PROJECT PROFILE FOR THE MANUFACTURE OF

L.T. CONTROL PANEL

PART-I

PRODUCT : **L.T. CONTROL PANEL**

QUALITY & STANDARD : IS: 8623-1977.

MONTH & YEAR : December, 2013.

OF PREPARATION

PREPARED BY :

ELECTRICAL DIVISION
MSME - Development Institute,
Ministry of Micro, Small & Medium Enterprises,
Government of India
107, Industrial Estate, Kalpi Road,
Kanpur-208012.

Tele. 2295070, 2295071 & 2295073 (EPBAX)
Tele. No. 2295072 (SENET & TRC)

Tele/Fax No.: 0512- 2240143
Email: dcdi-kanpur@dcmsme.gov.in
Website: msmedikanpur.gov.in

PART-II

A. INTRODUCTION:

Control Panel as the name implies, are used to provide proper control of operations of any electrical equipments. These are also used to protect the electrical equipments from being damaged due to various faults like short circuit, overload and earth leakage etc.

B. MARKET POTENTIAL:

With the rapid electrification and industrialisation and by virtue of being a functionally integral part of all electrical equipments like Motor, Generator, Transformer, Motor Control Centre, Incinerator etc. the control panel has get immense scope. The phased increase in power generation and transmission has by itself necessitated increased production of electrical equipments thereby creating a good scope for the control panel.

C. BASIS & PRESUMPTION:

1. The basis for calculation of production capacity is on single shift basis, working of 25 days per month of 75% efficiency.
2. B.E.P. for the profile has been calculated on full capacity.
3. Rate of interest has been taken as 15% per annum on an average. This however, is likely to vary depending upon the financial outlay and the location of the unit.
4. Labour & wages have been taken on the basis of minimum applicable. These are likely to vary depending on location of the unit.
5. Rental charges of Rs.20/- per sq. mtr. P.m. has been taken on an average. This may also vary depending on place to place.
6. Margin money requirement differs from project to project and type of entrepreneurs such as women, SC/ST physically handicapped etc. and the minimum margin money asked by the banks and financial institutions are 15%. Margin money up to 25% in some cases is also asked. The entrepreneur may check the margin money requirement from the financial corporation for the project.
7. Terms of loan differ from one financial institution to another and in general minimum gestation period is normally 06 months and it could be two years. Maximum period for repayment of load is 7 years including gestation period. The exact terms and conditions may be found by the individual from the concerned agency.
8. The cost of plant & machinery as indicated in the scheme are approximate. The entrepreneur may check the exact price for specific mark and model of the machine selected.
9. Non-refundable deposits, cost of preparation of project report etc. may be considered under pre-operative expenses.
10. The provision made in other respects viz; raw materials, utilities, overheads etc. are drawn on the basis of standard variation and output. The cost indicated against each are approximate and based on local market conditions and observations.

D. IMPLEMENTATION SCHEDULE:

It is estimated that from the conception of the project to commercial production, it may take about two years including purchase of machineries, errection and commissioning, recruitment of staff and all clearance from different agencies like DIC, Financial Institutions, Banks, Pollution Control Board, State Electricity Board etc.

E. TECHNICAL ASPECTS:

1. Process Outline

The Control Panel is sheet metal fabricated in closure open, semi-enclosed or totally enclosed type, which provide and control electric power to equipment and appliances. Provision for indicating electrical parameters like voltage, current, frequency, power factor etc. will be available on the face of the panel. Regulation of the power supply is also possible with the help of auto transformer switches and circuit breaker.

The sheet metal enclosure for the Control Panel is designed and fabricated in the unit. The components are bought out from the reputed sources and fitted at appropriate places on the panel as per manufacturers design. The circuit as per the design is laid out and the control panel is tested for the proper functioning as per relevant specifications.

2. Quality Control

The LT Control Panel shall be tested as per IS:8623-1977 regarding technical aspects.

3. Production Capacity (per annum):

LT Control Panel of a short range - 300 Nos. per year.

4. Approximate Motive Power Requirement: 20 KVA

5. Pollution Control Requirement:

No Objection Certificate is required to obtained from DIC level.

6. Energy Conservation Requirement:

The product under question itself plays vital role in energy conservation. The suitable tripping devices in case of automatic tripping devices etc. is required to be provided to minimize the unwanted use of electricity.

F. TECHNICAL ASPECTS:

1. **Land & Building** **Rented**

Built up Area 150 Sq metres @ Rs.30/- per sq. mtrs. P.M. **Rs. 4,500/-**

2. Machinery & Equipment:

Sl. No.	Description of Machines	Quantity	Rate (Rs.)	Value (Rs.)
1.	Hand Operated Sheet Bending Machine	1	20,000/-	20,000/-
2.	Guillotine Shearing Machine 1200mm	1	50,000/-	50,000/-
3.	Drilling Machine 15mm & 25mm Cap.	1	15,000/-	15,000/-
4.	Bench Grinder 200mm dia wheel	1	7,000/-	7,000/-
5.	Arc Welding Transformer 300 Amp	1	20,000/-	20,000/-
6.	Gas Welding Equipment	1	40,000/-	40,000/-
7.	Hand Shearing Machine	1	5,000/-	5,000/-
8.	Power Hacksaw Machine 150mm	1	10,000/-	10,000/-
9.	Air Compressor with Spray Gun	1	15,000/-	15,000/-
10.	Flexible Shaft Grinder	1	10,000/-	10,000/-
11.	Portable Drilling Machine 15mm capacity	1	10,000/-	10,000/-
12.	Fly Press No.8	1	10,000/-	10,000/-
13.	Coil Winding Machine Hand Operated	1	5,000/-	5,000/-
14.	Baking Oven (600X600X 600mm)	1	15,000/-	15,000/-
15.	Tools, Dies etc.	LS	15,000/-	15,000/-
			Total:	**2,32,000/-**

Testing Equipment:

1.	H.V. Tester 5KV	1	10,000/-	10,000/-
2.	Megger1000 DC	1	5,000/-	5,000/-
3.	Multimeter	2	3,000/-	6,000/-
4.	Portable Precision Volt Meter with range (0-500)Volts	1	1,500/-	1,500/-
5.	Loading Renostat 0-25 Amp	3	3,000/-	9,000/-
6.	L.C.R. Bridge	1	10,000/-	10,000/-
			Total:-	**41,500/-**

C. Electrification & Installation charges 15,200/-

D. Furniture & Office Equipment including work bench etc.
@ 10% of cost of machinery. 27,000/-

Total:- **3,20,000/-**

3. Working Capital (per month):

i) Personnel:

Sl.No.	Designation	No.	Salary (Rs.)	Total (Rs)
	Technical			
1.	Manager-cum-Engineer	1	20,000/-	20,000/-
2.	Supervisor	1	12,000/-	12,000/-
3.	Electrician	2	8,000/-	16,000/-
4.	Skilled Workers	4	8,000/-	32,000/-
5.	Welders	2	8,000/-	16,000/-
6.	Helpers	2	3000/-	6,000/-
	Administrative			
7.	Cashier-cum-Accountant	1	5,000/-	5,000/-
8.	Clerk-cum-Typist	1	4,000/-	4,000/-
9.	Store Keeper	1	4,000/-	4,000/-
10.	Peon-cum-Watchman	1	3,000/-	3,000/-
			Total:	**1,18,000/-**
	Perquisites @15%			**17,700/-**
			Total:	**1,35,700/-**

ii) Raw Material

Sl. No.	Particular	Ind/Imp	Qty.	Rate (Rs.)	Value (Rs)
1.	MS Sheet Angles flats	Ind.	2.5MT	30000/MT	75,000/-
2.	Instruments, Control Accessories	Ind.	25 Sets	10000/Set	2,50,000/-
3.	Terminal Strip Fuse Units etc.	Ind.	LS	-	50,000/-
4.	Hardware items like Bolts, Nuts, Hinges, Spring etc.	Ind.	LS	-	15,000/-
5.	Wiring materials insulating materials etc.	Ind.	LS	-	20,000/-
				Total:	**4,10,000/-**

iii) Utilities:

Power	5,000/-
Water	1,000/-
Rent	4,500/-
Total:	**10,500/-**

iv) Other Contingent Expenses:

1.	Postage & Stationery	2,000/-
2.	Telephone	2,000/-
3.	Repair & Maintenance	2,000/-
4.	Transport Charges	5,000/-
5.	Advertisement & Publicity	2,000/-
6.	Misc. expenses	2,000/-
	Total:	**15,000/-**

4. Total Working Capital(per month)

(i) + (ii) + (iii) + (iv) **= Rs. 5,71,000/-**

5. Total Working Capital for 3 months basis = Rs.17,13,000/-

6. Total Capital Investment:

1.	Fixed Capital	3,20,000/-
2.	Working Capital on 3 month basis	17,13,000/-
	Total:	**20,33,000/-**

G. MACHINERY UTILISATION

The bottle necking operation in manufacturing operation of L.T. Control Panel is in spray painting shop and where it is sent for baking. The baking process takes time and accordingly the capacity of the plant is reduced.

H. FINANCIAL ANALYSIS:

1. Cost of Production (per year)

i) Cost of Production (Per Annum))

Sl. No.	Particulars	Value(Rs.)
1.	Total Recurring Expenditure	68,52,000/-
2.	Depreciation on machinery and equipment @10% p.a.	27,350/-
3.	Depreciation on Office equipment, Tools etc. @ 20% p.a.	48,000/-
4.	Interest on Total Capital Investment @ 15% p.a.	3,04,950/-
	Total: -	**72,32,350/-**

ii) Turnover (Per Annum)

Sl. No.	Item	Value (Rs.)
1.	By sale of 300 L.T. Control Panel @ Rs.27,000/- average	**81,00,000/-**

iii) NET PROFIT (Per Month)

Turn Over	(-)	Cost of Production	=	**8,68,000/-**
81,00,000	(-)	72,32,000/-		

iv) PROFIT RATIO ON SALES (Per Month):

Profit/month X 100	8,68,000/- X 100	=	**10.7%**
Turnover/month	81,00,000/-		

v) RATE OF RETURN (Per Annum):

Net Profit/12X 100	8,68,000 X 100	=	**42%**
Total Capital Investment	20,33,000/-		

BREAK EVEN POINT

Fixed Cost (Per Annum):

1.	Depreciation on machinery & equipments, Tools, Office Equipment etc.	Rs.	75,350/-
2.	Rent	Rs.	54,000/-
3.	Interest on Investment @ 15%	Rs.	3,04,950/-
4.	40% of Salary & Wages	Rs.	6,51,000/-
5.	40% of other contingent expenditure	Rs.	72,000/-
	Total:-	**Rs.**	**11,57,300/-**

B.E.P.

Annual Fixed Cost X 100	11,57,300X 100	**=**	**57%**
Annual Fixed Cost + Profit	11,57,300 + 8,68,000		

Names & Address of Machinery & Equipment Suppliers:

1. M/s Atlas Works Pvt. Ltd., 110, Rippon Street, Calcutta – Gen. Machine
2. M/s Compressed Machinery Corpn., Sunil Sadan M.I. Road, Jaipur – Spray Painting
3. M/s Joshi Engg. Co., India Place, N Block, Cannaught Place, New Delhi – Coil Winding Machine
4. M/s Automatic Electric Ltd., Rectifier House P.B. No.703, Mumbai.
5. M/s Toshniwal Bros. (P) Ltd., M.G. Road, Ajmer.

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