Hot Cases

PRODUCT CODE (ASICC)	:	77729
QUALITY AND STANDARDS	:	IS 4150 : 1967 IS 302 : 1979 IS 4185 : 1967
Production Capacity	:	Qty. : 12000 Nos. (per annum) Value : Rs. 54,00,000
YEAR OF PREPARatioN	:	2002 _ 2003
PREPARED BY		Small Industries Service Institute Bamuni Maidan Guwahati_781021 (Assam) and Office of the Development Commissioner Small Scale Industries, Electrical and Electronics Division, 7th Floor, Nirman Bhavan, New Delhi - 110 011.

Introduction

In the present era, domestic electrical appliances are very popular. These are convenient and time saving. Hot case is also a domestic electrical appliance and used to keep the food warm for a longer period.

Market Potential

Now-a-days domestic electrical appliances are not longer considered as luxury items. Hence, these items are preferred by most of the families. In some parts of India temperature remains low in whole year, so hot case plays vital role for these places to keep the food warm. Therefore, hot cases have wide scope and also good scope for export to other countries.

Basis and 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 onwards.

iii) The salaries and wages, cost of raw materials, utilities, rents, etc. are based on the prevailing rates in and around Guwahati. 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 15% 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 and 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:

Sl. No.	***Activity***	***Period (In Months)***
1.	Preparation of project report	1
2.	Registration and other formalities	1
3.	Sanction of loan by financial institutions	3
4.	Plant and Machinery:	
	a) Placement of orders	1
	b) Procurement	2
	c) Power connection/ Electrification	2
	d) Installation/Erection of machinery/Test	2

	Equipment	
5.	Procurement of raw materials	2
6.	Recruitment of Technical Personnel etc.	2
7.	Trial production	11
8.	Commercial production	12

Notes

1. Many of the above activities shall be initiated concurrently.

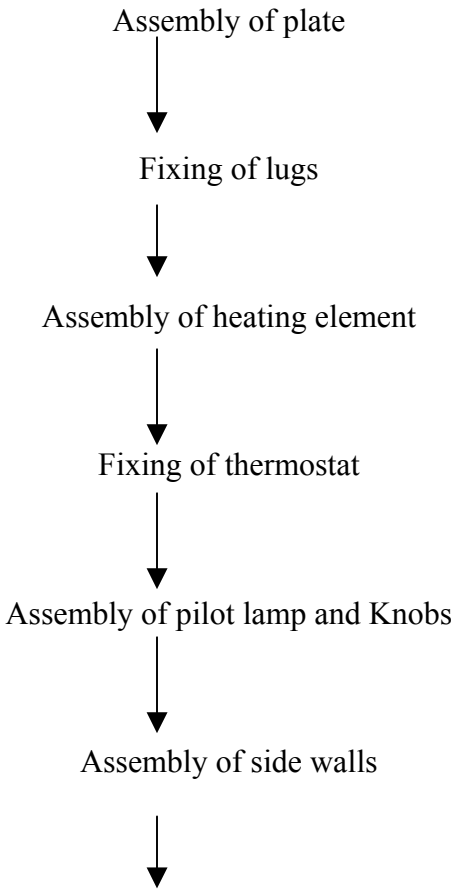
2. Procurement of raw materials commences from the 8th month onwards.

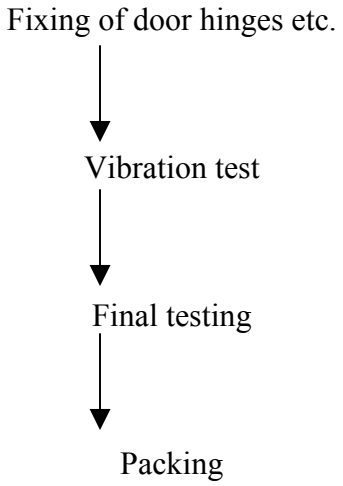
3. When imported plant and machinery are required, the implementation period of project may vary from 12 months to 15 months.

Technical Aspects

Process of Manufacture

The sequence of operation of assembly of hot cases is as under:





Quality Control and Standards

Quality of a product plays a vital role in survival and growth of an industry. Quality control in the manufacturing of domestic electrical appliances keeping in view the risk involved in using the substandard items. Government has also introduced the quality control order insisting the manufacturers of domestic electrical appliances to manufacture products as per specification. The IS specification followed while manufacturing hot cases are;

IS 4150 : 1967

IS 302 : 1977

IS 4185 : 1967

Production Capacity (per annum)

Quantity : 12,000 Nos.

Value : Rs. 54,00,000

Motive Power 5 kVA.

Pollution Control

The Government accords utmost importance to control environmental pollution. The small-scale entrepreneurs should have an environmental friendly attitude and adopt pollution control measures by process modification and technology substitution.

India having acceded to the Montreal Protocol in September, 1992, the production and use of Ozone Depleting Substances (ODS) like Chlorofluore Carbon (CFCs), Carbon Tetrachloride, Halons and methyl Chloroform etc. need to be phased out immediately with alternative chemicals/solvents. A

notification for detailed Rules to regulate ODS phase out under the Environment Protection Act, 1986 have been put in place with effect from 19th July 2000.

Energy Conservation

With the growing energy needs and shortage coupled with rising energy cost, a greater thrust in energy efficiency in industrial sector has been given by the Govt. of India since 1980s. The Energy Conservation Act, 2001 has been enacted on 18th August 2001, which provides for efficient use of energy, its conservation and capacity building of Bureau of Energy Efficiency created under the Act.

The following steps may help for conservation of electrical energy:

i) Adoption of energy conserving technologies, production aids and testing facilities.

ii) Efficient management of process/manufacturing machineries and systems, QC and testing equipments for yielding maximum Energy Conservation.

iii) Optimum use of electrical energy for heating during soldering process can be obtained by using efficient temperature controlled soldering and de soldering stations.

iv) Periodical maintenance of motors, compressors etc.

v) Use of power factor correction capacitors. Proper selection and layout of lighting system; timely switching on-off of the lights; use of compact fluorescent lamps wherever possible etc.

Financial Aspects

A. Fixed Capital

(i) Land and Building

600 Sq. mt. - Value Rs. 3,40,000

(ii) Machinery and Equipments

Sl. No.	Name of item	Qty.	Value (Rs.)
1.	Oven	1	20000
2.	Grinder	1	5000
3.	Drilling machine (portable) 1/2"	1	5000
4.	Gas welding equipment with accessories	1	7500
5.	Welding transformer 500 Amp.	1	7500
6.	Spray painting eqpt. with spray gun and Other accessories	1	12000

7.	Sheet cutting machine	1	20000
8.	Sheet bending machine	1	3800
	Total		**80,800**

Testing Equipments

Sl. No.	**Name**	**Qty.**	**Value (Rs.)**
1.	Multimeter (Digital)	1	5000
2.	Megger 1000 volt DC	1	7500
3.	Variable Auto X-mer 0-440 volt 100 Amp	1	3000
4.	High voltage tester 0-10 kV	1	10000
5.	Testing panel with Ammeter, voltmeter and Multimeter	1	10000
	Total		**35,500**
(A)	*Electrification and installation charge approximately 10% of machinery and eqpt. Cost*		11630
(B)	*Cost of office eqpt. Working tables etc.*		15000
(iii)	**Pre-operative expenses (Project cost, Non-refundable deposit), if any**		**5000**
	Total		**31,630**

Total Fixed Capital		**(Rs.)**
1)	Land and building	3,40,000
2)	Machinery and equipments	1,16,000
3)	Preliminary and prospective expenses such as Consultancy fees, electricity bill, tools etc.	31,630
	Total	4,87,930

B. Working Capital

(i) Personnel: Salary and Wages (per month)

(a) Staff and Labour

Sl. No.	**Name of staff**	**No.**	**Salary (Rs.)**	**Total (Rs.)**
1.	Manager	1	4000	4000
2.	Clerk/Store keeper	1	2500	2500

3.	Accountant	1	3000	3000
4.	Peon	1	1200	1200
		Total		10,700

(b) Technical Man Power

Sl. No.	**Name**	**No.**	Salary (Rs.)	Total (Rs.)
1.	Supervisor	1	3500	3500
2.	Skilled worker	3	2500	7500
3.	Un-skilled worker	8	1500	12000
4.	Semi-skilled worker	8	2000	16000
5.	Helper	5	1200	6000
		Total		**45000**
	Perquisites @ 15%			*6750*
		Total		51750

(ii) Raw Material (per month)

Sl. No.	**Name of item**	**Qty.**	**Rate (Rs.)**	**Total (Rs.)**
1.	Thermostat	1000	40/ PC	40,000
2.	Switches	1000	15/ PC	15,000
3.	Element	1000	60/ PC	60,000
4.	M.S. Sheet	2000 kg	20/ kg	40,000
5.	Aluminum Sheet	800 kg	65/ kg	52,000
6.	Pilot lamp	1000	5/ PC	5,000
7.	Handles	1000	20/ PC	20,000
8.	Connector with flexible cord	1000		
9.	Insulation material	LS	50/ set	50,000
10.	Hardware	LS		
11.	Misc. items (Paints) etc.	LS		
		Total		2,82,000

(iii)	**Utilities (per month)**	**(Rs.)**
(1)	Electricity	3,000
(2)	Water	500

(3)	Gas etc.	1,000
	Total	**4,500**

(iv) Other Contingent Expenses (per month)	**(Rs.)**
Postage and stationery	3,500
Repair and maintenance	4,000
Transport	3,000
Advt. and publicity	10,000
Insurance	1,000
Total	**21,500**

(v)	**Total Recurring Expenses (per month)**	**(Rs.)**
1)	Personnel	64,055
2)	Raw material	2,82,000
3)	Utilities	4,500
4)	Other contingent expenses	21,500
	Total	**3,72,055**

C. Total Capital Investment

Fixed capital	Rs. 4,87,930
Working capital (for 3 months)	Rs. 11,16,165
Total	**Rs. 16,04,095**

Financial Analysis

(i)	**Cost of Production (per year)**	**(Rs.)**
(1)	Cost of production (recurring cost)	44,64,660
(2)	Depreciation on machinery, fixtures and eqpt. 10% of total cost	11,630
(3)	Depreciation on office eqpt. @ 20%	3,000
(4)	Interest on total investment @ 15%	2,40,614
	Total	**47,19,904**

(2) Turnover (per annum)

Sl.	**Item**	**Otv.**	**Rate (Rs.)**	**Total**

No.		(Nos.)		(Rs.)
1.	Hot case	12000	450	54,00,000

(3) Net Profit

= Sales - Cost of production

= Rs. 5400000 - 4719904

= **Rs. 6,80,096**

(4) Net Profit Ratio

$$= \frac{\text{Net profit} \times 100}{\text{Annual Turn over}}$$

$$= \frac{680096 \times 100}{5400000} = \textbf{12.59\%}$$

(5) Rate of Return on Total Capital Investment

$$= \frac{\text{Net profit} \times 100}{\text{Total capital investment}}$$

$$= \frac{680096 \times 100}{1604095} = \textbf{42.39\%}$$

(6) Break-even Point

Annual Fixed Cost	**(Rs.)**
1) Total depreciation	14630
2) Interest on investment	240614
3) 40% of personnel	25622
4) 40% of utilities	1800
5) 40% of other contingent expenses	8402
Total	**291068**

B.E.P

= Annual Fixed cost x 100

Annual Fixed cost + Annual profit

= 291068 x 100

291068+680096

= 291068x 100

--- = **29.9%**

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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 Raw Material Plant and Machinery Suppliers

1. M/s. Philips India Ltd.
68, Najafgarh Road, New Delhi.

2. M/s. Rajdhani Tele Products Pvt. Ltd.
F A Road, Kumarpara, Guwahati (Assam).

3. M/s. Assam Electricals Tinsukia (Assam).

4. M/s. Electronics Appliances Janna Bhavan, Asaf Ali Road,
New Delhi.

5. M/s. Prem Engineering Works Okhla Industrial Estate,
New Delhi.