

# Auto Tubes and Flaps

|                                 |  |
|---------------------------------|--|
| PRODUCT CODE                    | : 374894000  |
| QUALITY AND STANDARDS           | : Auto Tubes and Flaps envisaged in the project will be made as per Consumers Specifications   |
| PRODUCTION CAPACITY (PER ANNUM) | : (a) Auto Tubes 1,50,000 numbers<br>(b) Auto Flaps 1,00,000 numbers   |
| MONTH AND YEAR OF PREPARATION   | : January, 2003  |
| PREPARED BY                     | : Small Industries Service Institute<br>4th Floor, Harsiddha Chambers, Ashram Road, Ahmedabad-380 014.<br>Phone Nos. 27540619, 27544248, 27543147<br>E-mail : sisiabd@guj.guj.nic.in |

## INTRODUCTION

The manufacture of auto tubes and flaps is possible well within the investment limit of small-scale industries and a good number of such units are working successfully in different parts of the country. Automobile continues to be the most popular conveyance for the masses and this is going to be so also for a long time to come. In a developing country like India, automobile forms an important mode of transport.

## MARKET POTENTIAL

As auto continues to be the most popular mode of transport both in urban and rural areas, the demand for auto tubes and flaps is likely to increase day-by-day. Moreover, this is a labour intensive type of unit and can be located in rural areas solving rural unemployment problem, Small Scale Auto Tubes and flaps units can also function as ancillaries to establish large scale manufacturers.

## BASIS AND PRESUMPTIONS

1. The estimates are drawn for a production capacity generally considered techno-economically viable for a model type of manufacturing activity.
2. The information supplied is based on standard type of manufacturing activities, utilizing conventional techniques of production.
3. The cost in respect of land and building, machinery and equipment, raw materials and the selling price of the finished products etc. are those generally obtained at the time of the preparation of the Project Report.
4. Where as some names of manufacturers/suppliers of machinery and equipments, raw materials are indicated at the end of the profile, these are by no means exclusive or exhaustive.

## IMPLEMENTATION SCHEDULE

In the project, land and building has been taken as rented and as such there is no problem of acquisition of land and other formalities. The entire plant and machinery and other equipments have to be purchased and installed. It may take about 3 to 6 months on an average for a concern to go into regular production.

## TECHNICAL ASPECTS

### Process of Manufacture

Auto tubes are manufactured by moulding method. First of all rubber along with other materials is properly mixed in the two roller mill or a ban bury mixer. This compounded rubber is fed into the extruder and the rubber compound takes the shape of long tube, then proper length of this green tube is cut and tube valve is fitted in this green tube and the end of the tubes are jointed by means of butt joining machine. This green tube is vulcanized in the mould having air pressure inside. After proper vulcanizing it is tested by filling specific amount of air inside for leakage, if any.

Auto flaps are manufactured by the pressure moulding technique in the mould, after making the rubber compound on a two roll mixing mill.

## FINANCIAL ASPECTS

### A. Fixed Capital

#### (i) Land and Building

|              |                      |
|--------------|----------------------|
| Total Area   | 250 Sq. m.           |
| Covered Area | 100 Sq. m.           |
| Rent         | Rs. 10,000 per month |

#### (ii) Machinery and Equipments

| Sl. No. | Description   | Nos. | Value (Rs) |
|---------|---|------|------------|
| i.      | Rubber mixing mill 14" x 36" complete with reduction gear, safety devices, chilled cast iron roll with 20 H.P. 3 Phase motor. | 2    | 5,00,000   |
| ii.     | Tube extrusion unit complete with reduction gear, size 6" dia with 10 H.P. motor.   | 1    | 75,000     |
| iii.    | Tube molding units complete with hydraulic  | 4    | 4,00,000   |
| iv.     | Valve tightening machine complete with electric motor and other accessories.  | 1    | 10,000     |
| v.      | Valve nut punching machine.   | 1    | 15,000     |
| vi.     | Air removing machine complete with accessories.   | 1    | 40,000     |
| vii.    | Air compressor complete with 15 HP motor.   | 1    | 40,000     |
| viii.   | Moulding units for flaps complete with Hydraulic pump and other controls.   | 2    | 1,50,000   |
| ix.     | Boiler rating capacity 150 kg./hr at 150 psi pressure complete with all accessories and pump                                  | 1    | 2,50,000   |
| x.      | Weighing balance and miscellaneous tools.   | 2    | 40,000     |
|         | 1. Thickness gauge tester   |      | 2,000      |
|         | 2. Hardness tester  |      | 5,000      |
|         | 3. Tensile testing  |      | 40,000     |
|         | 4. Compression testing apparatus  |      | 5,000      |
|         | 5. Impact tester  |      | 10,000     |
|         | 6. Abrador  |      | 10,000     |
|         | 7. Ross flex machine  |      | 10,000     |
|         | 8. Ageing block   |      | 20,000     |
| xi.     | Electrification and installation charges @ 10% of cost of machinery and equipment.  |      | 1,49,000   |
| xii.    | Cost of office equipments/ working table etc.   |      | 20,000     |
| xiii.   | Transformer and accessories   |      | 1,00,000   |
|         | Total cost of machinery and equipment   |      | 18,61,000  |
|         | Total fixed capital   |      | 18,61,000  |

## B. Working Capital

### (i) Personnel Salary and Wages (per month)

| Designation                   | No. | (Rs.)  |
|-------------------------------|-----|--------|
| Manager                       | 1   | 4,000  |
| Accountant/Storekeeper        | 1   | 2,500  |
| Clerk-cum-Typist              | 1   | 2,500  |
| Peon                          | 2   | 3,000  |
| Watchman                      | 1   | 1,500  |
| Technical Staff               |     |        |
| Supervisor                    | 1   | 2,500  |
| Skilled workers               | 10  | 15,000 |
| Unskilled workers             | 5   | 7,500  |
| Total                         |     | 38,500 |
| Perquisites @ 15% of Salaries |     | 5,775  |
| Total                         |     | 44,275 |
| Say                           |     | 44,200 |

### (ii) Raw Materials Including Packaging Requirement (per month)

| Particulars                                     | Indigenous/<br>Imported | Qty.<br>Kg.    | Rate<br>pe kg.<br>(Rs.) | Value<br>(Rs.) |
|---|-------------------------|----------------|-------------------------|----------------|
| 1. Smoked Natural Rubber                        | Ind.                    | 8000           | 40                      | 3,20,000       |
| 2. Synthetic Rubber                             | do                      | 2000           | 80                      | 1,60,000       |
| 3. China Clay                                   | do                      | 2000           | 2                       | 4,000          |
| 4. Carbon Black                                 | do                      | 1000           | 20                      | 20,000         |
| 5. Stearic Acid                                 | do                      | 150            | 2                       | 6,3000         |
| 6. Zinc Oxide                                   | do                      | 300            | 70                      | 21,000         |
| 7. Sulphur                                      | do                      | 200            | 20                      | 4,000          |
| 8. Valve Fitting                                | do                      | 14,000<br>Nos. |                         | 10,000         |
| 9. Processing Oil                               | do                      |                |                         | 2,000          |
| 10. Chemicals like Accelerator antioxidant etc. | Ind.                    |                |                         | 8,000          |
| 11. Packing material and other expenses         | do                      |                |                         | 9,000          |
| Total   |                         |                |                         | 5,64,300       |

| (iii) Utilities (per month) | (Rs.)  |
|-----------------------------|--------|
| I. Power                    | 10,000 |
| II. Fuel                    | 10,000 |
| III. Water                  | 2,000  |
| Total                       | 22,000 |

| (iv) Other Contingent Expenses (per month) (Rs.) | (Rs.)  |
|--|--------|
| Rent   | 10,000 |
| Postage and Stationery                           | 1,000  |
| Telephone  | 1,000  |
| Advertisement and Publicity                      | 5,000  |
| Transport charges                                | 10,000 |
| Consumable stores                                | 2,000  |
| Repairs and Maintenance                          | 2,000  |
| Insurance  | 1,000  |
| Taxes Miscellaneous expenditure                  | 1,500  |
| Sales expenses                                   | 2,000  |
| Total  | 35,500 |

| (v) Total Recurring Expenditure (per month) (Rs.) | (Rs.)    |
|---|----------|
| Staff and Labour                                  | 34,500   |
| Raw Materials                                     | 5,64,300 |
| Utilities   | 22,000   |
| Other Contingent Expenses                         | 36,000   |
| Total   | 6,56,800 |

(vi) Total Working Capital (3 months basis)  
Rs. 19,70,400

## Total Capital Investment

|                      |               |
|----------------------|---------------|
| (i) Fixed            | Rs. 18,61,000 |
| (ii) Working Capital | Rs. 19,70,400 |
| Total                | Rs. 38,31,400 |

## Machinery Utilization

The proposed project is based on single shift basis with 8 hours working. Effective working hours will be 6 hours per day/shift. On an average 75% machine utilisation is assumed per shift.

## FINANCIAL ANALYSIS

| 1. Cost of Production (per year)               |                  | (Rs.) |
|--|------------------|-------|
| Total Recurring Cost (per year)                | 78,81,600        |       |
| Depreciation on machineries and equipment @10% | 1,86,100         |       |
| Depreciation on office equipment @ 20%         | 4,800            |       |
| Interest on total investment @ 14%             | 5,36,396         |       |
| <b>Total</b>                                   | <b>86,08,896</b> |       |
| <b>Say</b>                                     | <b>86,08,896</b> |       |

### 2. Turnover (per year)

| Item         | Qty.     | Rate (Rs.) | Values (Rs.)       |
|--------------|----------|------------|--------------------|
| Tubes        | 1,50,000 | 50         | 75,00,000          |
| Flap         | 1,00,00  | 25         | 25,00,000          |
| <b>Total</b> |          |            | <b>1,00,00,000</b> |

### 3. Net Profit (per year)

$$\begin{aligned} \text{Profit} &= \text{Turnover} - \text{Cost of production} \\ &= \text{Rs. } 1,00,00,000 - \text{Rs } 86,08,800 \\ &= \text{Rs. } 13,91,200 \end{aligned}$$

### 4. Net Profit Ratio

$$\begin{aligned} &= \frac{\text{Net Profit per year} \times 100}{\text{Turn Over}} \\ &= \frac{13,91,100 \times 100}{1,00,00,000} \\ &= 13.9\% \end{aligned}$$

### 5. Rate of Return

$$\begin{aligned} &= \frac{\text{Net Profit Per year} \times 100}{\text{Total investment}} \\ &= \frac{13,91,100 \times 100}{38,31,400} \\ &= 36.3\% \end{aligned}$$

### 6. Break-even Point (% of Total Production Envisaged)

| (i) Fixed Cost   | (Rs.)    |
|--|----------|
| (a) Depreciation on machinery and equipment              | 1,86,100 |
| (b) Depreciation on office equipment                     | 4,800    |
| (c) Interest on total capital investment @ 14% per annum | 5,36,396 |
| (d) Rent of building                                     | 1,20,000 |

| Fixed Cost  | (Rs.)            |
|---|------------------|
| (e) Insurance   | 12,000           |
| (f) 40% of salary and wages                                       | 1,65,600         |
| (g) 40% of other contingent expenses including Rent and insurance | 1,20,000         |
| <b>Total</b>  | <b>11,44,896</b> |
| <b>Say</b>  | <b>11,44,900</b> |

### (ii) Net Profit (per year)

$$\begin{aligned} \text{B.E.P.} &= \frac{\text{F.C.} \times 100}{\text{F.C.} + \text{Profit}} \\ &= \frac{11,44,900 \times 100}{25,36,000} \\ &= 45.10\% \end{aligned}$$

## Addresses of Machinery and Equipment Suppliers

1. M/s. Premier Industries  
Station Road, Sirhind,  
Punjab.
2. M/s. Anant Industries  
Basis Road, Sirhind,  
Punjab.
3. M/s. Anant Corporation  
Railway Road, Sirhind,  
Punjab.
4. M/s. Sunrise Industries  
Railway Road, Sirhind,  
Punjab.
5. M/s. Rubbermac Industries  
Outer bye pass, Sirhind,  
Punjab.
6. M/s. Sohal Engg. Works  
Off. Haines Road,  
Mumbai-140003.
7. M/s. Modern Tyre Moulds India (P)  
Ltd.  
Bhagat Singh Street,  
Paharganj,  
New Delhi-110055.

## Addresses of Raw Material Suppliers

### 1. *Rubber Chemicals*

- i. I.C.I. India Ltd.  
Post Box No. 310  
Crescent House,  
Ballard Estate,  
Mumbai.
- ii. M/s. Bayer India Ltd.  
Nagin Mahal,  
Veer Nariman Road,  
Mumbai.
- iii. M/s. Monsanto Chemicals of  
India Ltd.  
318, Asaf Ali Road,  
New Delhi

### 2. *Carbon Black*

- i. M/s. United Carbon India Ltd.  
133, Mahatma Gandhi Road,  
Mumbai
- ii. M/s. Phillips Carbon black Ltd.  
Udyog Bhawan, Ballard Estate,  
Mumbai

### 3. *Process Oil*

- M/s. Indian Oil Co.  
Unity Building, J.G Road,

Banglore.

### 4. *Zinc Oxide*

M/s. Kamani Metallic Oxide Pvt. Ltd.  
Nicols Road, Kamani Chamber,  
Mumbai.

### 5. *Mineral Fillers and Synthetic Rubber*

M/s. Kila Chand Deva Chand Co.  
Pvt. Ltd.  
Rubber Division, 7,  
Jamshed Ji Tata Road,  
Mumbai.

### 6. *Stearic Acid*

M/s. Godrej Soaps (P) Ltd.  
3/6, Delise Road,  
Mumbai.

### 7. *Rubber (Natural)*

Rubber Board, Kottayam,  
Kerala.

### 8. *Tripur forest Development Corporation*

Agartala.

### 9. *Synthetic Rubber (SBR)*

M/s. Synthetics and Chemicals,  
Bareilly, U.P.