

PROJECT PROFILE

ON

ALUMINIUM CIRCLES FROM SCRAP

(ALUMINIUM CASTING AND ROLLING)

Month & Year
December 2009

**PREPARED BY
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A. INTRODUCTION

Aluminium is a versatile metal which finds major applications in almost all areas such as building construction, household utensils, industrial products, general engineering, electrical engineering etc. It has light weight, high strength to weight ratio, corrosion resistance, electrical and thermal conductivity and no toxicity. The aluminium circles manufactured out of aluminium scrap by way of casting and rolling has good demand from aluminum vessel manufacturers and other aluminium can manufacturers and other users. Vessels are widely used by common population in India. With the growth of population in the country the usage of Aluminium vessels is increasing. Aluminium is fast replacing stainless steel, bronze, brass, etc. It is strong, elegant, durable and non-rustic in nature. The Aluminium vessels are cheaper compared to stainless steel vessels and in country where people with low and middle income are more, the consumption of aluminium vessels are increasing. The aluminium vessels are also replaced frequently at cheaper cost.

B. PRODUCT USES AND SPECIFICATIONS

The products proposed to be manufactured are Aluminum circles of size Dia 5” to 18’ with thicknesses ranging from 0.9 mm to 2mm which are most popular

sizes. Aluminium circles are used to manufacture aluminium vessels, utensils, packing cans, and other industrial products.

C. MARKET POTENTIAL

Automobile and Engineering sectors

In 2009 estimated rate of growth of India auto industry is going to be 9 percent. Auto industry in India has been hit hard by ongoing global financial recession. Sales figures of India automobile industry for December 2008 have shown devastating after effects of global financial slowdown.

However, there is still hope for automobile industry of India in 2009 as there are certain factors working in its favor. India is blessed with a middle class, which is getting economically stronger with every passing day. This class is being touted as potential consumers for India auto industry in years to come.

Indian economy has been, more or less, able to withstand tremors of global financial meltdown. Even though its rate of growth has slowed down considerably, there are hopes of an economic revival. Work force of auto industry of India is relatively well trained. All these factors indicate that there could be a decent future for India auto industry in days to come.

India automobile market

India automobile market is likely to be in good shape in 2009. Much of this

optimism results from renewed interest being shown in India auto industry by reputed overseas car makers. Nissan Motors, which is a well known Japanese car making company, regards India automobile market as a global car manufacturing hub for future.

Hyundai, a major automobile establishment of South Korea, has put in large sums of money in India automobile market. As per its estimates, India auto industry could become a major center for small car manufacturing organizations in future.

There are some other automobile companies of world who have shown interest in India auto market. Major names among these are General Motors, Skoda Auto and Mercedes-Benz. These companies have major plans lined up for India auto industry and are likely to invest a huge amount of money in India automobile market.

India domestic auto industry

India domestic auto industry has been passing through a tough phase in 2008 and such a trend is supposed in 2009 as well. Leading members of India auto industry have forecast a difficult path in 2009.

The automotive industry in India grew at a computed annual growth rate (CAGR) of 11.5 percent over the past five years, as per the Economic Survey 2008-09

tabled in parliament .“The industry has a strong multiplier effect on the economy due to its deep forward and backward linkages with several key segments of the economy,” a finance ministry statement said.

The automobile industry, which was plagued by the economic downturn amidst a credit crisis, managed a growth of 0.7 percent in 2008–09 with passenger car sales registering 1.31 percent growth while the commercial vehicles segment slumped 21.7 percent.

Infrastructure

India’s Infrastructure Output Index, a measure of output growth from six industries related to infrastructure production, has shown resilience thus far in 2009 and according to the latest available data from June 2009, production increased by 6.5% year–on–year (y–o–y), the strongest month yet. The forecasts are more bullish this quarter for 2009. Three factors influence the upward revision:

The latest infrastructure data

The re–election of the United Progressive Alliance party, which assures a level of policy continuity in infrastructure investment policy

The 2009/2010 budget announcements :

In the Q409 India Infrastructure Report, it is forecast that India’s construction

sector will grow, in real terms, at a rate of 2.6% y-o-y in 2009. This still remains a historically low figure for India, but growth is forecast to resume strongly in 2010, when we forecast real growth of 9.4%.

Infrastructure was the focal point of the new budget. A combination of higher government funding and public private partnerships (PPPs) will drive new investments in infrastructure projects. The main goal behind the provisions for infrastructure is increasing liquidity in the market, which in turn will sustain mega-projects in power, gas, highways and railways. For the transport sector, funding earmarked for the national highways development program increased by 23% compared with the previous budget, while funding for railways increased by close to 45%. In the power sector, allocations for the power development program increased by 160%. Finally, the project to create a national system of natural gas pipeline corridors will see a blueprint developed within the new fiscal year. Even though infrastructure got the lion's share of attention in the budget, Reuters reports that domestic infrastructure players sought more clarity over the allocation of earmarked funds.

India ranks 10th out of the 14 countries rated in our Project Finance Ratings for the Asia Pacific region.

The country's particularly low score in contract enforceability and market orientation drags its total project finance score down. In addition, finds itself in

fifth place this quarter owing to South Korea’s fall from the top of the table; India’s score remains the same this quarter. The country's weak points lie in the limited expertise of the domestic sector which, with the possible exception of companies such as Gammon, GMR Infrastructure and Larsen & Tourbo, cannot meet the demands of the mega-projects the government is seeking to implement in the transport and energy sectors.

D. TECHNICAL ASPECTS

1. Installed Capacity

The installed capacity of the unit is 300 Tonnes of aluminium circles per annum on single shift basis, 8 hours per day, for 300 days.

2. Plant and Machinery

The following items of equipment are required.

Machine name	Quantity (Nos.)	Value (Rs.lakhs)
Oil fired aluminum melting Furnace for batch capacity of 170 kgs suitable for 26” dia C.I Pan	1	1.60
Pumping ,Heating and Filtering unit consisting of Oil pre-heater, Gear pump, Electric motor with valves fittings	1	1.20
Centrifugal air blower	1	1.30

Aluminum cold rolling machine complete unit of 14x 36 with steel housing high carbon rolls, clutch system, Closed pinion box, Double reduction gears, Gunmetal bearing Fly wheel base plate etc	1	8.50
Oil fired aluminum sheet annealing furnace with refractory materials plates channels, air and oil pipelines	1	3.20
Miscellaneous items like Hand operated circle cutting machine, Power circle cutting machine, Shearing machine, C.I moulding plate, C.I.Pan spoons, Holding bars, Chain Block 3 Tonne capacity		3.20
Miscellaneous Tools etc		1.00
	Total	20.00

3. Manufacturing Process

The process of manufacturing aluminium from the scrap involves the following sequence of operations

Melting of aluminium scrap along with additives in oil fired furnace and removal of slag

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Pouring into slab moulds

|

Taking into Rolling Machines

|

Annealing

|

Rolling to required thickness

I

Circle cutting (circles of desired sizes)

4. Raw Material

The main raw material required is Aluminium Scrap which is available from aluminium scrap dealers. The consumables such as alloys and additives for casting are also available from dealers.

5. Land & Building

A rented place with 5000 sqft. area is required. The monthly rent is estimated at Rs.50,000 and also an advance of Rs.500000.

6. Utilities

Power:

The total power requirement of the unit will be 70 HP

Water:

Water is required only for human consumption.

Man power:

Category	Nos.	Monthly Salary	Total monthly Salary
Manager	1	9000	9000
Supervisor	2	8000	16000
Skilled	4	6000	24000
Unskilled	4	4000	16000
Assistant	3	5000	15000
Security	2	4000	8000

		88000
Add : Benefits	20%	17600

Total wages per month		105600

Total wages per annum [Rs.lakhs]		Rs.12.67 lakhs

7. Implementation Schedule

If financing arrangement is made available the project can be implemented with in one month's period.

8. ASSUMPTIONS

Installed capacity per annum	Aluminium Circles-300 MT
Capacity utilization-Year -1	60%
Year-2	70%
Year-3	80%
Selling price per unit	Aluminium Circles-Rs.108 000/MT

Material cost at 100%	Qty(inclgd . wastage)	Rate/MT	Value (Rs.lakhs)
Aluminium Scrap	330 Mt	Rs.60000	198.00
Alloys & other additives	300 Mt	Rs.15000	45.00
Total			243.00

Consumables per annum-at 100% (Rs. Lakhs)	Rs.1.20 lakhs
Power and Fuel-100% (Rs.lakhs)	Rs.14.67 lakhs
Wages & salaries -100% (Rs.lakhs)	Rs.12.38 lakhs
Repairs & Maintenance- p.m.	Rs.2000/-
Depreciation	WDV method - 15%

General & administration Expenses per month	Rs.50000/-
Selling expenses	3% on Sales
Interest on term loan and Working capital finance	13% p.a.
Income tax provision	34% on profit

LIST OF MACHINERY SUPPLIERS

1. T.K.Industries
26, Hoodwharf (Walltax Road)
Chennai-600 079.

2. P.Gopal Chettiar Rolling Works
No.1033 T.H.Road
Chennai-600 019

LIST OF RAW MATERIAL SUPPLIERS

General Scrap Merchants, available in all towns

1. Badusha Enterprises
10/10 Chakrapani Road
Chennai-600 032

2. KOP Enterprises
10/10 A Chakrapani Street
Chennai-600 032

3. Mangal Metals–Kapoor metals

9.Ponnapan Lane

Chennai–600 003

1. COST OF PROJECT

[Rs.lakhs]

Land & Building (Advance)	5.00
Plant & Machinery	20.00
Other Misc. assets	1.00
Pre–Operative expenses	2.00
Margin for WC	4.50
	<u>32.50</u>

2. MEANS OF FINANCE

Capital	17.50
Term Loan	15.00
	<u>32.50</u>

3. COST OF PRODUCTION & PROFITABILITY STATEMENTS

Years	1	2	3
Installed Capacity p.a.(MT)	300	300	300
Utilisation	60%	70%	80%
Production/Sales (MT)	180	210	240
Selling Price/MT (in Rupee)	108,000 per MT		
Sales Value	194.40	226.80	259.20

Raw Materials	145.80	170.10	194.40
Consumables	0.72	0.84	0.96
Power	8.80	10.27	11.74
Wages & Salaries	12.67	13.30	13.97
Repairs & Maintenance	0.24	0.25	0.26
Depreciation	3.00	2.55	2.17
Cost of Production	171.23	197.31	223.50
Admin, & General expenses	6.00	6.30	6.62
Selling expenses	5.83	6.80	7.78
Interest on Term Loan	1.95	1.71	1.22
Interest on Working Capital	2.19	2.19	2.19
Total	187.20	214.31	241.31
Profit Before Tax	7.20	12.49	17.89
Provision for tax	2.45	4.25	6.08
Profit After Tax	4.75	8.24	11.81
Add: Depreciation	3.00	2.55	2.17
Cash Accruals	7.75	10.79	13.98

4. WORKING CAPITAL:

	Months Consumption	Values	%	Margin Amount	Bank Finance
Raw Materials	0.75	9.11	25%	2.28	6.83
Consumables	1.00	0.06	25%	0.02	0.04
Finished goods	0.25	3.57	25%	0.89	2.68
Debtors	0.50	8.10	10%	0.81	7.29
Expenses	1.00	0.50	100%	0.50	0.00
		<u>21.34</u>		<u>4.50</u>	<u>16.84</u>

5. PROFITABILITY RATIOS BASED ON 80% UTILISATION

<u>Profit after Tax</u>	<u>11.81</u>	
Sales	259.20	5%
<u>Profit before Interest and Tax</u>	<u>21.30</u>	
Total Investment	49.34	43%
<u>Profit after Tax</u>	<u>11.81</u>	
Promoters' Capital	17.50	67%

6. BREAK EVEN LEVEL

Fixed Cost (FC):

	[Rs.lakhs]
Wages & Salaries	13.97
Repairs & Maintenance	0.26
Depreciation	2.17
Admin. & General expenses	6.62
Interest on TL	1.22
	<u>24.24</u>

Profit Before Tax (P) 17.89

$$\text{BEL} = \frac{\text{FC} \times 100}{\text{FC} + \text{P}} = \frac{24.24}{42.13} \times \frac{80}{100} \times 100$$

46% of installed capacity

