PROJECT PROFILE

ON

ELECTRONIC GAS LIGHTERS

Month & Year
July 2010

PREPARED BY

TANSTIA-FNF SERVICE CENTRE
B-22, INDUSTRIAL ESTATE
CHENNAI-600032

Supported by

Friedrich Naumann STIFTUNG FÜR DIE FREIHEIT

ELECTRONIC GAS LIGHTERS

INTRODUCTION

Electronic gas lighters are used for lighting cooking gas (LPG). It is durable and economical in performance compared to mechanical and electrical lighters. It does not require battery for operation. It is reliable quick in action. It does not require any maintenance.

PRODUCT USES

There is no BIS standard for this product, however the following Specifications may be referred for quality:

IS 11514:1985 Piezo electric ceramic catridge for impact type of Gas Lighters.

IS 11519:1985 Piezo electric ceramic catridge for squeeze type of Gas Lighters.

IS 11013:1985 Piezo electric ceramic elements (Impact type and squeeze type) for Gas Lighters.

It is envisaged that the gas lighter will be able to perform the following operations:

1. To generate voltage above 10 KV.
2. Period of spark generation should not be less than 10 milli second.
3. The gas lighters must be able to operate more than 30000 times.

MARKET POTENTIAL

The demand for gas connections is increasing day by day with the number of households and the customers increasing rapidly. There are several private and Government gas suppliers in India. The Gas Lighters are frequently replaced items which have good demand.

The Government has directed Indian Oil, Bharat Petroleum and Hindustan Petroleum to clear the waiting list for domestic LPG connection. The road map is to increase the pace of new LPG connections by releasing 5.5 Crores new connection by 2015.

INSTALLED CAPACITY

The installed capacity of the unit is 100 lighters per day, which works out to 30000 lighters per annum. This is based on 300 days of working per annum and 8 hrs per day.

PLANT AND MACHINERY

S.No	Description	Qty-Nos	Value-Rs.
1	Precision type bench lathe-4.5 feet lathe	1	100000
2	Fly press	1	8000
3	Bench drilling machine1/2”	1	8000
4	Bench grinder	1	7000
5	Shearing machine -10X10	1	12000
6	Injection moulding machine	1	20000
7	Test bench with jigs	1	15000
8	Spot welding machine	1	25000
9	Dies, tools,moulds fixtures		25000
			220000

MANUFACTURING PROCESS

Sheet metal components/parts are being manufactured with the help of hacks, saw machines, hand press, drilling machine, spot welding machine, etc. Moulded components are made on injection moulding machine. The

metal turned parts are made on injection moulding machine. The metal turned parts are made on lathe machine. Assembly, on piezo electric ceramic cartridge along with sheet metal components/parts and moulded parts are carried out and fitted in M.S.tubing/cases. The complete assembled unit is tested for life cycle ignition before it is sent for packing and dispatch.

RAW MATERIALS

The Raw materials required for this process is given below:

Sl. No	Particulars	Qty
1.	Peizo electric ceramic cartridge/slug	30000 Nos
2.	Copper contacts	30000 sets
3.	M.S. Tubing	6000 Mtrs
4.	Spring	30000 Nos
5.	Plastic powder/granules	180 Kgs
6.	M.S. Strip	600 Kgs
7.	Hardware	30000 sets
8.	Packing materials	30000 sets

The average cost of raw material per set works out to be Rs.27 per set.

LAND & BUILDING

Built up area-Sq. ft	1500
Rent p.m.-Rs	15000
Advance-10 months. Rs	150000

UTILITIES

POWER:

The power requirement of the unit will be about 15 HP.

WATER:

Water is required for only human consumption.

MAN POWER:

Category	**Nos.**	**Monthly Salary**	**Total monthly Salary**
Skilled workers	3	6000	18000
Unskilled workers	2	4000	8000
Supervisors	1	8000	8000
			34000
Add : Benefits	20%		6800
Total			**40800**
Total wages per annum [Rs.lakhs]			Rs.4.90

IMPLEMENTATION SCHEDULE:

After arranging the finance the project can be implemented within a month's period

COST OF PRODUCTION & PROFITABILITY

ASSUMPTIONS

Installed capacity	30000 lighter per annum (100 lighters per day)
Capacity utilisation	Year-1 -60% Year -2 -70% Year-3 onwards- 80%
Selling price	Rs. 85 per lighter.
Raw materials	Rs. 8.10 lakhs at 100% capacity utilisation.
Power	Rs. 1.42 lakhs at 100% capacity utilisation.
Wages and salaries	Rs. 4.90 lakhs as per the break up given above with increase of 5% every year.
Repairs and Maintenance	Rs. 0.60 lakh per annum with annual increase of 10%.

Depreciation	Written down value method -15 % on machinery
Selling general and administrative expenses	Rs.2.40 lakhs for the first year with annual increase by 5% on every year.
Interest on Term loan	12% per annum
Interest on working capital	12 % per annum
Income tax	33.22 % on profits

LIST OF MACHINERY SUPPLIERS

1. Orient Machine Tools
   New No.269(old No.130) Linghi Chetty Street
   Chennai-600 001

2. Quality Machine Tools
   New 238 Linghi Chetty Strret
   Chennai 600 001.

3. Gujrat Machine Tools
   New 279, Linghi Chetty Street
   Chennai 600 001

4. Premier Machine Tools
   New 103 Armenian Street
   Chennai 600 001

5. Machine Centre
   New 214 linghi chetty Street
   Chennai 600 001

LIST OF RAW MATERIAL SUPPLIERS

1.Central Electronics Ltd. Industrial Area, Shahibabad, UP-For Piezo ceramics

2. Brisk Electro Sales Pvt Ltd, 394-A Lamingaton Road, Lamnigton Chambers, Mumbai-600004- Piezo ceramics

3. Keltron Crystals Ltd, Keltron Nagar, Mangatparamba,P.O Kallisseri,Cannanore-670562- Piezo ceramics

FINANCIAL ASPECTS

1. COST OF PROJECT

[Rs.lakhs]

Land & Building (Advance)	1.50
Plant & Machinery	2.20
Contingencies	0.50
Other Misc. assets	0.50
Pre-Operative expenses	0.50
Margin for WC	0.55
	5.75

2. MEANS OF FINANCE

Capital	3.73
Term Loan	2.03
	5.75

3. COST OF PRODUCTION & PROFITABILITY STATEMENTS

[Rs.lakhs]

Years	1	2	3

Installed Capacity/Nos			
Gas lighters	30000	30000	30000
Utilisation	60%	70%	80%
Production/Sales Nos			
Gas lighters	18000	21000	24000
Selling Rate per piece	Rs.85.00		
Total Value (Rs.lakhs)	**15.30**	**17.85**	**20.40**
Raw Materials	4.86	5.67	6.48
Power	0.85	0.99	1.14
Wages & Salaries	4.90	5.15	5.41
Repairs & Maintenance	0.60	0.66	0.73
Depreciation	0.41	0.34	0.29
Cost of Production	11.62	12.81	14.05
Admin. & General expenses	2.40	2.52	2.65
Interest on Term Loan	0.24	0.21	0.15
Interest on Working Capital	0.25	0.25	0.25
Total	14.51	15.79	17.10
Profit Before Tax	0.79	2.06	3.30
Provision for tax	0.00	0.68	1.10
Profit After Tax	**0.79**	**1.38**	**2.20**
Add: Depreciation	0.41	0.34	0.29
Cash Accruals	1.20	1.72	2.49

4. WORKING CAPITAL:

	Months Consumptions	Values	%	Margin Amount	Bank Finance
Raw Materials	2.00	0.81	25%	0.20	0.61
Consumables	0.00	0.00	25%	0.00	0.00
Finished goods	0.50	0.48	25%	0.12	0.36
Debtors	1.00	1.28	10%	0.13	1.15
Expenses	1.00	0.10	100%	0.10	0.00
		2.67		0.55	2.12

5. PROFITABILITY RATIOS BASED ON 80% UTILISATION

Profit after Tax / Sales	=	2.20 / 20.40	11%
Profit before Interest and Tax / Total Investment	=	3.70 / 7.87	47%
Profit after Tax / Promoters Capital	=	2.20 / 3.73	59%

5. BREAK EVEN LEVEL

Fixed Cost (FC):

	[Rs.lakhs]
Wages & Salaries	5.41
Repairs & Maintenance	0.73

Depreciation	0.29
Admin. & General expenses	2.65
Interest on TL	0.15
	9.23
Profit Before Tax (P)	3.30

$$BEL = \frac{FC \times 100}{FC + P} = \frac{9.23}{12.53} \times \frac{80}{100} \times 100$$

59% of installed capacity