

Neon Sign Boards

PRODUCT CODE (ASICC)	:	95489
QUALITY AND STANDARDS	:	As per Customers Specification
Production Capacity	:	Quantity: 120 Nos. (per annum) Value : Rs. 12,00,000
YEAR OF PREPARATION	:	2002 _ 2003
PREPARED BY	:	Small Industries Service Institute Kanjani Road, Ayyanthale, Thrissur_680003 and Office of the Development Commissioner Small Scale Industries, Electrical and Electronics Division, 7th Floor, Nirman Bhavan, New Delhi - 110 011.

Introduction

The Neon sign board is one of the most popular and attractive media of advertisement widely used by industrial and commercial firms to popularise their products among the general public. The neon sign board that is installed on tall buildings attracts the attention of people even from distant places and hence it is ideally suited for advertisement in busy places like big town and cities.

Market Potential

With the expansion of trade and industry the competition in every field is growing day by day. After liberalization of economic policy, variety of foreign goods are available every where at cheap rates creating tough competition for industrial and consumer goods in the local market and advertisement has become very essential for the success of any business activity. As such it is found to have scope for starting new small scale units for the manufacture of neon sign boards to meet the growing demand.

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 Thrissur. 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:

<i>Sl. No.</i>	<i>Activity</i>	<i>Period (In Months)</i>
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 Equipment	2
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 Neon tubular lamp that is used in the Neon Sign Board is a cold cathode type discharge lamp in which discharge takes place between two electrodes placed at the ends of the tube. In long tubular lamps used for advertisement purposes, several thousand volts is applied between electrodes for which supply is given through a high voltage transformer having high leakage reactance. The Neon lamp of different colours are used for advertisement purposes and the desired colour is produced either by filling lamp with suitable gas or by using glass tubes coated with suitable fluorescent material as per the requirements. Now a day's latter method is generally adopted for producing Neon lamp of different colours.

Quality Control and Standards

As per customers specification.

Production Capacity (per annum)

Quantity : 120 No.

Value : Rs. 1200000

Motive Power 10 kW.

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 Government 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 (Rented- per month)	(Rs.)
Built Area 75 sq.meters (Rented)	2000

(ii) Machinery and Equipments

Sl. No.	Description	Qty.	Price (Rs.)
1	Bombarding transformer 7.5 kVA 230/25000 V	1	30,000
2	Agency Transformer 15000 V.60 ma.	1	7,500
3	Vacuum pump 1 Micron	1	10,000
4	Gas Filling Unit	1	15,000

5	Gas plant (petrol, argon type)	1	15,000
6	High frequency Vacuum Tester	1	3,500
7	Tipping, Torches, Splicing torches, ribbon burners etc.	1	7,000
8	Hand sheering machine	1	15,000
9	Hand operated sheet bending machine	1	12,000
10	Arc welding Transformer 12 kVA	1	13,000
11	Spot welding machine 2 kVA	1	8,000
12	Bench Drilling machine 13 mm Dia	1	9,000
13	Bench Grinder	1	7,000
14	Wheel valves, pressure Gauges, hand tools	L.S.	15,000
Total			1,67,000
<i>Installation and Electrification charges</i>			15,000
<i>Work benches and Office equipment</i>			25,000
(iii) Pre operative expenses			10,000
Total Fixed Capital			2,17,000

B. Working Capital

Staff and Labour (per month)		(Rs.)
1	Manager cum proprietor	7,000
2	Neon sign Technician	4,000
3	Skilled worker	3,000
4	Semi-skilled worker	2,500
5	Helper	1,500
Total		18,000
<i>Perquisites @ 15% on Salaries</i>		2,700
Total		20,700
(ii) Raw Material (per month)		(Rs.)
1	Fluorescent coated Lead glass tube 8 mm to 12mm Dia 50 kgs @ Rs. 70 per kg	3,500
2	Lamp Electrodes 300 Nos. @ Rs.35per piece	10,500
3	High voltage Transformer 7500 V - O - 7500 V 450 VA 10 Nos @ Rs. 1400 per piece	14,000
4	Argon/Neon gas 5' litres @ Rs-1500 per ltr.	7,500
5	Acrylic Sheet 6'x4' 2 Nos @ Rs. 1000 per sheet	2000

6	M.S. Angle, Flat and Sheet 200 kgs @ Rs.20 per Kgs	4000
7	Hard ware materials L.S.	1000
8	Painting material L.S.	2500
9	Miscellaneous items	2500
	Total	47,500
	(iii) Utilities (per month)	(Rs.)
	Fuel SBP Spirit or Leaded petrol	2500
	Power	1,500
	Total	4000
	(iv) Other Contingent Expenditure (per month)	(Rs.)
1	Rent for Building	2,000
2	Postage and Stationery	500
3	Telephone Charges	1,500
4	Transport Charges	3,000
5	Sales expenses	1,000
6	Miscellaneous	500
	Total	8,500
	(v) Working Expenditure (per month)	(Rs.)
	Staff and Labour	20700
	Raw Materials	47500
	Utilities	4000
	Other Contingent Expenditure	8500
	Total	80,700
	(vi) Working Capital (for 3 Months)	242000

C. Total Capital Investment

(i) Total Fixed Capital	Rs. 217000
(ii) Working Capital (for 3 months)	Rs. 242000
Total	Rs. 459000

Financial Analysis

(1) Cost of Production (per year)	(Rs.)
1 Staff and labour	2,48,400
2 Raw materials	5,70,000

3	Utilities	48,000
4	Other Contingent Expenditure	1,02,000
5	Depreciation on Machinery and Equipment @ 10%	15,200
6	Depreciation on tools @ 25%	3,750
7	Depreciation on office furniture @ 20%	5,000
8	Interest on Capital Investment @ 15%	68,850
	Total	10,61,200

(2) Turnover (per year) (Rs.)

By way of selling Neon Sign boards including metal frames 120 Nos @ Rs. 10,000 piece 12,00,000

(3) Net Profit (per year)

(Rs.)

Total Sales Turnover	12,00,000
Cost of production	10,61,200
Total	1,38,800

(4) Net Profit Ratio

= Net profit × 100

Annual turnover

= 138800 × 100

1200000

= 11.56%

(5) Rate of Return

= Net profit × 100

Total capital Investment

= 138800 × 100

459000

= 30.2%

(6) Break-even Point

Fixed Cost	(Rs.)
1 Depreciation on machinery, Tools, work table and office furniture	23,950
2 Interest on Total Capital Investment	68850
3 40% of Salary and Wages	99,360
4 40% of Other Contingent expenses	50400
5 100% of Rent	24,000
Total	2,66,560

B.E.P.

$$= \text{Fixed cost} \times 100$$

$$\text{Fixed cost} + \text{Profit}$$

$$= 266560 \times 100$$

$$405360 = 66.7\%$$

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 and Equipment Suppliers

1. M/s. Transformer Manufacturing and Repairing Works, Vadanagar, North Gujarat.

2. M/s. Toshniwal Brothers (P) Ltd.
Mount Road, Chennai-32
3. M/s. Hind Vacuum Co. (P) Ltd.
B/92, Rajaji Nagar, Industrial Estate, Bangalore.
4. M/s. Gansons (P) Ltd.,
Mumbai-14
5. M/s. Key Engg. Works
16/A, Najafgarh Road, New Delhi-15
6. M/s. Malik Electrical (P) Ltd.
Mumbai-10
7. M/s. Rallis India Ltd. Chennai-1
8. M/s. National Neon Light, 6, Kennedy Street, Chennai-4
9. M/s. Central Scientific Co. Ramaspath, Nagpur-1
10. M/s. Benay Electrical , 34/1 Balligunge Circular Road, Kolkata-19
11. M/s. Union Scientific Syndicate P. O. Box No. 2484, Mumbai-2
12. M/s. P. J. Manson and Co.
King Street, The Brook, Chatnikent, England.

Addresses Raw Material Suppliers

1. M/s. Philips India Ltd.
Shivsagar Estate, Block 11-A, Dr. Annie Besant Road, Mumbai.
2. M/s. British Drug House Mumbai/Chennai.
3. M/s. Ashok Rubber Industries
106 B, Narkel Dange North Road, Kolkata.
4. M/s. National Neon Lights Chennai-4.
5. M/s. Leuchtaftwerk (India) (P) Ltd. Mumbai.
6. M/s. Electrical and Glass Products,
52-A, Sidhpuza Industrial Estate, 5.V. Road, Goregaon (West),
Mumbai-52.