

# POWER CAPACITORS

## 1. INTRODUCTION

Low tension power capacitors are used in LT power installations to improve the overall system power factor. The product tends to improve the efficiency of power systems and thus contribute to the better utilisation of power thus contributing to conservation. Power capacitors are increasingly finding use in rural electrification as well as urban areas.

## 2. RAW MATERIALS

Condensor tissue paper, aluminium foil, chlorinated diphenyl, MS sheet, cans, pressphan paper etc.

## 3. MANUFACTURING PROCESS

The tissue paper and aluminium foil is wound alternatively on the foil winding machine and the core assembly is done. The stack is then pressed with MS plates and assembled before the leads are soldered on. The whole assembly is then housed in the can which is then vacuumised. Thereafter, chlorinated diphenyl is filled in the cans and the whole unit is sealed. Testing is done and the product is checked for quality. IS 2834-1964 is applicable for the product.

## 4. MANPOWER REQUIREMENT : 10

## 5. PROJECT COST

<b>A. Fixed Capital</b>	<b>Rs.</b>
Land & Building	Rented
Plant & Machinery	3,50,000
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<b>B. Working Capital ( per month)</b>	
Raw Material & Packing	75,000
Utilities	2,000
Salary & wages	22,000
Other expenses	3,000

	1,02,000
<b>Total (A+B)</b>	<b>4,52,000</b>

## 6. COST OF PRODUCTION / ANNUM

	(Rs.)
Raw materials etc. ( per annum )	12,24,000
Depreciation on machinery	35,000
Interest on investment	80,000

**13,39,000**

## 7. PROFITABILITY

Sales turnover	15,00,000
Operating expenses	13,39,000
Annual profit	1,61,000
Percentage of profit on investment / sales	25%

### Market potential :

The market potential of this item is showing an upward trend in view of various measures taken by the State Govts. and the Govt. of India in order to conserve the electrical energy. Improvement of power factor is considered to be one of the most vital factors in energy conservation. Some of the State Govts. have made obligatory to connect the L T capacitors before connect the I T capacitors before connecting the supply. The requirement of this item is expected to be very much encouraging.

### Annual Production capacity :

It is envisaged to produce goods worth Rs.15,25,000/-

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

- 1 Vacuum impregnation plant
- 2 Foil winding machine
- 3 Air conditioner with accessories
- 4 Drilling machine
- 5 Hand drilling machine
- 6 Bench grinder
- 7 Welding set
- 8 Spot welder
- 9 Sheet bending machine
- 10 Hand shear
- 11 Baking oven
- 12 High Voltage tester 2.5 K.V.
- 13 Insulation Tester Multirange
- 14 D.C over voltage tester.
- 15 Discharge device tester
- 16 Auto transformer 500 volts
- 17 Ammeters, Volt meter, Watt meters of different ranges, Power factor meter, capacitance bridge.



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