

## BARE & INSULATED COPPER CONDUCTOR

### 1. INTRODUCTION

The project is envisaged for the production of bare and insulated copper wire and strips. These items are mainly used by electrical industries for the manufactures of power and distribution transformers, Electric motors, Generators etc.

### 2. RAW MATERIALS

Bare copper rod, Fiberglass yarn, Synthetic enamel, Insulating varnish etc.

### 3. MANUFACTURING PROCESS

The electrolytic copper wire having purity of 99.9 % is used for the manufacture of bare and insulated copper conductor. The main raw materials like copper rods, synthetic enamel, insulating varnish etc., are available indigenously where as fiberglass tapes & polyester yarn have to be imported. The drawing, rolling and annealing are the main process involved in the manufacture of bare copper conductors. For the manufacture of enameled wire, copper wires or strips of required sizes are coated with synthetic enamel by passing through vertical enameling plant. The no of passes depends on the requirements of coating thickness. The fiberglass covered and varnish bonded copper conductors are produced by passing enameled copper wire or strip through horizontal glass covering machine. Fiberglass enameled wire is the impregnated with insulating varnish and dried. After obtaining quality results the furnish product is rewound on wooden bobbins and then packed for dispatch.

### 4. MANPOWER REQUIREMENT : 22 Nos

### 5. PROJECT COST

Total fixed capital	54,25,000.00
Working capital for 3 months	1,08,00,000.00

**Total:** **1,62,25,000.00**

## 6. COST OF PRODUCTION

	Amt (Rs)
1) Staff and labour	13,51,000.00
2) Raw Materials	3,92,10,000.00
3) Utilities	1,52,000.00
4) Other expenditure	10,80,000.00
5) Deprn. on machinery @ 10% P.A.	4,77,500.00
6) Deprn. on Dies & tools @ 25% P.A.	50,000.00
7) Deprn. on furniture and office equipment	20,000.00
8) Interest on total capital @ 15% P.A.	24,33,600.00
<b>Total</b>	<b>4,61,42,100.00</b>

## 7. PROFITABILITY

Total turn over	5,04,00,000.00
Cost of production	4,61,42,000.00
Profit	42,58,000.00

Break even point	8.44 %
Return on Investment	26.24 %

**Market potential :**

The demand for electric power is increasing year after year. After the liberalisation of economic policy, private sectors including foreign firms are allowed to take up power projects which was hitherto reserved for the public sector. Further, more thrust is now given for the power and infrastructure development. As a result of this it is expected that there will be considerable improvement in the power generation in the country. The demand for electrical machinery and equipment is also bound to go up with the easy availability of power in the coming years. As such it is considered that there is scope for setting up of small scale industries for the manufacture of copper conductors.

**Annual Production capacity : 360 MT**

**List of Plant, Machinery & equipment :**

- 1) Tandem bull block wire drawing machine with accessories
- 2) Wire pointing machine
- 3) Batt welding machine
- 4) Vacuum pot annelar
- 5) Strip rolling machine
- 6) Horizontal fiberglass covering machine
- 7) Vertical strip and wire enamelling plant
- 8) Cheese winding machine
- 9) Die polishing machine
- 10) Hoist
- 11) Platform weighing balance
- 12) Diesel generator