PROJECT PROFILE

ON

HARD RUBBER BATTERY

CONTAINERS

MONTH & YEAR
JULY 2011

PREPARED BY
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HARD RUBBER BATTERY CONTAINERS

INTRODUCTION

Automobile battery containers are used to carry the Batteries. They can be made of Natural rubber, synthetic rubber or reclaimed rubber depending up on the required hardness and strength.

MARKET

A huge domestic market growing furiously because of the huge production of passenger and commercial vehicles ensures a better future for consumption of rubber products. As 65% of the rubber goes into automobiles for various usages, the Indian Rubber Industry is set to grow at a fast pace.

The Indian rubber industry has been growing in strength and importance, as a part of India's burgeoning role in the global economy. India is the world's largest producer and the third largest consumer of natural rubber and India is also one of the fastest growing economy globally. With a stable annual growth rate of 8-9%, rising foreign exchange reserves, rapid expansion in the capital markets and FDI inflow, India proudly stakes its claim as the second fastest growing major economy in the world. These factors along with high concentration of automobile production and the presence of large and medium industries in South India, Chennai is the perfect place for the event India Rubber Expo-2011.

The Indian Rubber Expo 2011 is a testament to the confidence and relevance of India's largest rubber body the All India Rubber Industries Association AIRIA, the organiser of the India Rubber Expos. AIRIA, established in 1945 is comprised of over 1200 members and is headquartered in Mumbai.

It is considered to be one of the key players in global rubber business. Rapid progress in made in the production of natural rubber. India is home to some of the world's largest rubber enterprises through direct investment and technical collaboration.

There is no doubt that with rubber consumption stagnating in various Western countries and the shift in consumption of rubber to the Asia Pacific region, the focal country for this decade is India. There exists a huge scope for expansion causing import of machinery, technology, raw materials and export Rubber goods. There are 5000 units comprising 30 large scale, 300 medium scale and around 4600 small scale and tiny sectors in India.

These units are manufacturing more than 35000 rubber products, employing close to four hundred thousand people, which includes technically qualified support personnel's contributing Rs 40 Billion to the National Exchequer.

Natural rubber production in the country rose 3.7 per cent during 2010-11 against the previous year.

Domestic production stood at 8,31,400 tonnes in 2009-10 and 8,61,950 tonnes in 2010-11,as per the Rubber Board. The Rubber Board Chair anticipates the production for 2011-12 was 9,02,000 tonnes. Domestic consumption also increased by 2 per cent in 2010-11.

During 2010-11, growth in tyre production in the automotive sector grew by 23 per cent. Export of tyres also increased by 20 per cent. However, truck and bus tyre exports declined by five per cent.

The projected rubber consumption in 2011-12 is 9,77,000 tonnes.

During 2010-11 fiscal, exports stood at 28,424 tonnes compared with 25,090 tonnes in the previous fiscal. Imports accounted for 1,77,482 tonnes, 73 per cent of which was through duty free channels.

The chairperson said there would not be any shortage as the opening stock of rubber in 2011-12 was relatively high at 2,77,095 tonnes against 2,11,290 tonnes in 2010-11.

According to the International Rubber Study Group report, global rubber production-consumption balance in 2010 and 2011 showed deficits of 380,000 tonnes and 234,000 tonnes, respectively.

Automobile Industry and Rubber

India produces millions of passenger cars every year such as BMW, Nissan, Mitsubishi, Volvo, Toyota, Ford, Caparo, Swaraj Mazda, Fiat, Ford GM, Honda, Volvo Yamaha, Hyundai, Daimler, and Ranault in addition to the Indian manufacturers such as Ashok Leyland, TVS, Hindustan Motors, Bajaj Auto, Hero Honda, Tata Motors Royal Enfield and Tafe Tractors have all set their manufacturing base in India. Together they have during the last decade set a great pace of growth to the rubber industry as well.

Tyre Companies running operations in India are MRF Ltd, TVS Sri Chakra Tyres, Apollo Tyresm, Emerald Tyres, Michelin, Goodyear, JK Tyres Kumho Tyres ETC. India exports to over 85 countries including USA, Germany, France U.K, Italy, UAE, Saudi Arabia , Africa and Bangladesh.

The automobile production in the country is showing remarkable progress and any ancillary products such as rubber products which are used in automobiles. The growth in automobile production in the past can be seen from the following figures.

AUTOMOBILE PRODUCTION TRENDS

No of vehicles

Category	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Passenger Vehicles	1,209,876	1,309,300	1,545,223	1,777,583	1,838,593	2,357,411	2,987,296
Commercial Vehicles	353,703	391,083	519,982	549,006	416,870	567,556	752,735
Three Wheelers	374,445	434,423	556,126	500,660	497,020	619,194	799,553
Two Wheelers	6,529,829	7,608,697	8,466,666	8,026,681	8,419,792	10,512,903	13,376,451
Grand Total	**8,467,853**	**9,743,503**	**11,087,99**	**10,853,930**	**11,172,275**	**14,057,064**	**17,916,035**

			7				

Source: Society of Indian Automobile Manufacturers (SIAM)

INSTALLED CAPACITY

Product	Installed capacity per hour	No of working hours per day	Capacity per day	Capacity per annum 300 days per annum
Hard rubber battery containers				
Battery containers	25	8	200	60000 Nos
Battery covers	75	8	600	180000 Nos

PLANT AND MACHINERY

Sl. No	**Description**	**Qty Nos**	**Value Rs**
1.	(i) Production machinery, Tools & Equipments consisting of the following: Mixing Mill of size 16" × 42" with chilled Cast iron rolls, reduction gear, 60HP motor, starter & accessories	Whole Plant 1 No	4070000
2.	Hydraulic press – Hot platen size 800mm × 800 mm of capacity of about 300MT with 4 day lights for moulding large size battery containers	1 No	
3.	Hydraulic Press – Hot Platen size 700mm × 700 mm of capacity of about 200MT with 4 day lights for moulding various other sizes of battery containers.	1 No	

4.	Hydraulic Press – Hot platen size 500mm × 500mm of capacity of about 100MT with 4 day lights for moulding various battery covers	1 No	
5.	Boiler 1000Kgs/hr steam capacirty with working pressure of 150 Psi, with all standard accessories (Coal fired)	1 No	
6.	Weighing scales: Platform type(150 Kg) Single Pan type(10Kg.)Digital type	 1 No 1 No	
	(ii) Material handling equipments		70000
	(iii) Testing & Inception equipments, tools & apparatus		60000
	TOTAL		**4200000**

MANAFACTURING PROCESS

Natural rubber, synthetic rubber and reclaimed rubber are mixed with other ingredients and chemicals in a two roll mixing mill to make the rubber compound. It is then filled into suitable moulds and cured in a steam-heated hydraulic press for about 18 to 20 minutes at a temperature of 158 deg C. After curing, the pressure is released and the containers are removed from moulds and their edges and corners are trimmed. Then these containers are suitably packed and stored prior to despatch.

RAW MATERIALS

For-Battery conatiners	60000		
For-Battery covers	180000		
	Qty-kgs	Rate/kg	Value
			Rs lakhs

Reclaimed Rubber	120000	150.00	180.00
Natural rubber	15000	240.00	36.00
Synthetic Rubber	9600	207.00	19.87
Sulphur	30000	15.00	4.50
Ebonite	60000	40.00	24.00
Carbon black	5040	55.00	2.77
Fillers	84000	12.00	10.08
Hidrated lime	10800	15.00	1.62
Acceleartor	3600	150.00	5.40
Retarder	6000	150.00	9.00
Process oil	6000	40.00	2.40
Miscellaneous Chemicals like talc etc			2.40
Total			298.04
Packing materials	60000	1.50	0.90

UTILITIES

POWER& FUEL

Three phase- KW	45.00
Power charges Rs.lakhs p.a	5.94
Fuel-Rs 15000 p.m	1.80
Power & fuel	7.74
For process-Litres per day	2000
For human consumption-litres/day	200

LOCATION LAND AND BUILDING

Built up area-Sq.ft	2500
Rent p.m.-Rs per10 per sq.ft	25000
Advance-10 months.	250000

Rs

MANPOWER

		Monthly wages	Total
Supervisor	1	9000	9000
Skilled	5	7000	35000
Unskilled	11	5000	55000
Accounts Assistant	1	6000	6000
Sales Executive	1	7000	7000
Security	2	5000	10000
sub total			122000
Add benefits		20%	24400
Total per month			146400
TOTAL PER ANNUM-Rs. lakhs			17.57

COST OF PRODUCTION AND PROFITABILTY

Assumptions

Installed capacity	60,000 pieces of Battery Containers and 1,80,000 pieces of Battery Covers per annum
Capacity utilisation	Year-1 -60% Year -2 -70% Year-3 onwards- 80%
Selling price	Battery containers-Rs.265 per no Battery covers Rs.120.00 per no
Raw materials	As per the details given above
Packing materials	As per details given above
Power & Fuel	Rs.7.74 lakh per annum at 100%
Wages and salaries	Rs. 17.57 lakhs with increase 5% every year.

Repairs and Maintenance	Rs.0.60 lakh per annum
Depreciation	Written down value method -15 % on machinery
Selling general and administrative expenses	Rs.30000 per month
Interest on Term loan	14% per annum
Interest on working capital	14 % per annum
Income tax	34 % on profits

MACHINERY SUPPLIERS:

1. M/s.Indian Expeller Works Private Ltd, A-4, Naroda Industrial Estate, Ahmedabad – 383 330
2. M/s. Matharu Engineering Works, Plot No.1, Unit No.4, Opp. Tatwagyan Vidyapeeth
   Ghodbunder Road, Chitalsar, Thane - 400607
3. M/s. Modern Rubber Machinery Manufacturers Pvt. Ltd, 310, Jogani Industrial Estate
   541, Senapati Bapat Marg, Dadar, Mumbai – 400 028
4. M/s. Emson Industries, 6-A, Shri Ram Industrial Estate, Kaley Marg, Bail Bazar, Kurla
   Mumbai – 400 011.
5. M/s. Modern Hydraulics, 5, Italian Building(Ground Floor), 381, Sane Gruji Marg
   Agripada, Near I.T.I, Mumbai – 400 011
6. M/s. Perumacheril Castings Industries, Market Landing, Kottayam – 686 001, Kerala
7. M/s. Hind Hydraulics & Engineers, E-43/1, Okhla industrial Area, Phase –II, New Delhi – 110 002
8. M/s. Micromertics Engineers (P) Ltd. 298, 4th Floor, Khaleel Shiraji Estate Fountain Plaza, Pantheon Road, Egmore, Chennai – 600 028

9. M/s.Anant Engineering Works, Bassi Road, Sirihindi (N.Rly), Punjab – 140 406

10. M/s. Santhosh Industries, A-1, Sone Udyog, Parsi Panchayat Marg, Andheri (East)

Mumbai – 400 069

(b) Steam Boilers

1. M/s. Thermax Ltd, 610, Anna Salai, Chennai – 600 006

2. M/s. Maxima Boilers Pvt Ltd, 574/80, Mount Road, Congress Building,Teynampet,

Chennai – 600 006

3. M/s. Firetech Boilers Pvt. Ltd, No.211, 2nd Cross, 38th Main, BTM Layout, 2nd Stage,

Bangalore – 560 068.

4. M/s. Maxtherm, K3, Ambattur Industrial Estate, Ambattur, Chennai – 600 058

5. M/s. Southern Boilers & Equipments Pvt. Ltd, Y- 169, 1st Street, Anna Nagar ,

Chennai – 600 040

(c) Weighing Machines & Balances

1. M/s. Giri Brothers Private Ltd, P.B.No 1646, No.51, Rajaji Salai, Chennai – 600 001

2. M/s. Tamilnadu Scale Industries, 166, Broadway, Chennai – 600 108

(d) Testing & Measuring Instruments

1. M/s. P.B.Shah & Co, 182, Linghi Chetty Street, Chennai – 600 001

2. M/s. Blue Star Ltd, 620, Anna Salai, Chennai – 600 006

3. Madras Metallurgical Services, 5, Lalithapuram Street, Royapettah,Chennai - 600014

4. M/s. Presto Stantest Pvt. Ltd, C-117, F.F. Complex, Okhla Industrial Area, New Delhi – 110 020
5. M/s. Prolific Engineers, D-91, Sector – 2, Noida – 201 301,
6. M/s. ABS instruments Pvt. Ltd, 22, Electronics Complex, Guindy, Chennai – 600 032

(e) All miscellaneous equipments, tools, dies, moulds, fabricated items etc can be procured from local sources.

Suppliers of Raw Materials

(a) Rubber

1. M/s. Viraj Rubbers Private Ltd, 2-A, GNT Road, Ponniannanmedu, Madhavaram Post
   Chennai – 600 110
2. M/s. Silpro Trading Co, 8, Venkataratnam Road, Teynampet, Chennai – 600 018
3. M/s.Arasu Rubber Corporation Ltd, 259, Anna Salai, Chennai – 600 006
4. M/s. R.K.polymer, 196/5, Govindappa naicken Street, Chennai – 600 001
5. M/s. AVT Rubber products Ltd, 22, Marshells Road, Egmore, Chennai – 600 008
6. M/s. Goodluck Rubber House, Apnaghar, 103 Marshells Road, Egmore Chennai – 600 008
7. M/s. Kurian Abraham Ltd, 13/1, 423 MS Road, Parvathipuram, Nagercoil – 629 001
8. M/s. Cochin Malabar Estates and Inds Ltd, 6/117, Race Course Road, Coimbatore – 641 018

(b) Rubber Chemicals

1. M/s. Bayer India Ltd, 749, Anna Salai, Chennai – 600 002
2. M/s. National Organic Chemical industries Ltd, 8, Haddows Road, Chennai – 600 006
3. M/s. A.V.Thomas & Co(India) Ltd, 22, Marshalls Road, Egmore, Chennai – 600 008
4. M/s. Dujodwala Industries, 43, Armenian Street, Chennai – 600 001
5. M/s. Bharat Carbon Industries, 43, Buxipur Industrial Area, Gorakhpur – 273 001, U.P
6. M/s.Rubo-Chem Industries(P) Ltd, 403/404, laxmi Commercial Complex Senapati Bapat Marg, Mumbai – 400 028
7. M/s. I.C.I India Ltd, Rubber Chemicals Division, 149, Montieth Road, Chennai – 600 008
8. M/s. Monsanto Chemicals of India Ltd, F-4, Third Phase, Thiru Vi ka Industrial Estate
   Chennai – 600 097
9. M/s. Philips Carbon Black Ltd, 22, Marshalls Road, Egmore, Chennai – 600 008
10. M/s. R.K.Polymer, 196/5, Govindappa Naicken Street, Chennai – 600 001
11. M/s. South India Rubber & Chemicals, C-4, Ram Square, No.2 Village Road Nungabakkam, Chennai – 600 001
12. M/s. Manickavelu Corporation, Plot No. W-300, 19th Street, Sector – C Anna Nagar Western Extn, Chennai – 600 101.

FINANCIAL ASPECTS

1. COST OF PROJECT

[Rs.lakhs]

Land & Building (Advance)	2.50
Plant & Machinery	42.00
Other Misc. assets	0.50
Pre-Operative expenses	2.00
Margin for WC	5.29
	52.29

2. MEANS OF FINANCE

Capital	20.79
Term Loan	31.50
	52.29

3. COST OF PRODUCTION & PROFITABILITY STATEMENT

[Rs.lakhs]

Years	1	2	3	4	5
Installed Capacity- Battery containers-Nos	60000	60000	60000	60000	60000

Installed capcity-Battery covers	180000	180000	180000	180000	180000
Utilisation	60%	70%	80%	80%	80%
Production/Sales-Battery containers	36000	42000	48000	48000	48000
Production/sales-Battery covers	108000	126000	144000	144000	144000
Battery containers	265.00				
Battery covers	120.00				
Sales Value (Rs.lakhs)	**225.00**	**262.50**	**300.00**	**300.00**	**300.00**
Raw Materials	178.29	208.00	237.72	237.72	237.72
Packing Materials	0.54	0.63	0.72	0.72	0.72
Power& fuel	4.64	5.42	6.19	6.19	6.19
Wages & Salaries	17.57	18.45	19.37	20.34	21.36
Repairs & Maintenance	0.60	0.66	0.73	0.80	0.88
Depreciation	6.30	5.36	4.55	3.87	3.29
Cost of Production	207.94	238.52	269.28	269.64	270.16
Selling, Admin, & General exp	3.60	3.78	3.97	4.17	4.38
Interest on Term Loan	4.10	3.58	2.56	1.53	0.51
Interest on Working Capital	2.88	2.88	2.88	2.88	2.88
Total	218.52	248.76	278.69	278.22	277.93
Profit Before Tax	6.48	13.75	21.31	21.78	22.07
Provision for tax	2.18	4.63	7.17	7.33	7.43
Profit After Tax	**4.30**	**9.12**	**14.14**	**14.45**	**14.64**
Add: Depreciation	6.30	5.36	4.55	3.87	3.29
Cash Accruals	10.60	14.47	18.69	18.32	17.93

Repayment of Term loan	0.00	7.88	7.88	7.88	7.86

4. WORKING CAPITAL:

	Months Consumptions	Values	%	Margin Amount	Bank Finance
Raw Materials	0.50	7.43	25%	1.86	5.57
Consumables	2.00	0.09	25%	0.02	0.07
Finished goods	0.50	8.66	25%	2.17	6.49
Debtors	0.50	9.38	10%	0.94	8.44
Expenses	1.00	0.30	100%	0.30	0.00
		25.86		5.29	20.57

5. PROFITABILITY RATIOS BASED ON 80% UTILISATION

$$\frac{\text{Profit after Tax}}{\text{Sales}} = \frac{14.14}{300.00} \quad 5\%$$

$$\frac{\text{Profit before Interest and Tax}}{\text{Total Investment}} = \frac{26.75}{72.86} \quad 37\%$$

Profit after Tax	=	14.14	68%
Promoters Capital		20.79	

6. BREAK EVEN LEVEL

Fixed Cost (FC):

	[Rs.lakhs]
Wages & Salaries	19.37
Repairs & Maintenance	0.73
Depreciation	4.55
Admin. & General expenses	3.97
Interest on TL	2.56
	31.18

Profit Before Tax (P) 21.31

$$BEL = \frac{FC \times 100}{FC + P} = \frac{31.18}{52.49} \times \frac{80}{100} \times 100$$

48% of installed capacity