

AUTOMOBILE LAMPS

1. INTRODUCTION

Auto lamps are an absolute necessity in automobiles of any type. Lamps being a consumable item, the replacement market is highly attractive for quality products. With the explosive in the automobile sector in the country, the replacement market is growing at a phenomenal rate. Lamps are required in headlights, rear lights, dashboards, inside the vehicle cabin, sides, above the number plate etc.

2. RAW MATERIALS

Flaring tube, exhaust tube, glass rod, shells, filaments, electrodes, aluminium caps, argon gas.

3. MANUFACTURING PROCESS

Glass shells are made for different types of bulbs in the unit itself by heating the glass bulbs and blowing with the help of dies. Shells of bigger size for automobile bulbs can be purchased readymade. Filament is mounted between two wires of the dumet wire fixed on a glass stem. Glass shell is sealed on the stem. Air inside the shell is exhausted on exhaust bench and inert gas is filled and sealed. Metallic cap is fixed and the bulb is tested. The process essentially consists of the following steps:

1. Glass shell washing & drying
2. Glass tube and rod cutting
3. Flaring of the tube
4. Stem making
5. Pig tailing of leads to support the filament
6. Mounting of filaments.
7. Gettering of the filament to prevent oxidation
8. Sealing of the stem to the shell
9. Vacuuming the shell to remove air
10. Testing and aging
11. Capping

12. Soldering
13. Final testing as per IS:3628-1966

4. MANPOWER REQUIREMENT : 20 Nos

5. PROJECT COST

A. Fixed Capital	In Rs.
Land & Building	Rented
Plant & Machinery	2,50,000
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B. Working Capital (per month)	
Raw Material & Packing	60,000
Utilities	6,000
Salary & wages	50,000
Other expenses	10,000
	1,26,000
Total (A+B)	3,76,000

6. COST OF PRODUCTION / ANNUM

Raw materials etc. (per annum)	15,12,000
Depreciation on machinery	25,000
Interest on investment	75,000
Total	16,12,000

7. PROFITABILITY

Sales turnover	20,00,000
Operating expenses	16,12,000
Annual profit	3,88,000

Percentage of profit on investment / sales 62%

Market potential:

With the increase in automobile industry in the country, this product has a very good demand. The product has original equipment market as well as replacement market. Quality branded electrical products are not readily available in the market and the potential of carving a niche definitely exists. Export potential is also bright.

Annual Production capacity : Rs. 20,00,000/-

List of Plant, Machinery & equipment :

- 1 Glass tube cutting machine
- 2 Semi automatic flaring machine
- 3 Manifold exhaust bench with gas filling arrangement
- 4 Sealing machine
- 5 Double stage vacuum pump
- 6 Filament mounting machine
- 7 Spot welder

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