

PROJECT PROFILE

ON

BRAKE LININGS

Month & Year
December 2009

**PREPARED BY
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BRAKE LININGS

A. INTRODUCTION

Brake Linings are brake shoes which are used in light and heavy commercial vehicles, passenger cars, scooters as friction materials for stopping, speed reducing of vehicle. These components constitute a very important part of the total braking system of these vehicles.

B. PRODUCT USES & SPECIFICATION

Bureau Of India Standards has prescribed standards under IS : 1521-1960. for Brake linings

C. MARKET POTENTIAL

There are two types of demand for Brake Linings 1.O.E.Demand and 2.Replacement demand. The O.E Demand will increase with the production of original vehicles. The replacement demand is dependent on the wear and tear and replacement of the vehicle owners as this is a critical equipment and replacement is essential to run the vehicle, the replacement demand is bound to increase. With the setting up major automobile projects namely Ford Motors, Hyundai Motors, Hindustan Motors, Mitsuibishi and with expansion plans of Ashok Leyland & TAFE, Chennai emerges the Detroit of south East Asia. TamilNadu has always been a fore-runner in the industrial process, both in terms of industrial output and also terms of encouraging various new large-

scale projects. Having recorded an impressive growth industry in the post-reform span, it is poised for further industrial development and expansion. At present the state accounts for over 11-12% of India's industrial output. Automobile ancillaries have O.E. Market and Replacement market for all automobile

The Production and Sales trends for the past 7 years is given below:

Automobile Production Trends			(Number of Vehicles)				
Category	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Passenger Vehicles	723330	989560	1209876	1309300	1545223	1777583	1838697
Commercial Vehicles	203697	275040	353703	391083	519982	549006	417126
Three Wheelers	276719	356223	374445	434423	556126	500660	501030
Two Wheelers	5076221	5622741	6529829	7608697	8466666	8026681	8418626
Grand Total	6279967	7243564	8467853	9743503	11087997	10853930	11175479

Source: Society of Indian Automobile Manufacturers

Automobile Domestic Sales Trends			(Number of Vehicles)				
Category	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Passenger Vehicles	707198	902096	1061572	1143076	1379979	1549882	1551880
Commercial Vehicles	190682	260114	318430	351041	467765	490494	384122

Three Wheelers	231529	284078	307862	359920	403910	364781	349719
Two Wheelers	4812126	5364249	6209765	7052391	7872334	7249278	7437670
Grand Total	5941535	6810537	7897629	8906428	10123988	9654435	9723391

Domestic Sales

The cumulative growth of the Passenger Vehicles segment during April 2007 – March 2008 was 12.17 percent. Passenger Cars grew by 11.79 percent, Utility Vehicles by 10.57 percent and Multi Purpose Vehicles by 21.39 percent in this period.

The Commercial Vehicles segment grew marginally at 4.07 percent. While Medium & Heavy Commercial Vehicles declined by 1.66 percent, Light Commercial Vehicles recorded a growth of 12.29 percent.

Three Wheelers sales fell by 9.71 percent with sales of Goods Carriers declining drastically by 20.49 percent and Passenger Carriers declined by 2.13 percent during April– March 2008 compared to the last year.

Two Wheelers registered a negative growth rate of 7.92 percent during this period, with motorcycles and electric two wheelers segments declining by 11.90 percent and 44.93 percent respectively. However, Scooters and Mopeds segment grew by 11.64 percent and 16.63 percent respectively.

Despite the slow down in production of automobiles the demand for the automobiles is expected to grow in coming years.

D. TECHNICAL ASPECTS

1. Installed capacity

The installed capacity proposed is 90,000 nos. brake linings in small scale sector per annum. This is based on 300 days working on single shift basis.

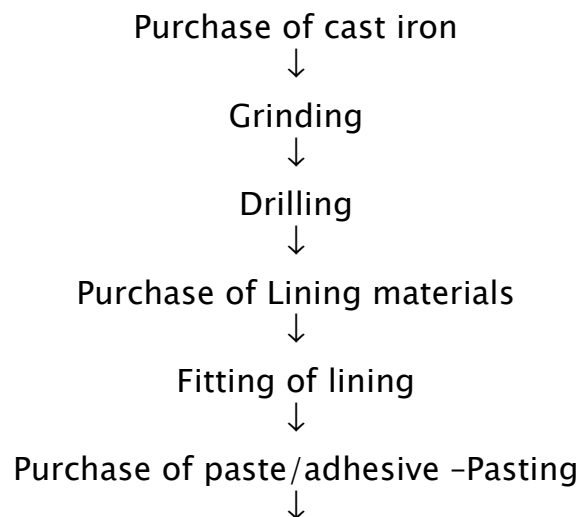
2. Plant and Machinery

The following plant & machinery are required.

Description	Qty. (Nos.)	Value (Rs.lakhs)
Medium lathe	1	1.90
Drilling machine	1	0.45
Bench Grinding	1	0.30
Power Hacksaw	1	0.65
Other tools & equipment		0.70
Total		4.00

3. Manufacturing Process

The manufacturing process of Brake linings is as follows:



Fitting Screws
↓
Packing and Despatching

4. Raw Materials

The materials required are cast iron components, Asbestos, Chemicals, resins, paste adhesive and screws. The casting items can be procured from foundries in Coimbatore. Other materials are available from dealers.

5. Land & Building

A Building area of 500 sqft. is required this may be taken on rental basis Rs.5000 per month. Advance Rs.50000.

6. Utilities

Power:

A power load of 10 HP is sufficient for the operation of the M/c.

Water:

Water is requirement human consumption only.

Man Power:

Supervisor	1	8000	8000
Skilled	2	6000	12000
Unskilled	2	4000	8000
Assistant	1	5000	5000
Security	4	4000	<u>16000</u>
			49000
Add : Benefits	20%		9800
Total wages per month			<u>58800</u>

Total wages per annum [Rs.lakhs] Rs.7.06

7. Implementation Schedule

As the machines and materials are available indigenously, the project can be implemented within 3 months period if financial arrangements are made.

8. ASSUMPTION

Installed Capacity per annum	Brake Lining - 90,000 Pieces p.a.
Capacity utilization - Year 1	60%
- Year 2	70%
- Year 3	80%
Selling price per piece	Brake Lining - Rs.60/piece

Raw Material required per piece	Value (Rs.)
Cast Iron component	15.00
Asbestos	8.00
Chemical resins / Paste	3.00
Screws etc.	1.50
Total cost per piece	27.50

Consumables cost p.a. at 100% (Rs.lakhs)	Rs.2.40 lakhs
Power & Fuel at 100% (Rs.lakhs)	Rs.0.95 lakh p.a
Wages & Salaries (Rs.lakhs)	Rs.7.06 lakhs
Repairs & Maintenance per month	Rs.5,000 p.m
Depreciation	WDV method - 15%

Administrative & General expenses p.m.	Rs.5,000
Selling expenses	3%
Interest on Term loan and Working capital finance	13%
Income Tax provision	34%

LIST OF MACHINERY SUPPLIERS

Machine Tools

1. Quality Machine Tools
New No.238, Linghi Chetty Strret
Chennai 600 001
2. Gujrat Machine Tools
New No.279, Linghi Chetty Street
Chennai 600 001
3. Premier Machine Tools
New No.103, Armenian Street
Chennai 600 001
4. Machine Centre
New No.214 linghi chetty Street
Chennai 600 001
5. Power Hydraulics,
Plot 10-c, 1st Main Road,
Thirumalaipriya Nagar,
Pudur, Ambattur,
Chennai 600 053

LIST OF RAW MATERIAL SUPPLIERS

1. Ecmas Resin Pvt. Ltd.
3-6-260/101, Madhuri Mansion
Himayath Nagar,
Hyderabad 500 029
2. Bharath Resins & Chemicals
No.27, SP. Industrial Feeder Complex,
Ambattur Estate
Chennai 600 058.

BRAKE LINING

1. COST OF PROJECT	[Rs.lakhs]
Land & Building (Advance)	0.50
Plant & Machinery	4.00
Other Misc. assets	0.50
Pre-Operative expenses	1.00
Margin for WC	<u>1.03</u>
	<u>7.03</u>
2. MEANS OF FINANCE	
Capital	4.03
Term Loan	<u>3.00</u>
	<u>7.03</u>

3. COST OF PRODUCTION & PROFITABILITY STATEMENTS

Years	1	2	3
Installed Capacity (No.)	90000	90000	90000
Utilisation	60%	70%	80%
Production/Sales (No.)	54000	63000	72000
Selling Price/No. (in Rupee)	60 per piece		
Sales Value (Rs.lakhs)	32.40	37.80	43.20
Raw Materials	14.85	17.33	19.80
Consumables	1.44	1.68	1.92
Power	0.57	0.67	0.76
Wages & Salaries	7.06	7.41	7.78
Repairs & Maintenance	0.24	0.25	0.26
Depreciation	<u>0.60</u>	<u>0.51</u>	<u>0.43</u>
Cost of Production	24.76	27.85	30.95
Admin, & General expenses	0.60	0.63	0.66
Selling expenses	0.97	1.13	1.30
Interest on Term Loan	0.39	0.34	0.24
Interest on Working Capital	<u>0.31</u>	<u>0.31</u>	<u>0.31</u>

Total	27.03	30.26	33.46
Profit Before Tax	5.37	7.54	9.74
Provision for tax	1.83	2.56	3.31
Profit After Tax	3.54	4.98	6.43
Add: Depreciation	0.60	0.51	0.43
Cash Accruals	4.14	5.49	6.86

4. WORKING CAPITAL:

	Months Consumption	Values	%	Margin Amount	Bank Finance
Raw Materials	0.75	0.93	25%	0.23	0.70
Consumables	1.00	0.12	25%	0.03	0.09
Finished goods	0.25	0.52	25%	0.13	0.39
Debtors	0.50	1.35	10%	0.14	1.21
Expenses	1.00	<u>0.50</u>	100%	<u>0.50</u>	<u>0.00</u>
		<u>3.42</u>		<u>1.03</u>	<u>2.39</u>

5. PROFITABILITY RATIOS BASED ON 80% UTILISATION

<u>Profit after Tax</u>	<u>6.43</u>	15%
Sales	43.20	
<u>Profit before Interest and Tax</u>	<u>10.29</u>	109%
Total Investment	9.42	
<u>Profit after Tax</u>	<u>6.43</u>	159%
Promoters' Capital	4.03	

6. BREAK EVEN LEVEL

Fixed Cost (FC):

[Rs.lakhs]

Wages & Salaries	7.78
Repairs & Maintenance	0.26
Depreciation	0.43
Admin. & General expenses	0.66
Interest on TL	<u>0.24</u>
	<u>9.37</u>

Profit Before Tax (P) 9.74

$$\text{BEL} = \frac{\text{FC} \times 100}{\text{FC} + \text{P}} = \frac{9.37}{19.11} \times \frac{80}{100} \times 100$$

39% of installed capacity