PROJECT PROFILE

ON

CASTING FOR AUTO LOCKS

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PART- I

NAME OF THE PRODUCT : **CASTING FOR AUTO LOCKS.**

PRODUCT CODE : -

QUALITY & STANDARD : As per BIS.

PRODUCTION CAPACITY : The production capacity of the unit at 75% capacity utilisation.

Item	Quantity	Amount
Casting for Auto Locks	1.50 Lakhs	Rs. 27.0 lakhs

MONTH & YEAR OF PREPARATION : December, 2010.

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PART-II

A) INTRODUCTION

Zincs castings of various sizes and shapes are used in Auto Locks Assembly. Usually die casting zinc alloy is used for this purpose due to:

1. High productivity
2. Good as Casting surface finish and appearance.
3. Do not require much machining.
4. Can be cast within close dimensional tolerance.
5. Their section can be cast with case.
6. Very Low metal wastage.
7. Very Low rejection.

B) MARKET POTENTIAL

Open market and Automobile units are in need of the Auto Locks. Hence, there is good scope for this product. It is better to do the production of Zinc die-casting for Auto Locks near the Auto Lock Manufacturing units' Cluster. There is very good scope in and around Aaligarh city which has cluster group of Auto locks manufacturing units.

C) BASIS & PRESUMPTIONS

1.	Number of shifts	:	Single shift of 8 hours
2.	Working days per annum	:	300
3.	Working efficiency	:	75%
4.	Time period for achieving full capacity utilization	:	3 years.
5.	Labour wages	:	As per the minimum Wages Act of State Govt.
6.	Margin money	:	25% on an average of project cost.
7.	Interest rate on fixed and working capital	:	15% on average.
8.	Estimated life of the project	:	20 years
9.	Land cost and construction cost	:	It has been assumed that the project is established in rented shed.
10.	Cost of machinery and equipments	:	Prevailing cost of the market.
11.	Seeing present practice, it has been assumed that the die and raw material will be supplied by the Lock Assemblers.		

D) IMPLEMENTATION SCHEDULE:

Sl. No.	Activity	Period
i.	Scheme preparation and approval	1 month
ii.	Provisional Registration as SSI unit.	2 weeks
iii.	Sanction of loan required if any.	3 months
iv.	Clearance from State Pollution Control Board	2 months
v.	Placement of order for delivery of machinery	3 months
vi.	Installation of machinery	1 month
vii.	Power connection	3 months
viii.	Trial Run	5 months
ix.	Commencement of regular production	After 5 months

E) TECHNICAL ASPECTS:

(i) Process of Manufacture:

Melting of zinc Ingots (450^{o}C) - Clearing –Die-casting – ejection of casting – runner breaking – Primary inspection – Fitting – Final inspection – Buffing – dispatch.

(ii) Quality Control and Standards

As per customer's specification. Die cast components should be free from blow holes, pin holes, shrinkage cold-shut etc. They should be free from dimensional inaccuracies. Zinc alloy should be as per specification of the customer. Generally Zinc alloy (IS MAC-3) having electrolytic Zinc with 4-6% Al is used for this purpose. Raw material is expected to be supplied by the lock assemblers.

(iii) Production Capacity:

Item	Quantity	Amount
Casting for Auto Locks	1.50 Lakhs	Rs. 27.0 Lakhs

(iv) Motive Power: 40 HP

(v) Pollution Control:

There is not much problem of pollution. However, powerful exhaust is required for exhaust of smokes from the shed.

No Objection Certificate has to be obtained from State Pollution Control Board.

(vi) Energy Conservation:

i. Maximum utilization of machine has to be done to consumer metal from the melting furnace.
ii. The furnace should be provided with thermocouple and automatic temperature control devices.
iii. Opening of the Furnace should be kept closed while not in use.
iv. Energy audit of the unit has to be done on a regular basis.
v. Preheating of charge should be done by keeping few ingots on holding furnace.
vi. The furnace should be properly insulated to reduce radiation.

F) FINANCIAL ASPECTS:

A) Fixed Capital:

(i) Land & Building:

Amount in Rs.

Rented area 300 sq. mtrs. @ Rs. 6000/- per month **18,00,000/-**

(ii) Machinery & Equipment:

Sl. No	Description	Ind/Imp	Qty.	Amount (In Rs.)
1.	Horizontal Hot Chamber pressure die casting M/c capacity 400 gm/shot with control panel and accessories.	Ind	1 No.	3,00,000/-
2.	Electrical Resistance furnace for melting zinc alloy	Ind.	1 N.	1,50,000/-
3.	Arc welding machine	Ind.	1 No.	25,000/-
4.	Fitting equipment and Buffing equipments		-	25,000/-
5.	Bench drilling machine 1 HP		-	20,000/-
6.	Weighing Machine (Plat form type) 200 Kg cap.		-	20,000/-
7.	Air compressor 3 HP		-	30,000/-
8.	Pedestal Grinder 2 HP			20,000/-
9.	Flexible shaft grinder 2 HP		-	20,000/-
10.	Bench grinder double ended ½ HP		-	15,000/-
11.	Pheusmatic grinder	Ind.	1 No.	6,000/-
12.	Material Handling equipments			10,000/-
13.	Testing equipments	Ind.		30,000/-
14.	Pollution Control Equipment (Exhaust)	Ind.		20,000/-
15.	Energy Conservation facilities		Already included in the accessories of Furnace.	
16.	Cost of Power connection including transformer			1,00,000/-
17.	Electrification and installation charges			70,000/-
18.	Tools and other fixtures			24,000/-
19.	Office equipment/working tables			50,000/-
			Total:	**9,35,000/-**

(iii) Pre-operative Expenses **Rs. 50,000/-**

Total Fixed Capital = Rs. 9,85,000/-

B) Working Capital (Per Month):

(i) Personnel:

(a) Administrative Supervisory

Sl. No.	Designation	No.	Salary	Total (Rs.)
1.	Manager	1	10000/-	10,000/-
2.	Engineer-cum-Supervisor	1	8000/-	8,000/-
3.	Accountant (Part Time)	1	2000/-	2,000/-
4.	Clerk-cum-Typist (Part Time)	1	2000/-	2,000/-

(b) Technical Skilled & Unskilled:

1.	Skilled Worker	1	5000/-	5,000/-
2.	Semi-skilled Worker	1	4000/-	4,000/-
3.	Unskilled Worker	2	3000/-	6,000/-
4.	Peon-cum-Watchman	1	3000/-	3,000/-
			Total:	**40,000/-**
	Add Perquisites @ 15% of salary			6,000/-
			Total:	**46,000/-**

(ii) Raw Materials including Packaging Requirements:

Sl. No.	Particulars	Amount (In Rs.)
1.	Zinc Alloy ingots Ind. (Alloy ingots will be supplied by the customer) 5% burning loss will also be allowed)	
2.	Various consumables Ind.	50,000/-
	Total:	**50,000/-**

(iii) Utilities:

1.	Electricity and Power	25,000/-
2.	Water & Misc.	5,000/-
	Total:	**30,000/-**

(iv) Other Contingent Expenses (P.M.):

1	Rent	6,000/-
2	Telephone	1,000/-
3	Consumable Stores	1,000/-
4	Transport charges	5,000/-
5	Advertisement and publicity	1,000/-
6	Postage and stationery	1,000/-
7	Insurance taxes and other misc. exp.	10,000/-
8	Repairs and maintenance	2,000/-
	Total:	**27,000/-**

(v) Working Capital / Total Recurring Expenditure (P.M.):

1.	Personnel	46,000/-
2.	Raw Materials	50,000/-
3.	Utilities	30,000/-
4.	Other Contingent Expenses	27,000/-
	Total:	**1,53,000/-**

(vi) Total working capital for 3 months 1,53,000 X 3 = Rs.4,59,000/-

C) TOTAL CAPITAL INVESTMENT:

I.	Fixed Capital	9,85,000/-
II.	Working Capital for 3 months	4,59,000/-
	Total:	**14,44,000/-**

G) FINANCIAL ANALYSIS:

i) Cost of Production (Per annum)

Sl. No.	Particulars	Value(Rs.)
1.	Total Recurring cost	18,36,000/-
2.	Depreciation on machinery @ 10%	24,000/-
3.	Depreciation on furnace @ 20%	90,000/-
4.	Depreciation on tools and fixtures @ 25%	6,000/-
5.	Depreciation on office equipment @ 20%	10,000/-
6.	Interest on Total Capital Investment @ 15%	2,17,000/-
	Total: -	**21,83,000/-**

ii) Sales/Turnover (Per Annum)

Sl. No.	Item	Quantity	Rate (Rs.)	Value (Rs.)
1.	Zinc die casting for Auto Locks per shot of 400 gm shot about 3-4 various castings like Roter, Body, casting etc.	1,50,000 shots	Rs.18/- per shot conversion charges	**27,00,000/-**

iii) NET PROFIT (Per annum) Before Taxation:

Turn Over	(-)	Cost of Production	=	**5,17,000/-**
27,00,000/-	(-)	21,83,000/-		

iv) PROFIT RATIO ON SALES (Per Annum):

Profit/annum X 100	5,17,000/- X 100	=	**19.14%**
Turnover/Annum	27,00,000		

v) RATE OF RETURN (Per Annum):

Net Profit/annum X 100	5,17,000/- X 100	=	**35.80%**
Total Capital Investment	14,44,000/-		

BREAK EVEN POINT

Fixed Cost:

1.	Depreciation on machines and equipment tools, fixtures and office equipments	Rs.	1,30,000/-
2.	Rent (Annual)	Rs.	72,000/-
3.	Interest on total investment	Rs.	2,17,000/-
4.	Insurance	Rs.	29,000/-
5.	40% of Salary & Wages	Rs.	1,92,000/-
6.	40% of other contingent expenses (excluding rent & insurance)	Rs.	1,30,000/-
	Total:-	**Rs.**	**7,70,000/-**

B.E.P.

Fixed Cost X 100	7,70,000/- X 100	=	**59.82%**
Fixed Cost + Profit	7,70,000/- + 5,17,000/-		

Additional Information:

In this project Die and Raw material will be supplied by the customer as per present practice in the field of die casting.

Names & Address of Machinery & Equipment Suppliers:

1. M/s HMT Limited,
   Die Casting and Plastic Machinery Division, HMT P.O. Bangalore-31.
2. M/s P. K. Engineering Works,
   B-1, Industrial Estate, Aligarh. U.P.

Address of Raw Material Suppliers:

1. M/s Hindustan Zinc Limited.
2. M/s Minerals and Metals Trading Corpn. Of India Limited,
   1-8-32/15, Bapubagh, Panderghast Road, Secunderabad-3.
3. M/s S. S. Agarwal and Co.,
   Sabzi Mandi, Kanwari Ganj, Aligarh. U.P.

Address of Chemical Suppliers:

1. M/s Greaves Foseco Limited,
   Chinchwad, Pune – 411019.
2. M/s I.V.P. Limited,
   Regd. Office, Shashikant Nedij Marg,
   Ghorupodio, Mumbai-33.

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