

**ENVIRONMENTAL STATEMENT  
(April 2016 to March 2017)**



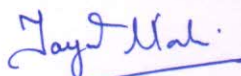
**Rail Wheel Plant/Bela  
(Indian Railways) Govt. of India**  
Village-Bela, Block – Dariarpur  
District: Saran (Chhapra) Bihar  
Pin Code- 841221

**APRIL 2017**

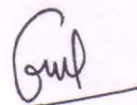


## Environmental Statement for the Financial Year (April-2016 to March-2017)

Rail Wheel Plant, Ministry of Railways, Govt of India is located at Bela in Daryapur block, Chhapra (Saran) district of Bihar. It produces cast rail wheels for use in BOX-N wagons and BGC wagons. Rail wheel production in this plant started on 01-08-2014. The project cost is Rs. 1500 Crores. The plant is located in an area of 295 acres. Environmental Clearance from the Ministry of Environment, Forests & Climate Change, Govt of India was obtained vide letter No. J-11011/527/2010-IA-II (I) dated 12<sup>th</sup> January 2012. The production capacity is 100000 Numbers of cast steel rail wheels (62235 tons/annum steel casting). Metal Scrap and Ferroalloys is smelted in Electric Arc Furnace. The electric arc furnace is provided with Fume Extraction Hood, Wet Scrubber and Bag House to control the air emissions generated from the furnace. Slag is skimmed off from the top of the furnace. The molten steel from EAF is poured in ladles and taken to Normalising Furnace and then to Draw Furnace. Desired chemistry and properties of the steel is achieved, which is then casted into wheels in moulds. DG sets has been installed to meet the electricity requirement during grid failure/ load shedding. Water is required for cooling purpose in the plant. Cooling is done in closed circuit through cooling towers. Domestic waster is required for drinking, canteen, toilets, wash-rooms and for gardening purpose. Sewage Treatment Plant of 500 KLD capacity has been provided to treat the sewage and use the treated sewage for gardening purpose. Provision has been also kept to take the sewage to 4 ponds for storage and natural treatment. Solid wastes generated from the plant are slag, skull and refractory bricks. These are reused, sold and disposed as landfilling material. Used oil is sold to authorized reprocessors. Asbestos materials are stored at secured place and effort is made to locate a TSDF site for its disposal. Soiled jute and cotton clothes used for cleaning purpose of machines and equipment are also stored in a secured place for incineration. One incinerator has been provided inside the plant premises for this purpose. Adequate greenbelt covering 33% of the plant area has been developed. Other open spaces inside the plant have been converted to lawns and gardens. Concrete and asphalt roads have been made inside the plant premises, which are cleaned daily. Good housekeeping practice is followed inside the work areas to keep it clean all the time. Workers are subjected to routine health check-up and all safety systems has been maintained. Personnel Protection System like dust mask, ear plugs, face shield, goggles and helmets are given to workers. Emission & Discharge Consent from Bihar State Pollution Control under Water Act and Air Act has been obtained. 6-Monthly EC compliance reports are submitted regularly to MOEF&CC and BSPCB. Environmental Statement in Form V is also submitted regularly to MOEF&CC and BSPCB. Rail Wheel Plant/Bela has entrusted EMTRC Consultants Private Limited, Laboratory recognized by Ministry of Environment Forests & Climate Change, Govt of India, to carry out regular monitoring of ambient air quality, noise quality, stack emission quality, wastewater quality and groundwater quality of the plant premises for preparation of six-monthly compliance reports and Environmental Statement.



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Works Manager/PFP cum FM  
Rail Wheel Plant, Bela  
PO: Arvind Nagar, Block Daryapur  
Dist: Chhapra (Saran) 841221 Bihar



## PART – A

- i. Name and address of the Owner/ Occupier of the Industry : **Rail Wheel Plant/Bela**  
(Ministry of Railways) Govt. of India  
Office of the Chief Administrative Officer,  
Administrative Building, Village-Bela,  
Block – Dariarpur Saran (Chhapra)  
Bihar, Pin Code- 841221
- ii. Industry Category : Secondary Metallurgical Industry
- iii. Production capacity (per day) :
1. Product (Rail Cast Steel Wheel) : 100000 Nos/ Annum cast steel rail wheel  
(62235 tons/annum - Licensed)
- Products manufactured during 2016-17 : 12593 Nos. Rail Wheels  
(10176 BOX-N Wheel + 2417 BGC Wheel)
- By product : None
- iv. Year of establishment : 01-08-2014
- v. Date of last environmental statement : 28-07-2016

## PART – B

### Water & Raw Material Consumption

#### i. Water Consumption (April-2016 to March-2017):

Cooling & Process	:	70 KL/day
Domestic	:	125 KL/day
Total	:	195 KL/day

Name of the project	Process water consumption per unit product output	
	During the previous Financial year	During the current Financial year
Rail Wheel Plant/Bela		
Rail Wheel	3.9 KL/ Piece Wheel	3.7 KL / Piece Wheel

Output in 2016-17: 12593 Rail Wheels  
Output in 2015-16: 12071 Rail Wheels  
Manufacturing considered for 240 days.

**Raw Material Consumption :**

Raw Materials (as given below)	Name of Product	Consumption of Raw Material per Unit of Output	
	Rail wheel	During the Financial Year 2015-2016 (Metric Tons)	During the Financial Year 2016-2017 (Metric Tons)
		1.51 Tons/Piece Wheel	1.23 Tons/Piece Wheel

Output in 2016-17: 12593 Rail Wheels

Total Raw Materials Consumed in 2016-17: 15512 Metric Tons

Output in 2015-16: 12071 Rail Wheels

Total Raw Materials Consumed in 2015-16: 18179 Metric Tons

Name of the Raw Material		During the Financial Year 2016-2017 (Metric Tons)
1	HMS	11303.59
2	LMS	2556.79
3	Ferro Silicon	161.99
4	Ferro Manganese	90.26
5	Silico Manganese	68.43
6	Carbon	
	a).Graphite Granules	180.13
	b).Graphite Powder	95.84
	c).Graphite Electrode	114.0
7	Lime	941.34
	Total	15512.37 MT

**PART - C**

**Pollution discharge to environment / unit of output  
(Parameter as specified in the consent issued)**

Pollutants	Quantity of pollutants discharged (mass/day)	Concentration of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water	BOD – 3 kg/day TSS – 10 kg/day Oil & Grease – 1 kg/day	BOD - 30 mg/l TSS-100 mg/l Oil & Grease -10 mg/l	Calculation done using prescribed discharge standards. There is underground drainage system partially in function which is connected with 4 numbers of ponds. Arrangement has been made to discharge the domestic wastewater in the ponds till further functioning of STP.

Domestic water consumption: 125 KL/day

Domestic wastewater generation @80%: 100 KL/day

No wastewater is discharged from cooling and process.

