

PROJECT PROFILE ON CYLINDER LINER

PRODUCT NAME : **CYLINDER LINER**

PRODUCTION CAPACITY : 45000 Per Annum

**MONTH & YEAR OF
PREPARATION** : JANUARY, 2010

PROJECT PROFILE (NEW) ON CYLINDER LINER

(1) Introduction:

Cylinder Liner is one of the critical components of Diesel Engine. The cylinder block is fitted over the crankcase & liner is fitted in it. The cylinder liner is made of cast iron. This part plays an important role in the working of the Diesel Engine and efficiency of the engine.

(2) Production Capacity : 45000 Per Annum

(3) Market & Demand Aspects :

More & more farmers are opting for lift irrigation and various types of mechanized agricultural implements. The demand of diesel engines has been increasing steadily. Now a days commercial banks are also providing finance to the small farmers & enterprises for purchasing diesel engines; which has created extra potential for marketing the items. The cylinder liner is replaceable items. After a certain use, the liner is to be replaced. Hence the item is having good demand for new diesel engine and as well as for replacement purpose.

(4) Raw Materials: Available with local market.

(5) Manufacturing process & Source of Technology

In this project profile it is considered that casted cylinder liner (**by centrifugal process**) as per require specification & sizes will be purchased from the local foundries. The liners are cleaned & fettled. Then rough machining operation like facing, rough outer diameter, rough boring is done. Then final machining operation are carried out like finish boring, O.D. Honing etc. After last operation every liner is checked & grouped in “A” & “B” category and packed for dispatch.

(6) Basis of Project preparation and Technical aspects

The project profile has been prepared on the basis of single shift of 8 hours a day & 25 days in a month at 75% efficiency.

(7) Presumption:

- i) It is presumed that in the first year the capacity utilization will be 70% , followed by 85% in the next year and 100% in the subsequent years.
- ii) The rates quoted in respect of salary & wages for skilled workers & others are as per the minimum rates in the market.
- iii) Interest rate for fixed & working capital has been taken at 15% on an average.
- iv) The rate quoted in respect of machines, equipments & raw material are prevailing at the time of preparation of the projects and are likely to vary from supplier to supplier and place to place. When a tailor made project profile is prepared, necessary changes are to be made.
- v) In this project profile cylinder liner of 100 mm & 110 mm dia are considered for calculation purposes.

(8) PRODUCTION CAPACITY (PER ANNUM):

- Quantity - 45,000 Nos.
- Value – Rs. 90,00,000/-

(9) Utilities : Electricity and Water

IMPLEMENTATION SCHEDULE:

S.No	Activity	Duration (in weeks)
1)	Preparation of project Profile	
	a) Calling Quotations	3weeks

	b)	Preparation	1weeks
2)		Provisional Registration	1weeks
3)		Financial Arrangements	10weeks
4)		Purchase & Procurement oif Machinery	8weeks
5)		Installation of Machinery	4weeks
6)		Electrification	4weeks
7)		Recruitment of Staff & Labor	4weeks

QUALITY CONTROL & STANDARDS:

To maintain the quality of the product it is necessary that casting should be free from burrs, blow hole, pin holes. Casting of liner should be inspected and assure that the casting is of required specification & grade. The sizes of the product should be inspected at every stage to maintain the required standards.

POLLUTION CONTROL:

This industry does not come under the category of polluting industry. However consent of the State Pollution Control Board is required.

10) FINANCIAL ASPECTS:

(A) Fixed Cost : (i) Land and Building:

1	Land & Building (Rented) – 100sq.Mtrs @ Rs.50/- Per sq.Mtr	5000/-
	Total Rs.	5000/-

(ii) Machinery & Equipments:

Sl No	Description	Qty	Value (Rs)
a)	Lathe M/s. 6” With Electrical Motor& Complete	3Nos	3,60,000
b)	SPM Boring Machines	1 No	3,50,000
c)	Copy Turning Machines	1No	3,50,000
d)	Honing Machine	1No	5,00,000
e)	Precision Lathe 6’With Mandril,etc.	1No	3,50,000

	Sub Total Rs		19,10,000
	Installation and commissioning charges @ 10%		1,91,000
	Office equipment and furniture		50,000
	Jigs & fixture and measuring eqpts & instrument		50,000
	Pre-operative expenses		20,000
	Total Rs.		22,21,000

B) WORKING CAPITAL (Per month)

a) Personnel (Per month)

Sl. No.	Designation	Nos	Salaries/ month	Total Amount
1	Supervisor	01	6,000	6,000
2	Skilled Worker	03	5,000	15,000-
3	Skilled Worker	02	4,000	8,000
4	Peon/ Watchman	02	3500	7,000
5	Office Clerk	01	4,000	4,000
			Sum total Rs.	40,000
	Perquisites-15% of Salaries			6,000
			Total Amounts.	46,000

b) Raw Materials per month

Sl. No.	Description	Qty.	Rate Per Ton	Total amount Rs.
01	C. I. Casting	40 ton	12,000	4,80,000
			Total Rs.	4,80,000

c) Utility Per Month

1	Electricity and Water		Rs. 5,000
		Total Rs.	Rs. 5,000

d) Other Expenditure (Per Month)

1	Rent	Rs. 5,000
2	Transport	Rs 2,000
3	Stationary, Postage, Telephone	Rs. 2,000
4	Repairers & Maintenance	Rs. 3,000
5	Consumable Store, Dies, & Chemicals etc.	Rs 5,000
6	Miscellaneous Expenses	Rs 3000
	Total Rs.	Rs.20,000

E) Working capital (Per Month):

1	Personnel	Rs 46,000
2	Raw material	Rs.4,80,000
3	Utilities	Rs.5,000
4	Others Expenses	Rs.20,000
	Total Rs.	5,51,000

F) Total working Capital:

1	Fixed Capital	Rs.22,52,000
2	Working Capital for 3 months	Rs.16,53,000
	Total Rs.	Rs.38,08,000

FINANCIAL ANALYSIS : Cost of Production (Per Annum):

1	Total Recurring Cost Per Year	Rs 66,12,000
2	Depreciation on Machinery@ 10%	Rs 2,20,000
3	Depreciation on Office Furniture @ 20%	Rs 10,000
4	Depreciation on tools, etc @ 20%	Rs 10,000
5	Interest on Capital Investment @ 16%	Rs 6,09,300
	Total Rs.	Rs 74,61,300

Turnover (Per Annum) :

1	By sale of 45,000 liners @ Rs/185- Each	83,25,000
	Total Rs.	83,25,000

Net profit (Per Annum): = Turnover - Cost of Production
= 83,25,000 – 74,61,300

$$= \text{Rs. } 8,63,700$$

$$1) \text{ Net Profit Ratio} = \frac{\text{Net Profit per Annum} \times 100}{\text{Turnover}} = \frac{8,63,700 \times 100}{83,25,000} \\ = 10.37 \%$$

$$2) \text{ Rate of Return} = \frac{\text{Net Profit} \times 100}{\text{Total Investment}} = \frac{8,63,700 \times 100}{38,08,000} \\ = 23 \% \text{ Appx}$$

3) Break Even Analysis : Fixed cost (Per Annum):

1	Total Depreciation (on Machinery, Equipment, Dies, Tools Furniture)	2,40,000
2	Rent	60,000
3	Interest on Borrowings	6,09,300
4	40 % of salaries	2,20,800
5	40% of Other Contingent Express (Excluding Rent & Insurance)	72,000
	Total Rs.	12,02,100

$$\text{B.E.P.} = \frac{\text{Fixed Cost} \times 100}{\text{Fixed cost} + \text{Profit}} = \frac{12,02,000 \times 100}{12,02,000 + 8,63,700} = 58.2\%$$

NAMES & ADRESSES OF MACHINERY SUPPLIERS:

1	M/s. AMI Machine Tool, 20, Ambalal Doshi Marg, (Hamam street), Fort Mumbai - 234 Tel : 022 – 22650745 / 33664969 Fax : 022 – 222653459 E-mail : atlasin@born5.vsnl.net.in Web : www.atlamachimesindia.com
2	M/s. HMT Machine tools Ltd. DHMT Bhavan,59 Bellary Road, Banglore – 560 032 Tel : 080 – 233330333 Fac : 080 -= 23337800 E-mail : jmm@hmtmtm.com Web : www.hmti.com
3	M/s Micromatic Machine Tools Pvt. Ltd. 277/272 Udyod Bhavan m Sonawala Road, Goregaon (E) Mumbai 63 Tel : 022 – 28717271 / 2871272 Fax : 022 – 28765699 E-mail : mmtbom@acemicromatic.com
4	M/s. S & T Engineers, H.O. 22, Vasanth Nagar Singanallur, Coimbatore – 641 005. Tel. : 0422 – 2590810/ 2593487 Fax : 0422 – 2573629 E-mail : stengine@md3vsnl.net.in
5	M/s. Joginder Machine Tools, Ghiwani Road, Near Ramleela Ground, Rohtak – 124 001 (Harayana) Tel. : 01263 -235310 Fax : 01262 – 235310
6	M/s Sagar Machines Tools Pvt.Ltd., 418,Indl Area-Aludhina. Tel. :2661557/2660469
7	M/s. Machine Tools Traders, Riddhi Apartments, plot No, 10, Jawahar Nagar, 1 st Floor, SV Road, Goregaon (W) Mumbai- 62 Mobile -9819425747
8	M/s Bharat Machine Tools (Jamnagar) Pvt. Ltd. Pandit Nehru road, opp. Broke bond, Jamangar -361 002 Tel :0288-2757382/2757472 Fax 0288-2757382

	E-mail: natmatilathe@satyam.net.com
10	Mecshot Blasting Equipments pvt. Ltd. E-279 Mia, Phase-II, basinF ,Jodhpur, Rajasthan. Tel.: 91-291-2740600 / 2744068 Fax ;91-230-2468443
11	M/s. Khushbu Engineers. F-24/1 MIDC, Shirol, Kolhapur – 416 122 Maharashtra, Tel : 91-230-2468859 / 2469620 Fax : 91-230-2468443
12	M/s. M/s/ Auto pack Machines Pvt. Ltd. 101=- C, Poonam Chambers, Dr. A. B Road Shiv sagar Estate, Mumbai – 18, MS, Tel : 91-22-24974800 /24924806 Fax : 91-22-24924926
13	M/s Manisha Machinery Pvt. Ltd. Unit NO 16 Vora INdl. Estate NOK 2 Nav gahr, Basai (E) Dist. Thane – 401 210 Tel : 90-250-2392777 / 2390757 Fax :91-250-2390381
14	M/s Global Tech (India) Pvt. Ltd. 1382, Sadashiv peth 404 Tilk Road Pune – 411 030 Maharashtra Tele : 91-20-24470085 Fax : 91-20-24470086
15	M/s Deepmaya Engineering. S.No 62, Opp. Nikam Schiool, Sangamwadi, Pune – 411 003 Maharashtra Tel : 91-2026693884 / 30923010 Fax: 91-20-26681529 E-mail : pradipdighe@rediffmail.com , pradipdighe@hotmail.com Web : www.deepmayaengineering.com
16	M/s Arihant Industrial Corporation Ltd. Arihant Comp,.ex. Opp. Sagar Petrol Pump, Western Express Highway Sativali, Vasai (E) Dist, Thane – 401 208 Maharashtra Tel : 90-250-2481111 / 12 /13 /14 Fax : 91-250-2480200 E-mail : arihant@arihant.com . aicl@vsnl.com Web : www.arihant.com

NAMES AND ADDRESSES OF RAW MATERIAL SUPPLIERS:

1	M/S Bharat Enterprises, 276/278, Samul street, 2 nd Floor, Vadgadi, Mumbai-400 003 Tel 022-23442378/ Fax: 022-2300248
2	m/s Jai Ambe engineering works , A/14-25.nandjyot Indl. Estate, Andheri Kurla Road, Mumbai -400-072 Tel-022-28512073 /28513113 Fax:022-28514379 E-mail jaew@bvsnl.com
3	M/s Ancara Tube Industries, E-46 to 49, C.S.T. road ,Behind kurla Bus Depot, Kurla(W),Mumbai - 400 0770 Tel 022 – 25957522 / 26500522 Fax: 022 / 26506131
4	M/s Yogesh Metal Industries, 6A Saroj Niwas , Gr.Floor, 149/153, Sant Sena Maharaj Marg, (2 nd Kumbharwada), Mumbai-400 004 Tel: 022 – 23891088 / 256326207
5	M/s Sovereign, 6, Gopal Niwas, 1 st Floor,133,S.Gandhi Marg, (Princess Street), Mumbai -2. Tel: 022 – 22031079
6	M/s M.S.Engg. Co. Meenakshi Chamber , Shop No. 7,Gr.Floor,Ghoddev Road, Bhayander (E) Dist.Thana – 401 105. Tel: 022 – 28191644 / 28188216 Fax: 022 – 28192604
7	M/s Micro Tube Industries 24,Dhobi Street,,2 nd Floor , Mumbai – 400 003 Tel:022 - 23401625

Resource center of Technology: MSME-DI, Gangtok

List of units set up by using this project profile: Nil

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