

PROJECT PROFILE
ON
PVC CABLE

NAME OF THE PRODUCT : PVC CABLE.

QUALITY & STANDARD : PVC Cable for working voltage up to 1100 Volts are tested as per BIS Specification No. 694-1977.
(1) IS: 5831 – 1970 - PVC Insulation & Sheath.
(2) IS: 8130 – 1970 – Conductors for insulated electric cables.

PRODUCTION CAPACITY : **QUANTITY : 36,000 PVC Coils of 100 mtrs.**
VALUE : Rs.54,00,000/-

MONTH & YEAR OF PREPARATION : October, 2011.

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1. INTRODUCTION:

PVC Cables are used for power distribution in all types of electrical wiring, control cables, Telephone cables and signaling in Railways. With the development of industrial sector and with increase in power generation the demand of the cable is going to be more.

2. MARKET POTENTIAL:

This product has got a very good scope in the present market. With the rural development programme embark upon by the Government of India and various States spell out vast scope of cables. Small scale sector in India occupy a significant role in the cable industry. More than 50% L.T. cable is manufactured in small scale sector.

3. BASIS & PRESUMPTIONS:

- i) The basis for calculation of production capacity has been taken on single shift basis on 75% efficiency.
- ii) The maximum capacity utilization on single shift basis for 300 days a year. During first year and second year of operations the capacity utilization is 60% and 80% respectively. The unit is expected to achieve full capacity utilization from the third year onward.
- iii) The salaries and wages, cost of raw materials, utilities, rents etc. are based on the prevailing rates in and around Kanpur. These cost factors are likely to vary with time and location.
- iv) Interest on term loan and working capital loan has been taken at the rate of 16% on an average. This rate may vary depending upon the policy of the financial institutions/agencies from time to time.
- v) The cost of machinery and equipments refer to a particular make / model and prices are approximate.
- vi) The break-even point percentage indicated is of full capacity utilization.

- vii) The project preparation cost etc. whenever required could be considered under pre-operative expenses.
- viii) The essential production machinery and test equipment required for the project have been indicated. The unit may also utilize common test facilities available at Electronics Test & Development Centres (ETDCs) and Electronic Regional Test Laboratories (ERTLs) and Regional Testing Centres (RTCs).

Implementation Schedule:

The major activities in the implementation of the project has been listed and the average time for implementation of the project is estimated at 12 months:

	Period (in months)
1. Preparation of project report	1
2. Registration and other formalities	1
3. Sanction of loan by financial institutions	3
4. <u>Plant & Machinery</u>	
a) Placement of orders	1
b) Procurement	2
c) Power connection/Electrification	2
d) Installation /Erection of Machinery/Test Equipment	2
5. Procurement of raw materials	2
6. Recruitment of Technical Personnel etc.	2
7. Trial Production	11
8. Commercial production	12

Note:

1. Many of the above activities shall be initiated concurrently.
2. Procurement of raw materials commences from the 8th month onwards.
3. When imported plant and machinery are required, the implementation period of project may vary from 12 months to 15 months.

TECHNICAL ASPECTS:**1. PROCESS OF MANUFACTURE:**

E.C. Grade Aluminium wire of the required size is fed into the Extruder where in PVC is coated on the wire to the specified thickness. The extruded wire after passing through the cooling tank is coiled on the take off system. The wire is coiled into the length of 100 metres and tested as per IS specification.

2. QUALITY CONTROL & STANDARDS:

The Bureau of Indian Standard has laid down specifications:

1. IS: 694 – 1977 PVC insulated cables for working voltage up to and including 100 volts (second revision)
2. IS: 5831 – 1970 PVC insulation & sheath of Electric Cables.
3. IS: 8130 – 1976 Conductors for insulated Electric Cables and flexible coils.

3. PRODUCTION CAPACITY PER ANNUM:

Quantity : 36000 coils of 1.5 sq. mm average size of wire.
Value : Rs. 54,00,000/-

4. MOTIVE POWER : 20 K.W.**5. POLLUTION CONTROL:**

No Objection Certificate is required from concerned agencies.

6. ENERGY CONSERVATION:

Better conductivity material is required to be used for PVC Cable manufacturing to avoid voltage drop and resulting in energy loss.

FINANCIAL ASPECTS

(A) Fixed Capital

(i) Land and Building

Covered area of about 1000 sq. mtrs. @ Rs.250/- per sq. mtr.	Rs, 2,50,000/-
Construction of Working Shed.	Rs. 1,00,000/-
Total:	Rs. 3,50,000/-

(ii) MACHINERY AND EQUIPMENT:

S. No.	Particulars	Qty.	Rate (Rs.)	Value (Rs.)
1.	PVC Extruder and Wire Coating Machine 50 mm complete with cooling through supply stand take up unit control panel with Automatic Temperature indicator controller and electrical motors.	1	1,90,000/-	1,90,000/-
2.	Wire Straightening equipment	1	6,000/-	6,000/-
3.	Cable Printing Machine	1	6,000/-	6,000/-
4.	Measuring & Coiling Machine	1	30,000/-	30,000/-
5.	Extrusion Dies, KNOZZLES etc.	L.S.	15,000/-	15,000/-
	<u>Testing Equipments</u>			
6.	Spark Tester (0 to 11 KV)	1	20,000/-	20,000/-
7.	Vernier Micrometer 0.25 mm least count 0.001 mm	2	1,000/-	2,000/-
8.	Travelling Microscope 0.100 mm least count 0.001 magnification 10X	1	3,000/-	3,000/-
9.	Chemical Balance 0.200 gm Least measure 0.1 mg	1	2,000/-	2,000/-
10.	Kalvin's Double Bridge	1	14,000/-	14,000/-
11.	Tensile testing machine capacity 50 – 100 Kg.	1	35,000/-	35,000/-
12.	Electrically heater thermostatically controlled Air cooled Oven, size 450 mm X 450 mm temperature ranges up to 200+1°C.	1	15,000/-	15,000/-
13.	Pressure test apparatus (for Hot deformation)	1	500/-	500/-
14.	High Voltage test set AC (0 to 10 KV)	1	15,000/-	15,000/-
	Total:			3,53,000/-
	Electrification & installation charges @ 10% of plant & machinery			35,000/-
	Cost of office equipment etc.			10,000/-
	Misc. tools & dies etc.			20,000/-
	Grand Total:			4,18,000/-
	Total Fixed Capital (I + II):			7,68,000/-

WORKING CAPITAL (Per Month):**(i) Personnel (Per Month)**

S.No	Description	No.	Salary (Rs.)	Total (Rs.)
1.	Engineer-cum-Manager	1	3,500/-	3,500/-
2.	Supervisor	1	2,000/-	2,000/-
3.	Sales Officer	1	2,000/-	2,000/-
4.	Skilled Workers	2	1800/-	3,600/-
5.	Semi Skilled Workers	5	1,200/-	6,000/-
6.	Unskilled Workers	2	1,000/-	2,000/-
7.	Peon-cum-Watchman	1	1,000/-	1,000/-
			Total:	21,600/-
			+ Perquisites @ 15%	3,240/-
			Total:	24,840/-

(ii) Raw Material (Per Month):

Sl. No	Description with Specification	Qty.	Rate (Rs.)	Value (Rs.)
1.	E.C. Grade Aluminium Wire	2 MT	80000/MT	1,60,000/-
2.	PVC Compound (Cable Grade)	3.2 MT	60000/MT	1,92,000/-
3.	Packing material	3000	1/Coil	3,000/-
			Total:	3,55,000/-

(iii) Utilities Per Month:

Electricity & Water charges Rs. 2,000/-

(iv) Other Contingent Expenses (Per Month):

Sl. No.	Particulars	Rs.	Total
1.	Postage & Stationery	Rs.	500/-
2.	Repair & Maintenance	Rs.	500/-
3.	Transport & packaging	Rs.	1,000/-
4.	Advertisement	Rs.	1,000/-
5.	Misc. expenses	Rs.	500/-
	Total:	Rs.	3,500/-

TOTAL RECURRING EXPENDITURE (Per Month):

Sl.No.	Particulars	Rs.	Total
i	Personnel (Salary & Wages)	Rs.	24,840/-
ii	Raw Material	Rs.	3,55,000/-
iii	Utilities	Rs.	2,000/-
iv	Other Contingent Expenses	Rs.	3,500/-
Total:		Rs.	3,85,340/-

Working Capital for 3 months: Rs.3,85,340 X 3 = Rs. 11,56,020/-

TOTAL CAPITAL INVESTMENT:

Sl.No.	Particulars	Rs.	Total
i)	Fixed Capital	Rs.	7,68,000/-
ii).	Working Capital for 3 months	Rs.	11,56,020/-
Total:		Rs.	19,24,000/-

Machinery Utilisation:

The bottle necking operation for manufacture of PVC cable is in stranding of cable accordingly the capacity utilisation shall be reduced.

FINANCIAL ANALYSIS:**Cost of Production (Per Annum):**

Sl.No.	Particulars	Rs.	Total
1.	Total Recurring Cost per year	Rs.	46,20,000/-
2.	Depreciation on Machinery & Equipments @ 10%	Rs.	35,000/-
3.	Depreciation on Office equipment and hand tools @ 20%	Rs.	6,000/-
4.	Interest on Total Capital Investment @ 16%	Rs.	2,88,600/-
Total:		Rs.	49,50,600/-
Say:		Rs.	49,50,000/-

TURN OVER (PER ANNUM):

<u>Item</u>	<u>Qty. (Nos.)</u>	<u>Rate (Rs.)</u>	<u>Total Sales</u>
PVC Cable of average 1.5 sq. mm size	36,000 coils of 100 mtrs. Length each coil	150/- per coil of 100 mtrs. Length each coil	Rs. 54,00,000/-

PROFIT PER ANNUM (Before Taxes)

Profit =	Turn over	(-)	Cost of Production		
	54,00,000/-	(-)	49,50,000/-	=	Rs. 4,50,000/-

NET PROFIT RATIO:

<u>Net profit X 100</u>	<u>4,50,000/- X 100</u>		
Turn Over	49,50,000/-	=	9.09%

RATE OF RETURN:

<u>Net profit X 100</u>	<u>4,50,000/- X 100</u>		
Total Investment	19,24,000/-	=	23.58%

BREAK EVEN POINT:**Fixed Cost (Annual):**

1	Depreciation on Machinery & equipments @ 10%	Rs.	35,000/-
2	Depreciation on Office equipment & hand tools @ 20%	Rs.	6,000/-
3	Depreciation on Building	Rs.	17,500/-
4	Interest on Total Capital Investment @ 16%	Rs.	2,88,600/-
5	40% of Salary & Wages	Rs.	7,72,800/-
6	40% Other contingent Expenses	Rs.	26,400/-
Total:		Rs.	4,92,732/-

Break Even Point:

<u>Fixed Cost X 100</u>	<u>4,92,732/- X 100</u>		
Fixed Cost + Profit	4,92,732/- + 4,50,000/-	=	52.2%

Additional Information:

- a. The Project Profile may be modified/tailored to suit the individual entrepreneurship qualities/capacity, production programme and also to suit the locational characteristics wherever applicable.
- b. The electrical Technology is undergoing rapid strides of change and there is need for regular monitoring of the national and international technology scenario. The unit may, therefore, keep abreast with the new technologies in order to keep them in pace with the developments for global competition.
- c. Quality today is not only confined to the product or service alone. It also extends to the process and environment in which they are generated. The ISO 9000 defines standards for Quality Management systems and ISO 14001 defines standards for Environmental Management system for acceptability at international level. The unit may therefore adopt these standards for global competition.
- d. The margin money recommended is 25% of the working capital requirement at an average. However, the percentage of margin money may vary as per bank's discretion.

Addresses of Machinery & Equipment Suppliers:

1. NSIC Limited,
Okhla Industrial Area, New Delhi. 110020.
2. International Plastic Engineers,
A-78, Wazirpur Industrial Area, New Delhi – 110052.
3. Golden Engg. Works,
797, Sidapura Crossing, Rani Jhansi Road, New Delhi – 110015.
4. Primco Plastic Machinery Pvt. Ltd.,
Plot No. 55, Govt. Industrial Estate, Char Kop, Kandivli (West) Mumbai – 400067.
5. Rectifiers & Electronics,
1/3, DLE Industrial Area, Nazafgarh Road, New Delhi – 110015.
6. Automatic Electric Ltd.,
570, Naigeum Cross Road, Wadale, P.O. Box 7103, Mumbai – 400031.
7. Zosan Trading Agency,
Box No. 6657, Bandra, Mumbai – 400 050.
8. Blue Star Ltd.,
91, Nehru Place, New Delhi.

Addresses of Raw Materials & Spares Suppliers:

1. National Organic Chemical Industries Ltd.,
Bank of Baroda Building, Parliament Street, New Delhi.
2. Shri Ram Chemical Industries Ltd., Shri Ram Nagar, Kota.
3. Calico Plastic Ltd., Anil Chamber, Mumbai.
