		
	Door to Door Period	60	Months				
	Moratorium Period	6	Months				
	Repayment Period	54	Months				

**CALCULATION OF D.S.C.R**

<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b><u>CASH ACCRUALS</u></b>	46.63	47.86	56.71	62.64	73.30
Interest on Term Loan	7.75	12.85	9.30	5.76	2.22
Total	54.39	60.71	66.01	68.40	75.52
<b><u>REPAYMENT</u></b>					
Repayment of Term Loan	16.11	32.22	32.22	32.22	32.22
Interest on Term Loan	7.75	12.85	9.30	5.76	2.22
Total	23.86	45.07	41.53	37.98	34.44
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.28</b>	<b>1.35</b>	<b>1.59</b>	<b>1.80</b>	<b>2.19</b>
<b>AVERAGE D.S.C.R.</b>			1.78		

<b>COMPUTATION OF SALE</b>					
<b>Particulars</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
Op Stock	-	38,400.00	43,200.00	48,000.00	52,800.00
Production	11,52,000.00	12,96,000.00	14,40,000.00	15,84,000.00	17,28,000.00
	11,52,000.00	13,34,400.00	14,83,200.00	16,32,000.00	17,80,800.00
Less : Closing Stock(10 Days)	38,400.00	43,200.00	48,000.00	52,800.00	57,600.00
Net Sale	11,13,600.00	12,91,200.00	14,35,200.00	15,79,200.00	17,23,200.00
Sale Price per pcs	50.00	53.00	56.00	59.00	62.00
Sale (in Lacs)	556.80	684.34	803.71	931.73	1,068.38



**COMPUTATION OF ELECTRICITY**

<b>(A) POWER CONNECTION</b>			
Total Working Hour per day		Hours	8
Electric Load Required		HP	40
Load Factor			0.7460
Electricity Charges		per unit	7.50
Total Working Days			300
<b>Electricity Charges</b>			<b>5,37,120.00</b>
Add : Minimim Charges (@ 10%)			
<b>(B) DG set</b>			
No. of Working Days		300	days
No of Working Hours		0.5	Hour per day
Total no of Hour		150	
Diesel Consumption per Hour		8	
Total Consumption of Diesel		1,200	
Cost of Diesel		65.00	Rs. /Ltr
Total cost of Diesel		0.78	
Add : Lube Cost @15%		0.12	
Total		0.90	
Total cost of Power & Fuel at 100%			6.27
Year		Capacity	Amount (in Lacs)
I		40%	2.51
II		45%	2.82
III		50%	3.13
IV		55%	3.45
V		60%	3.76

<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>	556.80	684.34	803.71	931.73	1,068.38
Less : Op. WIP Goods	-	16.32	19.46	22.85	26.48
Add : Cl. WIP Goods	16.32	19.46	22.85	26.48	30.36
<b>Total Sales</b>	<b>573.12</b>	<b>687.48</b>	<b>807.10</b>	<b>935.36</b>	<b>1,072.26</b>
<b>Variable &amp; Semi Variable Exp.</b>					
Raw Material & Tax	391.68	466.56	547.20	633.60	725.76
Electricity Exp/Coal Consumption at 85%	2.13	2.40	2.66	2.93	3.20
Wages & Salary at 60%	30.65	36.25	44.44	50.78	55.86
Selling & administrative Expenses 80%	26.73	32.85	38.58	52.18	64.10
ii) Interest On Working Capital	5.27	5.27	5.27	5.27	5.27
Other Overheads & Consumables	27.84	34.22	40.19	46.59	53.42
Repair & Maintenance	1.39	6.84	8.04	9.32	10.68
<b>Total Variable &amp; Semi Variable Exp</b>	<b>485.69</b>	<b>584.39</b>	<b>686.37</b>	<b>800.66</b>	<b>918.29</b>
<b>Contribution</b>	<b>87.43</b>	<b>103.09</b>	<b>120.73</b>	<b>134.70</b>	<b>153.97</b>
<b>Fixed &amp; Semi Fixed Expenses</b>					
Electricity Exp/Coal Consumption at 15%	0.38	0.42	0.47	0.52	0.56
Wages & Salary at 40%	20.43	24.17	29.62	33.85	37.24
Interest on Term Loan	7.75	12.85	9.30	5.76	2.22
Depreciation	29.98	25.51	21.77	18.58	15.86
Selling & administrative Expenses 20%	6.68	8.21	9.64	13.04	16.03
<b>Total Fixed Expenses</b>	<b>65.23</b>	<b>71.16</b>	<b>70.81</b>	<b>71.75</b>	<b>71.90</b>
<b>Capacity Utilization</b>	<b>40%</b>	<b>45%</b>	<b>50%</b>	<b>55%</b>	<b>60%</b>
<b>OPERATING PROFIT</b>	<b>22.20</b>	<b>31.93</b>	<b>49.91</b>	<b>62.94</b>	<b>82.06</b>
<b>BREAK EVEN POINT</b>	<b>30%</b>	<b>31%</b>	<b>29%</b>	<b>29%</b>	<b>28%</b>
<b>BREAK EVEN SALES</b>	<b>427.59</b>	<b>474.57</b>	<b>473.41</b>	<b>498.27</b>	<b>500.74</b>

**FINANCIAL INDICATORS**

<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
TURNOVER	556.80	684.34	803.71	931.73	1,068.38
GROSS PROFIT	77.48	100.83	123.41	150.97	182.63
<b>G.P. RATIO</b>	<b>13.91%</b>	<b>14.73%</b>	<b>15.36%</b>	<b>16.20%</b>	<b>17.09%</b>
NET PROFIT	22.20	31.93	49.91	62.94	82.06
<b>N.P. RATIO</b>	<b>4.0%</b>	<b>4.7%</b>	<b>6.2%</b>	<b>6.8%</b>	<b>7.7%</b>
CURRENT ASSETS	85.85	95.14	101.72	112.40	131.90
CURRENT LIABILITIES	57.05	58.80	60.68	62.70	64.85
<b>CURRENT RATIO</b>	<b>1.50</b>	<b>1.62</b>	<b>1.68</b>	<b>1.79</b>	<b>2.03</b>
TERM LOAN	128.89	96.67	64.44	32.22	-
TOTAL NET WORTH	64.65	71.00	85.94	108.00	141.44
<b>DEBT/EQUITY</b>	<b>1.99</b>	<b>1.36</b>	<b>0.75</b>	<b>0.30</b>	<b>-</b>
TOTAL NET WORTH	64.65	71.00	85.94	108.00	141.44
TOTAL OUTSIDE LIABILITIES	197.94	175.36	145.24	115.28	85.47
<b>TOL/TNW</b>	<b>3.06</b>	<b>2.47</b>	<b>1.69</b>	<b>1.07</b>	<b>0.60</b>
PBDIT	65.21	75.56	86.26	92.55	105.41
INTEREST	13.02	18.12	14.57	11.03	7.49
<b>INTEREST COVERAGE RATIO</b>	<b>5.01</b>	<b>4.17</b>	<b>5.92</b>	<b>8.39</b>	<b>14.08</b>
WDV	176.74	151.23	129.46	110.88	95.02
TERM LOAN	128.89	96.67	64.44	32.22	-
<b>FACR</b>	<b>1.37</b>	<b>1.56</b>	<b>2.01</b>	<b>3.44</b>	<b>-</b>

PLANT & MACHINERY

PARTICULARS	QTY.	RATE	AMOUNT IN RS.
Fully Automatic N95 Mask Making Production Line	1	1,60,00,000.00	1,40,00,000.00
Mask Packaging machine	1	12,00,000.00	12,00,000.00
Amount			1,52,00,000.00
GST			27,36,000.00
Net Amount			1,79,36,000.00
Net Amount(Rounded Off)			1,80,00,000.00

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