PROJECT PROFILE

ON

BRAKE DRUM CASTING

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PART-I

NAME OF THE PRODUCT : **BRAKE DRUM CASTING.**

QUALITY & STANDARD : IS: 1865-1974, IS:5788-1970 & 5789-1970.

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

Item	Quantity	Amount (In Rs.)
Brake Drum Casing	300 MT	1,46,10,000/-

MONTH & YEAR OF PREPARATION : November, 2010.

PREPARED BY :

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PART-II

A) INTRODUCTION

Brake Drum Castings are made up of S.G. cast iron which has high strength, ductility, shock and wear resistance, good castability, excellent machinability and overall durability of the component.

B) MARKET POTENTIAL

With the start of the automobile revolution in the country the brake drum castings are expected to increase manifold in future.

The s. G. brake drum castings are replacing even forgings. The brake drum casting units have good scope in small scale industries due to the excellent technical base available at the small foundry units.

C) BASIS & PRESUMPTIONS

1. the scheme has been prepare3d on the basis of 75% efficiency on single shift considering 25 working days in a month.
2. the rate of interest in the scheme has been worked out on the basis of 14% on an average; however this figure is likely to vary depending on the financial outlay of the project as well as location of the unit.

3. The costs of machinery and equipment as indicated are approximate ruling locally at the time of preparation of the scheme.

4. The rates quoted in respect of salaries and wages for workers and others are the minimum rates in the state/neighbouring states.

5. Margin money required is minimum 25% of the project investment.

D) IMPLEMENTATION SCHEDULE:

Sl. No.	Activity	Period
i.	Preparation of project report after calling quotations	
	a) Calling quotations	1 month
	b) Preparation of report	2 weeks
ii.	Provisional Registration as SSI unit.	2 weeks
iii.	Financial arrangement	3 months
iv.	Purchase and procurement of machines and equipments	3 months
v.	Installation of Machines and equipments	3 months
vi.	Electrification	1 month
vii.	Recruitment of Staff and Workers	1 month
viii.	N.O.C. from Pollution Control Board.	1 month

E) TECHNICAL ASPECTS:

(i) Process of Manufacture:

i) The scrap and pig-iron in the required proportion are melted in the electric induction furnace. When the molten metal attains the pouring temperature, the hot metal is transferred from furnace to the ladle and then poured in the mould already prepared and kept ready. After cooling, the castings are knocked out, fettled, inspected and dispatched to the customer.

(ii) Quality Control and Standards

The Brake drum castings are manufactured under the following Indian Specifications:

1. IS:1865-1974 Indian Standard Specification for Iron Castings with spheroidal or nodular graphite.
2. IS:5789-1970 Indian Standard Specification for S.G. Iron Castings for low temperature use.
3. IS:5788-1970 Indian Standard Specification for Iron Castings with spheroidal or nodular graphite for use at elevated temperatures.

(iii) Production Capacity:

Item	Quantity	Amount (In Rs.)
Brake Drum Castings	300 MT	1,46,10,000/-

(iv) Pollution Control:

The units manufacturing brake drum foundry comes under category of Government classification. Hence the pollution control clearance is a must for these units. The unit has to take care of all statutory regulations.

F) FINANCIAL ASPECTS:

A) Fixed Capital:

(i) Land & Building:

Sl. No.	Description	Amount in Rs.
1.	Land 1 acre	10,00,000/-
2.	Factory / Shed 2600 Sq. Ft.	7,20,000/-
3.	Office / Laboratory 750 sq. ft.	6,00,000/-
	Total:	**23,20,000/-**

(ii) Machinery & Equipment:

Sl. No	Item	Qty. (Nos.)	Rate (Rs.)	Amount (In Rs.)
1.	Air Compressor capacity 500 lbs/sq. inch (Ind.)	1	50000/-	50,000/-
2.	Bench Drilling Machine 20 mm cap. With 1 HP motor and (Ind.)	1	25000/-	25,000/-
3.	Crane capacity 3 tonnes with 20 HP motor (Ind.)	1	275000/-	2,75,000/-
4.	Double ended grinder with 2 HP motor (Ind.)	2	20000/-	40,000/-
5.	Drying oven oil fired (Ind.)	1	80000/-	80,000/-
6.	Electricity Transformer 11 KV / 440 V / 250 KVA (Ind.)	1	200000/-	2,00,000/-
7.	Generating set rating 10 KVA	1	150000/-	1,50,000/-
8.	Hand Trolleys etc. Ind.)			25,000/-
9.	Hardness Tester (Brinell)	1	20000/-	20,000/-
10.	Heat Treatment Furnace 2mX1.5m) 3 HP motor (Ind.)	1	100000/-	1,00,000/-
11.	Induction AMelting Furnace 150 Kg capacity (Ind.)	2	8000000/-	16,00,000/-
12.	Izod / charpy Impact Tester	1	50000/-	50,000/-
13.	Lab. Chemicals and Equipments		LS	1,50,000/-
14.	Metallographic Metallurgical Microscope	1	30000/-	30,000/-
15.	Moulding Machine with 5 HP motor (LS)	1	90000/-	90,000/-
16.	Office equipments, tables, chairs, fans, computers, almirach etc.			50,000/-
17.	Platform weighing machine 500 Kg cap. (Ind.)	1	50000/-	50,000/-
18.	Sand mixer (100 Kg cap.) with 5 HP motor	2	40000/-	80,000/-
19.	Sand Testing Machine	1	35000/-	35,000/-
20.	Specimen Polishing Machine (Double dise-type)	1	35000/-	35,000/-
21.	Swing frame grinder with 10 HP motor (LS)	3	60000/-	1,80,000/-
22.	Tools, dies and equipments			60,000/-
23.	Weighing scale 500 Kg cap.	2	30000/-	60,000/-
24.	Installation and Electrification		LS	3,44,000/-
25.	Pre-operative Expenses			1,21,000/-
			Total:	**39,00,000/-**

B) Working Capital (Per Month):

(i) Personnel:

Sl. No.	Designation	No.	Salary	Total (Rs.)
1.	Accountant / Store In charge	1	6000/-	6,000/-
2.	Clerk-cum-Typist	2	4000/-	8,000/-
3.	Laboratory Technician	2	6000/-	12,000/-
4.	Supervisor	1	7000/-	7,000/-
5.	Skilled Workers	5	5000/-	25,000/-
6.	Unskilled Workers	5	3000/-	15,000/-
7.	Works Manager / Metallurgist	1	15000/-	15,000/-
			Total:	**88,000/-**
	Add Perquisites @ 15% of salary			13,000/-
			Total:	**1,01,000/-**

(ii) Raw Materials including Packaging Requirements:

Sl. No.	Particulars	Qty. MT	Rate/MT	Amount (In Rs.)
1.	Ferro-silicon (60%)		LS	40,000/-
2.	Furnace lining and other refractory		LS	30,000/-
3.	Graphite		LS	10,000/-
4.	Innoculating agents, fluxes bath conditioners etc.		LS	20,000/-
5.	M. s. Plate covers for reduction Lade 1 tonne		LS	40,000/-
6.	Mild Steel Scrap 26 MTs	26	15000	3,90,000/-
7.	Sand Binder and other Moulding Materials		LS	30,000/-
			Total:	**5,60,000/-**

(iii) Utilities:

1.	Electricity and Power	1,00,000/-
2.	Furnace Oil and Fuel	30,000/-
3.	Furnace lining charges	10,000/-
	Total:	**1,40,000/-**

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

1	Miscellaneous	11,000/-
2	Postage, Stationery & Telephone	4,000/-
3	Repair & maintenance	10,000/-
4	Transport charges / Advt.	10,000/-
5	Travelling and conveyance	15,000/-
6	Water	5,000/-
	Total:	**55,000/-**

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

1.	Personnel	1,01,000/-
2.	Raw Materials	5,60,000/-
3.	Utilities	1,40,000/-
4.	Other Contingent Expenses	55,000/-
	Total:	**8,56,000/-**

(vi) Total working capital for 3 months 8,56,000 X 3 = Rs.25,68,000/-

C) TOTAL CAPITAL INVESTMENT:

I.	Fixed Capital	23,20,000/-
II.	Working Capital for 3 months	25,68,000/-
	Total:	**87,88,000/-**

G) FINANCIAL ANALYSIS:

i) Cost of Production (Per annum)

Sl. No.	Particulars	Value(Rs.)
1.	Depreciation on Furnace	4,00,000/-
2.	Depreciation on machinery and equipment	2,30,000/-
3.	Depreciation on office furniture	10,000/-
4.	Depreciation on tools	50,000/-
5.	Recurring Expenditure	1,02,72,000/-
6.	Interest on Total Capital Investment @ 14%	12,30,000/-
	Total: -	**1,21,92,000/-**

ii) Sales/Turnover (Per Annum)

Sl. No.	Item	Quantity	Rate (Rs.)	Value (Rs.)
1.	By sale S.G. Iron Castings	300 MTs	48000/-	**1,44,00,000/-**
2.	By Scrap of Castings and Rejects	15 MTs	14,000/-	**2,10,000/-**
			Total:	**1,46,10,000/-**

iii) NET PROFIT (Per annum) Before Taxation:

Turn Over	(-)	Cost of Production	=	**24,18,000/-**
1,46,10,000/-	(-)	1,21,92,000/-		

iv) PROFIT RATIO ON SALES (Per Annum):

Profit/annum X 100	24,18,000/- X 100	=	**9.82%**
Turnover/Annum	1,46,10,000/-		

v) RATE OF RETURN (Per Annum):

Net Profit/annum X 100	24,18,000/- X 100	=	**27.51%**
Total Capital Investment	87,88,000/-		

BREAK EVEN POINT

Fixed Cost:

1.	Depreciation	Rs.	6,90,000/-
2.	Interest on Investment	Rs.	12,30,000/-
3.	40% of Salary & Wages	Rs.	4,04,000/-
4.	40% of other contingent expenses (excluding rent & insurance)	Rs.	9,36,000/-
	Total:-	**Rs.**	**31,70,000/-**
	Net Profit per year	**Rs.**	**24,18,000/-**

B.E.P.

Fixed Cost X 100	31,70,000/- X 100	=	**56.72%**
Fixed Cost + Profit	31,70,000/- + 24,18,000/-		

Names & Address of Machinery & Equipment Suppliers:

1. M/s Beco Engineering Co., Agra Road, H.T. Mills compound, Vikhroli, Mumbai- 400 079.
2. M/s Brady and Morris Engineering Co., Limited.,
   12/14, Veer Nariman Road, Brady House, Mumbai – 400 023.
3. M/s Commercial Engineering Works,
   P-17, Benaras Road, Bamangachi, Salkia, Howrah – 700 006.
4. M/s Federal Engineers,
   Plot No. A-81, Road No. 16-R, Thane – 400 604.

Address of Raw Material Suppliers:

1. M/s National Iron Traders,
   364, Kurichi Pirvu, Coimbatore – 23.
2. M/s NR Traders,
   Pollachi Road, Karumbukadai, Coimbatore -1.
3. M/s PA Ponnusamy and Chandran Co.,
   P.N. Palayam, Coimbatore – 641 020.

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