

PROJECT PROFILE ON CYLINDER LINER

PRODUCTNAME : CYLINDER LINER

PRODUCTION CAPACITY : 48000 PerAnnum

MONTH & YEAR OF PREPARATION : May 2021

PREPARED BY : MSME DEVELOPMENT INSTITUTE CHENNAI
Ministry of MSME, Govt of India,
65/1, GST Road, Guindy, Chennai - 32.

PROJECT PROFILE 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 the cylinder inner diameter. The cylinder liner is made from cast iron. This part plays an important role in the working of the Diesel Engine and efficiency of the engine.

(2) **Production Capacity :** 48000 Per Annum

(3) Market & Demand Aspects:

Most of the transport vehicles & industrial equipments, agriculture machineries/equipments and generators main power source is diesel engine. The demand of diesel engines has been increasing steadily day by day. Now a days commercial banks are also providing finance to the small farmers & enterprises for purchasing for the above machineries and equipments; which has created extra potential for marketing the items. The cylinder liner is replaceable items, after a certain time of use, the liner is to be replaced for better performance and efficiency of the equipments/machine. Hence the item is having good demand for new diesel engine and as well as for replacement.

(4) Raw Materials:

Available with local market/local manufacturers.

(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 casted liners are cleaned & fettled and also rough machining operation like facing, rough outer diameter, rough boring is done at the supplier end. The other operations are carried out at our plant, like turning, boring, grinding, honing etc. After last operation every liner is checked and marked for packing & 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 104 mm dia are considered for calculation purposes. The proposed machineries can be used for the cylinder dia 75mm to 175mm

PRODUCTION CAPACITY (PER ANNUM): Quantity - 48,000 Nos.
Value - Rs. 1,44,00,000/-

(8) 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 hole and internal cracks. Casting of liner should be inspected and assure that the casting is as per the 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) FixedCost: (i) Land and Building:

1	Land & Building (Rented) – 250sq.Mtrs @ Rs.100/- Per sq.Mtr	25000/-
	Total Rs.	25000/-

(ii) Machinery & Equipments:

SI No	Description	Qty	Value (Rs)
a)	CNC Lathe Machine chuck dia 200mm along with accessories	2Nos	16,00,000
b)	Centerless grinder	1 No	9,00,000
c)	Cylindrical grinder (ID Grinding)	1No	6,00,000
d)	Honing Machine	1No	7,00,000
e)	Phospating operation - outsourced.		
f)	Buffing Machine	1No	40,000
g)	Pedestal Grinder	1No	20,000
h)	Bench drilling Machine	1No	20,000
	Sub Total Rs		38,80,000
	Installation and commissioning charges @ 10%		3,88,000
	Office equipment and furniture		2,00,000
	Jigs & fixture and measuring eqpts & instrument		2,00,000
	Pre-operative expenses		30,000
	Total Rs.		46,98,000

B) WORKING CAPITAL (Per month)

a) Personnel (Per month)

Sl. No.	Designation	Nos	Salaries/ month (Rs.)	Total Amount (Rs.)
1	Supervisor	01	20,000	20,000
2	Skilled Worker	03	12,000	36,000
3	Semi Skilled Worker	02	9,000	18,000
4	Sales and Admin	02	10,000	20,000
5	Watchman	01	8,000	8,000
			Total Amount.	1,02,000

b) Raw Materials per month

Sl. No.	Description	Qty.	Rate Per Unit (Rs.)	Total amount Rs.
01	C. I. Casting	4000 Nos	170	6,80,000
			Total Rs.	6,80,000

c) Utility Per Month

1	Electricity and Water	Rs.15,000
	Total Rs.	Rs.15,000

d) Other Expenditure (Per Month)

1	Rent	Rs.25,000
2	Transport	Rs.10,000
3	Stationary, Postage, Telephone	Rs. 5,000
4	Repairers & Maintenance	Rs.25,000
5	Consumable Store, Dies, & Chemicals etc.	Rs.50,000
6	Miscellaneous Expenses	Rs.20,000
	Total Rs.	Rs.1,35,000

E) Working capital (Per Month):

1	Personnel	Rs.1,02,000
2	Raw material	Rs.6,80,000
3	Utilities	Rs. 15,000
4	Others Expenses	Rs.1,35,000
	Total Rs.	Rs.9,32,000

F) Total workingCapital:

1	Fixed Capital	Rs.38,80,000
2	Working Capital for 3 months	Rs.27,96,000
	Total Rs.	Rs.66,76,000

FINANCIAL ANALYSIS :Cost of Production (Per Annum):

1	Total Recurring Cost Per Year	Rs.1,11,84,000
2	Depreciation on Machinery@ 10%	Rs. 3,88,000
3	Depreciation on Office Furniture @ 20%	Rs. 40,000
4	Depreciation on tools, etc @ 20%	Rs. 40,000
5	Interest on Capital Investment @ 15%	Rs. 10,01,400
	Total	Rs.1,26,53,400

Turnover (Per Annum) :

1	By sale of 48,000 liners @ Rs/300- Each	1,44,00,000
	Total Rs.	1,44,00,000

Net profit(Per Annum): = Turnover - Cost of Production
 = 1,44,00,000 – 1,26,53,400
 = Rs. 17,46,600

1) NetProfitRatio = $\frac{\text{Net Profit per Annum} \times 100}{\text{Turnover}}$ = $\frac{17,46,600 \times 100}{1,26,53,400}$
 = 14%

2) Rateof Return = $\frac{\text{Net Profit} \times 100}{\text{Total Investment}}$ = $\frac{17,46,600 \times 100}{66,76,000}$
 = 26 % Appx

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

1	Total Depreciation (on Machinery, Equipment, Dies, Tools Furniture)	4,68,000
2	Rent	3,00,000
3	Interest on Borrowings	10,01,400
4	40 % of salaries	4,89,600
5	40% of Other Contingent Express (Excluding Rent & Insurance)	5,28,000
	Total Rs.	27,87,000

B.E.P. = $\frac{\text{Fixed Cost} \times 100}{\text{Fixed cost} + \text{Profit}}$ = $\frac{27,87,000 \times 100}{27,87,000 + 17,46,600}$ = 61%

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 & TEngineers, 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

17	LMW Machine Tools Pvt Ltd, Coimbatore
18	Jyoti CNC Automation Ltd, Hosur

NAMES AND ADDRESSES OF RAW MATERIALS 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

