

First Prize

Tyre

JK TYRE & INDUSTRIES LTD. Chennai (Tamil Nadu)

Unit Profile

JK Tyre & Industries Ltd Chennai Tyre Plant (CTP) in Tamil Nadu is the 6th manufacturing Plant of JK Tyre presently produces 25 Lakhs Passenger Car Radial (PCR) tyres and 4 Lakhs Truck /Bus Radial (TBR) tyres per annum. This Plant went on stream on 05th February 2012 with an initial investment of Rs. 956 Crores.

Present employee strength is 1200 (approx). The Mixers are provided with SCADA based recipe management. The fully automated chemical and carbon handling system and energy efficient processes keep the Plant and surroundings environment neat and tidy.

On 24th October 2013, the Board of Directors have approved a further outlay of Rs. 1,430 Crores for the Expansion Project keeping in mind the manufacturing capabilities of this Plant thereby enhancing the total annual capacity of CTP to 45 Lakhs PCR tyres and 12 Lakhs TBR tyres which is expected to be completed by the middle of Financial Year 2015-16.



Energy Consumption

DESCRIPTION	UNIT	2012-13	2013-14
Annual Production	MT	18182	38004
Total Electricity consumption/ Annum	Lakh kWh	285.54	408.13
Specific Energy consumption– Power	kWh / MT	1.70	1.07
Total Thermal energy consumption/ annum	M Kcal	58284	71469
Specific energy consumption – Thermal	M Kcal/MT	3.51	0.88
Specific Energy consumption - Steam	Kg /Kg	4.25	2.09

Energy Efficiency Projects

1. Electrical Energy (EE) savings in 2013-14

S. No	Project description	Investment (lakhs Rs)	Annual Cost Savings (2012-13)	
			Electricity (Lakhs kWh)	Cost (Lakhs Rs)
1.	Automatic stoppage of mixers auxiliaries / Main mixer motor	Nil	6.39	41.22
2.	Automatic Stoppage of Duplex & Triplex & 4Roll & Inner liner auxiliaries	3.0	2.19	14.13
3.	Idle running stoppage of Over head conveyer from TBM to FF (PCR&TBR)	Nil	8.88	57.28
4.	PCR curing Hydraulic pump interlock	Nil	0.55	2.29
5.	Utility Pump VFD	8.0	7.81	50.37
6.	Coal handling Crusher motor VFD	2.0	0.144	0.93
7.	Energy management system implemented	5.0	-	-
8.	FRP Blade replacement on Process cooling Tower	1.0	0.324	2.09
9.	PCR & TBR Apexing unit idle optimization	NIL	4.62	29.80
10.	AHU & HVAC idle running optimization	NIL	22.01	141.96
11.	Plant lighting & Roof top transparent sheets	NIL	7.67	49.47
12.	Fine tuning of Extruder & Apexing unit	NIL	4.08	26.32

13.	Carbon Compressor idle running optimization	NIL	2.84	18.32
14.	Turbo Vent blower in place of Electric Exhaust fan	NIL	1.62	10.45
	Grand Total	19.0	68.033	444.62

Miscellaneous Energy saving

Achieved through process improvement activities like;

- a. Cycle time reduction in Mixing
- b. Stage reduction in Mixing
- c. Increase in Batch weight in Mixing
- d. Line speed increase in Extruders
- e. Line speed increase in Calendars
- f. Process Rework reduction
- g. Scrap reduction
- h. Increase in operator skill level through various training

Total Electrical Energy Saved – 170.51 Lakhs	Units which works to: Rs 1104.35 Lakhs
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2. Thermal energy savings in 2013-14

S. No	Project description	Investment (lakhs Rs)	Annual Cost Savings (2012-13)	
			Coal (MT)	Cost (lakhs Rs)
1.	Replacement of orifice (C-trap) in place of conventional Steam Traps (TD3) in main distribution headers	3	1812.8	68.90
2.	Provision of orifice in the U seal out let to avoid the excess steam over flowing thru the seal and henceforth rising the temperature of the deaerator without live steam	0.09	300.4	11.42
3.	Usage coal drying bay to minimize moisture content (by 1% Total Moisture) in feeding coal and improve Boiler Efficiency	Nil	159.8	6.07
4.	VAM CRS inlet steam line size has been changed from 1/2 inch to 1 inch to avoid overflow of pure condensate	0.06	41.0	1.56

S. No	Project description	Investment (lakhs Rs)	Annual Cost Savings (2012-13)	
			Coal (MT)	Cost (lakhs Rs)
5.	Additional Covered sheds provided for storage of Coal to avoid wind and carpet loss	40	1000	38.01
6.	Flash Steam Recovery from curing CRS back to Boiler Deaerator instead of using live steam	1	1246.1	47.36
7.	Platern Steam condensate collection and pumping back to Boiler through condensate recovery system	1	573.46	21.80
8.	Increasing the turndown ratio of the boiler by operational changes	Nil	4249.38	161.52
9.	Hot water recovery from the press to utilize the heat energy in the system.	Nil	320	12.16
Grand Total		48.15	9702.8	368.80

Other Factors which contributed in Thermal energy saving

1. Improvement in cure cycle
 - a. Reduction in cure time
 - b. Cure cycle Changes
2. Isolating steam services for idle / non operating presses when not in use for more than 3 hrs.

The above factors contributed in savings of 3373 MT of coal which is equivalent to a cost of Rs 128.18 lakhs.

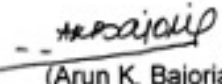
Energy Policy

ENERGY POLICY

We at JK Tyre are committed to design, manufacture and distribute our products & services in an energy efficient manner to meet our mission statement of becoming a green company. We will continually improve our energy performance for sustainable growth by:

- Complying with all applicable legal and other requirements related to our energy use, consumption and efficiency.
- Taking measures in Energy Management System by being proactive, innovative and cost effective including procurement of energy efficient products & services.
- Enhancing the effectiveness of energy management system by ensuring the availability of information and necessary resources to achieve the objectives and targets.
- Integrating the Energy policy into our business planning, decision making and performance review at appropriate levels.

We commit to communicate this policy to all our employees, persons working for and on our behalf and also will make it available to all interested parties on request.


(Arun K. Bajoria)
President & Director

**JKTYRE**
& INDUSTRIES LTD.