



Ref. No. – TSG/EC/2025-26/Nov-25/01

18/11/2025

To,

**Deputy Director General of Forests (C)
Ministry of Environment, Forest and Climate Change
Integrated Regional Office, 2nd Floor, Headquarter- Jharkhand State Housing Board
Harmu Chowk, Ranchi, Jharkhand – 834002**

Subject: Half yearly environmental clearance compliance report of Tata Steel Limited, Gamharia for the period from April 2025 to September 2025

Reference:

1. Environment clearance vide letter no. J/11011/681/2007 – IA II (I) dt. 11.10.2007
2. Environment clearance vide letter no. J/11011/611/2010 – IA II (I) dt. 25.10.2011

Sir,

We are herewith submitting half yearly compliance report along with environmental monitoring report of Tata Steel Limited, Gamharia situated at Adityapur Industrial Area, Village: Jhurkuli, Tehsil: Gamharia, District: Saraikela-Kharsawan. The compliance report is for the period from April 2025 to September 2025.

This is for your kind information and necessary records please.

Thanking you,

Yours sincerely

For **Tata Steel Limited, Gamharia**

Ravi Ranjan Prasoon
Head - Environment

Cc:

1. The Zonal Head, CPCB, Kolkata
2. The Member Secretary, JSPCB
3. The Regional Officer, JSPCB

TATA STEEL LIMITED

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Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India
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Corporate Identity Number L27100MH1907PLC000260

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No : F. No. J-11011/681/2007 - IA II (I)
	Issue date: 11.10.2007

S.N.	EC Conditions	Compliance Status
	Specific conditions	
i	Electrostatic precipitator (ESP) to captive power plant, bag house to sinter plant and bag filter to blast furnace shall be provided to control gaseous emissions within the permissible limits of Jharkhand SPCB or prescribed under E (P) A whichever is more stringent. Agglomerative dust suppression system shall be provided to coal crusher screens, coal transfer points and sinter plant. Fume extraction system shall be provided to steel melting shop. Sprinklers shall be provided in dust prone areas including roads.	Complied. Adequate Pollution control devices are installed at all required locations to maintain emissions within permitted norms. The equipment installed are as below – Captive Power Plant (CPP): Electrostatic precipitator (ESPs) are provided in all WHRBs and Coal based boilers. Water sprinkling arrangement, Dry fog system, sprinklers and rain guns are provided in coal handling area including crushers, screens and transfer points. Sinter Plant: ESPs are provided in sinter process and product circuit to control emissions. In Flux Crusher and screen circuits bag filters are provided. Dry fog Dust Suppression system is provided in ground hopper and rain gun sprinklers are installed in material storage yard for dust suppression during material handling. Blast furnace: Bag filters are installed in Raw Material Handling Area and Cast House. Gas Cleaning Plant (GCP) is installed for blast furnace gas cleaning. 7 Nos of Mist beam water cannon are provided in RMHS and cast House area for suppression of dust during material handling. Steel Melting Shop: The steel melting shop is provided with Fume Extraction System. Bag filters are provided in all raw material handling circuits for control of fugitive dust. Water sprinklers are installed at all dust prone areas viz. slag handling area, material storage yards etc. List of details APC systems installed is attached as Annexure-3.
ii	Secondary fugitive emissions from arc furnace and sinter plant shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guideline/ Code of Practice issued by the CPCB shall be followed.	Complied. Secondary emissions from SMS and Sinter Plant are controlled through high-capacity Fume Extraction System (FES) and Bag Filters respectively. Work-zone Air Quality monitoring is carried out by NABL accredited agency at regular intervals and values are maintained within permitted levels. Guidelines / Code of Practice of the statutory bodies issued from time to time are regularly followed. Work-Zone Air Quality monitoring reports are attached

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No : F. No. J-11011/681/2007 - IA II (I)
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		as Annexure-5.
iii	Total water requirement from River Subranarekha shall not exceed 12,110 m ³ /day as per the permission accorded by the State Govt. No ground water shall be used. All the wastewater shall be recycled and reused for industrial applications, dust suppressions, ash disposal and green belt development and no wastewater shall be discharged outside the premises. Domestic effluent shall be treated in septic tank followed by dispersion trench/ soak pits.	Complied. Water needed for the process is drawn from Subranarekha river as per the permission granted by Water Resources department, Govt. of Jharkhand. All wastewater generated is reused back in the process after appropriate treatment in the Effluent Treatment Plant (ETP). ETP treated water is used for slag granulation, coke quenching, in cooling circuit of Pellet Plant, spraying over roads for dust suppression, plantation and horticulture activities. Domestic effluent is treated through sewage treatment plant with Capacity 250 KLD and septic tank / soak pit arrangement. The treated effluent is used within the plant for various process such as plantation, gardening etc.
iv	Continuous monitoring of Total Organic Compounds (TOCs) shall be done at the outlet of ETP (BOD plant).	Complied. As there is no "Recovery type Coke Oven" in the plant the requirement for BOD Plant and Continuous Monitoring of TOC isn't needed. Online monitoring facility of pH, TSS, COD and BOD is provided at the outlet of centralized effluent treatment plant.
v	Ground water monitoring around the solid waste disposal site/ secured landfill (SLF) shall be carried out regularly and report submitted to the Ministry's Regional Office at Bhuvaneshwar, CPCB and Jharkhand SPCB.	Complied. Ground water monitoring is carried out by NABL accredited agency at regular intervals around the solid waste disposal site. Monitoring reports are submitted to statutory bodies as directed in the condition. Ground water monitoring report attached as Annexure-6

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No : F. No. J-11011/681/2007 - IA II (I)
	Issue date: 11.10.2007

vi	All the solid wastes shall be properly utilized. Rolling mill scrap shall be recycled as steel scrap. Mill scale shall be sold to cement industry. Grinding dust and dust from steel melting shop and fume extraction system shall be used in blast furnace. Dust from blast furnace gas cleaning plant shall be sold to smokeless fuel industry. Slag/ coke from blast furnace shall be used in sinter plant or used in making fly ash bricks. Slag from arc furnace shall be used in road construction. Waste oil shall be used in blast furnace.	Being Complied. Solid waste generated within the plant are segregated and most of the waste are recycled back in process. (i) Rolling mill scrap is partially recycled as steel scrap in SMS and partially sold as scrap to outside vendor. (ii) Mill scale is used in sinter making process at Sinter Plant and also sold to the outside vendor. (iii) FES Dust from SMS is being used in sinter plant. (iv) Flue Dust from blast furnace, Bag Filter Dust and wet GCP dust is also used in Sinter plant. (v) 100 percent Blast furnace Granulated slag is sold to open market. (Used by major cement industry). (vi) Metal is recovered from the slag of the arc furnace and recycled. Non-metallic slag is used for backfilling low-lying areas. (vii) Used Oil / Waste Oil / Spent oil is collected and stored in designated place and sold to authorized recycler.
vii	All the char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be accumulated anywhere else.	Complied. Char from DRI is used in Power Plant as a partial replacement of Coal which reduces CO2 emission from the process. Char is also reused in sponge Iron Plant to improve bed fluidity. Excess quantity of char is sold to outside users.
viii	All the fly ash shall be provided to cement and brick manufacturers for further utilization and bottom ash shall be used for land filling. Proper utilization of fly ash shall be ensured as per Fly ash Notification, 1999 and subsequent amendment in 2003.	Complied. Fly ash and bottom bricks are provided to local fly ash brick manufacturers for the production of fly ash bricks. TSG has successfully obtained the Stabilization certification for the legacy ash mound from the Jharkhand State Pollution Control Board (JSPCB). This achievement marks a significant milestone within the Tata Steel ecosystem. TSG also achieved 100% utilization of ash in a 3-year cycle as per the Fly Ash Notification 2021.
ix	Permission and recommendation of the State Forest Department regarding impact of proposed expansion on the protected forest located at 2.5 km shall be obtained and all the recommendation shall be implemented.	Agreed.
x	Permission and recommendations of the Chief Wildlife Warden regarding impact of the proposed expansion of the iron and steel Plant on Dalma Sanctuary shall be obtained and all the recommendations shall be implemented.	Complied. As per letter No. 1221 dated 26.07.2004 from Chief Conservator of Forests – cum – Chief Wildlife Warden, Jharkhand Dalma sanctuary is beyond 15KM from the plant and hence away from the impact zone. Letter is attached Annexure-11
	General Conditions	

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No : F. No. J-11011/681/2007 - IA II (I)
	Issue date: 11.10.2007

i	The project authorities must strictly adhere to the stipulation made by the Jharkhand Pollution Control Board (Jharkhand SPCB) and the State Government.	Agreed.
ii	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	Agreed. Expansion or modification in the plant shall not be carried out without prior approval of MoEFCC.
iii	The gaseous emissions from various process units shall conform load the load/ mass-based standards notified by this Ministry on 19 th May, 1993 and standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters, keeping in view the nature of the industry and its size and location. Online stack monitoring facilities for all the stacks including new sinter plant and powerhouse and sufficient air pollution control devices shall be provided to keep the emission levels below the permissible limit and reports submitted to the Jharkhand SPCB & CPCB. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	Complied. Monitoring of gaseous pollutants in all major stacks is periodically done and record maintained. The monitoring reports are sent to statutory bodies at regular intervals. Online stack monitoring facility is provided in all major stacks. Adequate pollution control devices such as ESPs, bag filters are provided for control of stack dust emission and Particulate matter emissions are maintained within norms. Stack monitoring result attached as Annexure-1.
iv	At least four ambient air quality monitoring stations shall be established in the downwind direction as well as where maximum ground level concentration of SPM, SO ₂ and NO _x are anticipated in consultation with the Jharkhand SPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the Jharkhand SPCB/ CPCB once in six months.	Complied. Four Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed inside the plant premises in consultation with JSPCB. Ambient Air Quality Monitoring and stack monitoring is carried out by JSPCB accredited agency and report is submitted to JSPCB / CPCB & Regional office of MOEFCC on half-yearly basis. Stack monitoring result attached as Annexure-1. Ambient air monitoring result attached as Annexure-2.

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No : F. No. J-11011/681/2007 - IA II (I)
	Issue date: 11.10.2007

v	In - plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Dust extraction system and dry fogging system shall be provided to control air emissions at material transfer and sizing plants. ESP and bag filters shall be provided wherever required to keep the emission levels below permissible limit. Gas cleaning plant shall be provided to BF. Further, specific measures like water sprinkling shall be carried out and fugitive emissions shall be controlled, regularly monitored and records maintained.	Being Complied. Adequate pollution control equipment (APCE) is installed in different units for control of pollution. The type of Pollution Control Equipment installed in different locations are as below – a) DRI – Bag Filters b) Power plant – ESPs, Bag Filters c) Sinter Plant – ESPs, Dry Fog System, Bag Filters d) Steel Melting Shop – Fume Extraction Systems, bag filters e) Blast Furnace – Bag Filters, Dry and Wet Gas Cleaning Plant Dust conditioning systems are provided at required locations to minimize generation of dust during unloading of hoppers / silos. Fixed and mobile sprinklers are deployed at dust generation points for control of fugitive dust. Monitoring records are maintained. List of details APC systems installed, and other environmental initiatives is attached as Annexure-3
vi	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December 1993 or as amend from time to time. The treated wastewater shall be utilized for plantation purpose.	Complied. Industrial effluent generated at various locations within the plant is collected and treated in centralized Effluent Treatment Plant (ETP) of 7200 KLD. Treated water is reused back in Pellet Plant, Blast furnace, Coke Oven etc for various purposes including slag granulation, Coke quenching, spraying over roads for dust suppression and plantation and horticulture activities. ETP treated water analysis report is attached as Annexure-7.
vii	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Being Complied. Noise generation sources are isolated with appropriate acoustic enclosures. Equipment is fitted with silencers and acoustic hoods to minimize noise at source. Ambient noise level is maintained within the norms specified under Environment Protection Act, 1986. Ambient Noise monitoring report is attached as Annexure-8.

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No : F. No. J-11011/681/2007 - IA II (I)
	Issue date: 11.10.2007

viii	Green belt shall be developed in 33% area within and around the plant premises as per the CPCB guidelines in consultation with DFO.	Complied. Continuous efforts are made to plant more trees within the plant area. Plan is drawn and executed every year during monsoon for plantation of saplings of different species viz. Gulmohar, Peltophorum, Mahogany, Kadam, Neem, Pipal, Bargad, Jamun, Mango, Guava, Alstonia etc. In addition, we are developing dense forest inside plant. Details of green Belt developed, and landscape area given in Annexure-4.
ix	The company shall develop surface as well as ground water harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table.	Being Complied. Rainwater harvesting plan as approved by Ground Water Directorate, Jharkhand is implemented within the plant. Rainwater harvesting structures have been set-up at Sinter plant, Power plant, DRI & Mill area.
x	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Complied. Health check-up for workers is done at periodic intervals and records maintained. The test conducted includes LFT, audiometric tests, ophthalmic investigations, X ray, routine urine and blood tests.
xi	Recommendations made in the Corporate Responsibility for Environment Conservation (CREP) issued for the steel plants shall be implemented.	Complied. Recommendations made in Corporate Responsibility for Environment Conservation (CREP) for steel plants is regularly reviewed and implemented. CREP compliance Status is attached as Annexure-10
xii	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/ EMP report. Further, the company must undertake socio-economic development activities in the surrounding village like community development program, educational program, drinking water supply and health care etc.	Being Complied. Environment protection measures stated in EIA/EMP are systematically implemented. Company through its dedicated CSR team undertakes multiple socio-economic initiatives in surrounding panchayats. The CSR department follows a logical process to extend the required and most needed benefits to its local community through its short-term and long-term CSR plans. Key CSR activities in Tata Steel Limited, Gamharia are attached as Annexure-9

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No : F. No. J-11011/681/2007 - IA II (I)
	Issue date: 11.10.2007

xiii	As mentioned in the EIA/ EMP, Rs. 90.00 Crores and 2.10 Crores earmarked towards the capital cost and recurring cost/ annum for environmental pollution control measures shall be judiciously utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.	Complied. Separate funds for environment management are allocated and spent for betterment of environment.
xiv	The Regional Office of this Ministry at Bhubaneswar / CPCB/ Jharkhand SPCB will monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Complied. Half-yearly compliance report along with monitoring data are regularly submitted to regional office, MoEFCC, CPCB and JSPCB as per stipulated guidelines. Previous Compliance report (Refer. No. TSG/EC/2024-25/May-25/01 Dated. 16/05/2025) was submitted on 20/05/2025. Copy of submission on Parivesh Portal is Attached as Annexure-14
xv	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the OSPCB/ Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspaper that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office.	Complied.
xvi	Project authorities should inform the Regional Office as well as Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Complied. Date of Financial closure: 2007 Date of issue of consent to establish by JSPCB: - 17.11.2007 vide letter no. - 4250

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No: F. No: J-11011/611/2010-IA-II (I)
	Issue date : 25-10-2011

COMPLIANCE OF STIPULATED CONDITIONS OF ENVIRONMENTAL CLEARANCE

SN	EC Conditions	Compliance Status
A	Specific conditions	
i	Efforts shall be made to mitigate RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all stacks shall be provided.	Being Complied. Several Steps are taken to mitigate RSPM levels in ambient air. Measures taken for control of dust levels in ambient air includes the following – - Fixed type sprinklers including rain guns are installed in raw material handling areas. 7 Nos of Water mist canon is installed in the RMHS and slag dumping area of MBF to control fugitive emission during material handling. - Mobile sprinklers are provided to reduce fugitive dust from roads. - Source emissions are controlled by effective operation of pollution control systems viz. ESPs, Bag filters, dry fog systems etc. - Broad leaved trees are planted in open areas within the department and plant periphery. - Construction of RCC roads inside plant. - All the paved roads are cleaned by vacuum road sweeper to arrest dust emission due to vehicular movement. - Raw material stock yards are covered with tarpaulin. - Construction of Four Nos Coal Storage Shed at DRI, MBF, CPP & Coke Oven - Installation of New Bag Filter at MBF-2 RMHs, Coke Circuit, Sinter Storage Bins, SMS-3 RMHs to control fugitive emission. 4 Continuous Ambient Air Quality Monitoring Stations (CAAQMS) are installed in different corners of the plant for ambient air quality monitoring. 09 online gas analyzers and 23 online dust monitors are also installed at different stacks for monitoring of emission from the stack. Stack monitoring result attached as Annexure-1 Ambient Air monitoring result attached as Annexure-2
ii	Stack monitoring facilities for all the major stacks and adequate air pollution control systems to control particulate emissions within the prescribed limits from coke oven shall be provided. Carbon mono-oxide (CO) shall also be monitored along with other parameters and standards notified under the Environment (Protection) Act shall be followed. ESP shall be installed to control	Complied. Stack monitoring facilities are provided at all major stacks. 09 online gas analyzers and 23 online dust monitors are installed covering all major stacks for monitoring of emission from the stacks. Adequate pollution control devices are installed to control the particulate matter emission from coke oven and pellet plant. PM, SO₂, and NO_x in flue gas of Coke Oven is monitored at regular intervals. The monitoring reports are

Tata Steel Limited

Address: Adityapur Industrial Area, Gamharia, District: Saraikela- Kharsawan, Jharkhand

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No: F. No: J-11011/611/2010-IA-II (I)
	Issue date : 25-10-2011

	the particulate emissions from the pellet plant. The reports shall be submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.	regularly submitted to MoEFCC Ranchi, CPCB and JSPCB. Stack monitoring result attached as Annexure-1
iii	Multistage scrubber shall be installed to control gaseous and dust emissions from the coke oven stack. Measures shall be taken to prevent leakages from coke oven plant.	Complied. Coke Oven installed is of Non-Recovery Type and hence dust and gaseous emission from the plant is very negligible. Non-recovery type ovens work on negative pressure and leakages in the system is insignificant.
iv	The prescribed emission standards for coke oven plants, as notified vide notification no. GSR 46 (E) dated 3 rd February 2006 and subsequently amended shall be complied with.	Complied. The prescribed emission standard is for Recovery type, whereas the Coke Ovens installed at TSG is of non-recovery type and hence not applicable.
v	In-plant control measures like bag filters, de-dusting and dust suppression systems shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression systems shall be provided at all the transfer points, coal handling plant and coke sorting plant of coke oven plant. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.	Being Complied. Adequate pollution control devices are installed at all required locations. Water sprinkling arrangements are provided to control secondary fugitive dust generated from vehicular movement, ground hoppers etc. List of details APC systems installed, and other environmental initiatives is attached as Annexure-3.
vi	Secondary fugitive emissions shall be controlled within the prescribed limits, regularly monitored and records maintained. Guidelines / code of Practice issued by the CPCB in this regard shall be followed.	Complied. Secondary emissions from SMS and Sinter Plant are controlled through high-capacity Fume Extraction System (FES) and Bag Filters respectively. Work-zone Air Quality monitoring is carried out by NABL accredited agency at regular intervals and values are maintained within permitted levels. Guidelines / Code of Practice of the statutory bodies issued from time to time are regularly followed. Work-Zone Air Quality monitoring reports are attached as Annexure-5.

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No: F. No: J-11011/611/2010-IA-II (I)
	Issue date : 25-10-2011

vii	Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall be made to control dust emissions during loading and unloading of the raw material and finished product. Efforts shall also be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash shall be transported in the closed containers only and shall not be overloaded. Vehicular emissions shall be regularly monitored and records kept.	Being Complied. Fugitive emissions due to movement of vehicles are controlled through water spraying. Fixed and mobile type sprinklers are deployed at strategic locations to maintain fugitive dust levels. Dust extraction system is installed in conveyor belts for control of dust during material transfer. Material carrying vehicles are closely monitored to prevent any overloading. Vehicles carrying fines and other materials are covered with tarpaulin to prevent emission during transport.
viii	Total requirement of the water for the proposed expansion shall not exceed 3,440 m ³ /day. All the treated wastewater shall be recycled for dust suppression and green belt development. Domestic wastewater shall be treated in septic tank followed by soak pit and used for green belt development. Zero effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.	Complied. Water needed for the process is drawn from Subranarekha river as per the permission granted by Water Resources department, Govt. of Jharkhand. All wastewater generated is reused back in the process after appropriate treatment in the Effluent Treatment Plant (ETP). ETP treated water is used for slag granulation, coke quenching, in cooling circuit of Pellet Plant, spraying over roads for dust suppression, plantation and horticulture activities. Domestic effluent is treated through sewage treatment plant with Capacity 250 KLD and septic tank / soak pit arrangement. The treated effluent is used within the plant for various process such as plantation, gardening etc.
ix	Efforts shall be made to make use of rain water harvesting. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	Being Complied. Rainwater harvesting plan as approved by Ground Water Directorate, Jharkhand is implemented within the plant. Rainwater harvesting structures have been set-up at Sinter plant, Power plant, DRI & Mill area.
x	Waste from the hard coke unit, shall be used as fuel in the captive power plant or sold. The iron ore sludge shall be sold to the bricks manufacturing units. Coal and coke fines shall be recycled and reused in the process. The waste oil shall be properly disposed off as per the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008.	Complied. Coke breeze from Coke Oven Plant is 100% re-used internally in Sinter Plant. Waste Oil generated within the plant is disposed of periodically to authorized recycler.

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No: F. No: J-11011/611/2010-IA-II (I)
	Issue date : 25-10-2011

xi	As proposed, green belt shall be developed in 33% of the plant area within and around the project site to mitigate the impact of fugitive emissions as per the CPCB guidelines in consultation with local DFO.	Complied. Continuous efforts are made to plant more trees within the plant area. We have achieved 33 percent green belt within the plant. Plan is drawn and executed every year during monsoon for plantation of saplings of different species viz. Gulmohar, Peltophorum, Mahogany, Kadam, Neem, Pipal, Bargad, Jamun, Mango, Guava, Alstonia etc. In addition, we adopted Miyawaki plantation method for developing dense forest inside plant. Details of green Belt developed, and landscape area given in Annexure-4.
xii	The recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Coke Oven Plant shall be implemented.	Complied. The recommendation of CREP applicable to integrated Iron & Steel Industry is implemented and reviewed regularly. CREP Compliance status is attached Annexure-10
xiii	Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environmental clearance letter.	Complied. Risk & disaster management plan has been prepared & submitted to JSPCB.
xiv	At least 5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner. The action plan shall include major items like school, vocational training etc.	Being Complied. Environment protection measures stated in EIA/EMP are systematically implemented. Company through its dedicated CSR team undertakes multiple socio-economic initiatives in surrounding panchayats. The CSR department follows a logical process to extend the required and most needed benefits to its local community through its short-term and long-term CSR plans. Key CSR activities in Tata Steel Limited, Gamharia are attached as Annexure-9
xv	The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Complied. Required infrastructure as directed in EC were provided during project and commissioning stages of the plant.

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No: F. No: J-11011/611/2010-IA-II (I)
	Issue date : 25-10-2011

xvi	The company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of noncompliance / violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.	Complied. The company has a well-defined IMS (Integrated Management System) covering all aspects of environmental governance. Standard Operating Procedure (SOP) / Work Instruction (WI) are prepared for all key environmental activities. An environment management cell comprising of scientists and engineers are established to oversee the environmental functions with the plant.
B	General Conditions:	
i	The project authorities shall strictly adhere to the stipulations made by the Jharkhand Pollution Control Board (JSPCB) and State Govt.	Agreed.
ii	At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	Complied. Measures are taken to maintain emissions within permitted norms. The performance of pollution control equipment is constantly evaluated through scheduled O & M practices. Preventive maintenance schedules are drawn for equipment to reduce unforeseen break downs or failures.
iii	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Complied. No expansion or modification in the plant shall be carried out without prior approval of MoEFCC.
iv	The gaseous emissions from various process units shall conform to the load/mass-based standards notified by this Ministry on 19 th May, 1993 and standards prescribed from time to time. The state Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	Complied. These features are taken care of in Design & Engineering of the project and emissions are maintained within norms.

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No: F. No: J-11011/611/2010-IA-II (I)
	Issue date : 25-10-2011

v	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and import of Hazardous Chemicals Rules, 1989 as amended in October 1994 and January 2000. Authorization from JSPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes.	Complied. The provisions of Hazardous Chemicals Rules 1989 and its amendment are strictly followed. Handling and disposal of hazardous waste is also done as per Hazardous and Other Wastes Rules, 2016. The unit has obtained valid authorization for its handling from JSPCB. Hazardous Waste Authorization copies are attached as Annexure-20
vi	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008. Authorization from Jharkhand Pollution Control Board must be obtained for collection/treatment/storage/disposal of hazardous wastes.	Complied. Responsibilities applicable under Hazardous Wastes (Management, Handling & Trans-boundary movement) Rules, 2008 and its last amendment in 2016 are strictly complied. Hazardous wastes generated in the plant are disposed to authorized recyclers.
vii	The overall noise levels in and around the plant area shall be kept well within the standards 85 dB(A) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dB(A) (day time) and 70 dB(A) (night time).	Being Complied. Acoustic hoods, Silencers, Mufflers, and enclosures are provided at high noise generation areas for control of noise pollution. Noise level in and around the plant monitored and precautionary steps are taken in high noise areas. Ambient Noise Monitoring Report is attached as Annexure-8
viii	The company shall develop rainwater harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table.	Being Complied. Rainwater harvesting plan as approved by Ground Water Directorate, Jharkhand is implemented within the plant. Rainwater harvesting structures have been set-up at Sinter plant, Power plant, DRI & Mill area.
ix	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Complied. Health check-up for workers is done at periodic intervals and records maintained. The test conducted includes LFT, audiometric tests, ophthalmic investigations, X ray, routine urine and blood tests.
x	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.	Being Complied. Environmental protection measures proposed in the EIA/EMP of the project are systematically implemented.

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No: F. No: J-11011/611/2010-IA-II (I)
	Issue date : 25-10-2011

xi	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions.	Complied. A multi-disciplinary team of engineers and environmental scientists is set up to oversee the environmental management function of the plant. An environmental laboratory is also established to conduct various analysis of air and water.
xii	As proposed, Rs. 50 Crores and Rs. 2.5 Crores shall be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures and judiciously used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. A time bound implementation schedule shall be submitted to the Ministry and its Regional Office at Bhubaneswar to implement all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Complied. The funds provided for EMP are not diverted for any other purpose.
xiii	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/ municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied.
xiv	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF, the respective Zonal Office of CPCB and the PCB. The criteria pollutant levels namely; RSPM (PM2.5 and PM10), SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Complied. Status of compliance of the EC conditions is being uploaded in the website of the company. The status of the same is periodically updated and sent to various government bodies including MoEFCC, CPCB and JSPCB twice in a year. The monitored data of stack emissions, ambient air quality and effluent quality is displayed in the electronic display board near the main gate of the company. Photographs of the electronic display board are attached as Annexure-12

Half yearly Environment Clearance Compliance Status (From Apr. 2025 to Sept. 2025)	EC Accord No: F. No: J-11011/611/2010-IA-II (I)
	Issue date : 25-10-2011

xv	The Project Proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to Regional Office of MoEF, the respective Zonal Office of CPCB and JPCB. The Regional Office of this Ministry/CPCB/JSPCB shall monitor the stipulated conditions.	Complied. Compliance and monitoring reports are submitted in PARIVESH portal once in every six months as stipulated. Acknowledgement copy is attached as Annexure-15
xvi	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MoEF by e-mail.	Complied. Environmental Statement for each financial year is submitted regularly to JSPCB before 30 th of September every year. Last Environment Statement (Refer. No. TSG/EMD/ES/FY'25) is submitted on 05/09/2025. Last ES copy is attached as Annexure-16
xvii	The Project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the JSPCB and may also be seen at website of the Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office.	Complied. The issuance of environmental clearance was advertised in local newspaper - Prabhat Khabar & Avenue Mail dated 01.07.2012. Paper cutting of Prabhat Khabar is attached as Annexure-17
xvii i	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Complied. Date of financial closure: 01.02.12. NOC issue date by JSPCB: 18.01.12. Land development job started on: 15.02.12

Stack Emission Monitoring Report

S.No	Unit	Stack Attached to	Report No.	Sampling on	Flue Gas Temp. (Deg.C)	Stack Gas Velocity (m/s)	Gas Flow (Nm3/hr)	PM (mg/Nm3)	SO2 (mg/Nm3)	NOX (mg/Nm3)
1	CPP	CPP 25 MW	RN-240715001 S09	09.04.2025	122	7.0	186898	70.1	645.1	366.1
2		WHRB - 4 & 5 (DRI-4&5)	RN-240715001 S02	02.04.2025	110	8.4	182681	32.2	364.2	142.3
3	SMS	FES of SMS - 1 & 2	RN-240715001 S10	11.04.2025	75	6.8	402359	22.3	66.1	124.2
4		FES of SMS - 3	RN-240715001 S19	23.04.2025	78	8.2	475975	23.4	95.2	152.0
5	Sinter Plant	Sinter Process	RN-240715001 S18	22.04.2025	112	6.3	497044	75.3	75.2	144.2
6		Sinter Dedusting	RN-240715001 S20	25.04.2025	62	5.9	288556	31.3	-	-
7		Sinter Product House	RN-240715001 S03	03.04.2025	45	8.5	72520	55.4	-	-
8	MBF - 1	MBF - 1 Cast House	RN-240715001 S12	16.04.2025	46	5.7	58793	21.2	39.2	45.1
9		MBF - 1 Ground Hopper	RN-240715001 S13	16.04.2025	38	12.7	27061	22.0	-	-
10		MBF - 1 Stock House	RN-240715001 S11	15.04.2025	39	6.9	26215	18.5	-	-
11	MBF-2	MBF - 2 Stoves	RM-240715001 S08	08.04.2025	186	6.9	64823	16.3	71.6	92.5
12		MBF - 2 Cast House	RM-240715001 S06	07.04.2025	43	9.2	172831	22.3	42.1	38.6
13		MBF - 2 PCI Stack	RN-240715001 S07	07.04.2025	65	13.2	31770	23.1	-	-
14		MBF - 2 RMHS-1	RN-240715001 S01	01.04.2025	42	8.6	71598	25.7	-	-
15	CPP	CPP 25 MW	RN-240715001 S08	14.05.2025	120	5.6	150522	72.4	608.3	371.5
16		WHRB - 1 & 40 TPH	RN-240715001 S07	13.05.2025	125	6.6	139835	32.1	324.4	81.1
17		WHRB - 2 & 3 (DRI-2&3)	RN-240715001 S11	19.05.2025	122	7.3	154682	30.2	351.6	74.5
18		Coke Oven WHRB - 1	RN-240715001 S09	15.05.2025	185	10.5	117440	20.1	294.1	63.3
19		Coke Oven WHRB - 2	RN-240715001 S10	16.05.2025	170	10.3	134016	21.3	208.4	96.0
20	SMS	FES of SMS - 1 & 2	RN-240715001 S13	23.05.2025	60	6.3	386358	16.2	68.4	130.6
21	WRM	WRM Reheating Furnace	RN-240715001 S03	06.05.2025	391	10.0	27710	22.4	78.4	160.3
22	Blooming Mill	BM Reheating Furnace	RN-240715001 S04	07.05.2025	360	10.0	51760	32.2	98.4	181.9
23	Sinter Plant	Sinter Process	RN-240715001 S01	02.05.2025	120	6.1	488254	64.5	82.6	150.6
24		Sinter Dedusting	RN-240715001 S02	02.05.2025	110	6.3	269827	27.2	-	-
25	Pellet Plant	Pellet Kiln	RN-240715001 S05	09.05.2025	40	5.7	534188	19.6	132.0	133.9
26	MBF - 1	MBF - 1 Cast House	RN-240715001 S16	28.05.2025	42	5.9	61401	20.3	44.3	50.5
27		MBF - 1 Stock House	RN-240715001 S12	20.05.2025	45	6.9	25628	20.3	-	-
28	MBF-2	MBF - 2 Stoves	RN-240715001 S20	30.05.2025	122	5.7	62800	15.2	76.4	97.9
29		MBF - 2 Cast House	RN-240715001 S14	26.05.2025	40	8.8	168360	21.5	46.9	44.0
30		MBF - 2 PCI Stack	RN-240715001 S15	26.05.2025	65	13.3	32288	17.1	-	-
31	CPP	CPP 25 MW	RN-240715001 S14	25.06.2025	116	5.0	135323	68.1	605.2	364.8
32		WHRB - 1 & 40 TPH	RN-240715001 S11	17.06.2025	121	6.1	130118	30.3	322.0	76.9
33		WHRB - 2 & 3 (DRI-2&3)	RN-240715001 S06	11.06.2025	118	6.8	146041	28.4	348.5	67.8
34		WHRB - 4 & 5 (DRI-4&5)	RN-240715001 S10	16.06.2025	106	7.9	175478	33.7	361.1	135.6
35		Coke Oven WHRB - 1	RN-240715001 S07	12.06.2025	181	10.1	114024	18.6	291.7	59.1
36		Coke Oven WHRB - 2	RN-240715001 S08	12.06.2025	166	9.9	114928	20.1	205.3	89.3
37	SMS - 3	FES of SMS - 3	RN-240715001 S17	27.06.2025	74	7.8	458335	20.4	92.8	148.1
38		SMS-3 RMHS	RN-240715001 S16	26.06.2025	40	6.2	122551	15.3	-	-
39	Pellet Plant	Pellet Kiln	RN-240715001 S13	24.06.2025	121	5.9	437973	20.5	130.2	129.7
40	MBF - 2	MBF - 2 Cast House	RN-240715001 S09	13.06.2025	36	8.5	163980	19.2	44.5	39.8
41		MBF - 2 RMHS	RN-240715001 S12	23.06.2025	38	8.0	69437	26.6	-	-
42	Coke Oven	Coke Route	RN-240715001 S15	26.06.2025	36	12.0	105397	18.6	109.9	328.4
43	CPP	CPP 25 MW	RN-240715001 S20	22.07.2025	118	6.9	187899	62.1	553.1	369.6
44		WHRB - 1 & 40 TPH	RN-240715001 S19	21.07.2025	123	6.3	145109	54.3	392.5	83.1
45		WHRB - 2 & 3 (DRI-2&3)	RN-240715001 S06	08.07.2025	120	7.4	157347	31.2	322.1	72.6
46		WHRB - 4 & 5 (DRI-4&5)	RN-240715001 S08	10.07.2025	108	7.7	168649	30.1	342.6	140.4
47		Coke Oven WHRB - 1	RN-240715001 S02	03.07.2025	183	9.9	110743	20.1	251.2	63.9
48		Coke Oven WHRB - 2	RN-240715001 S03	03.07.2025	168	9.6	111555	17.5	278.6	95.5
49	SMS	FES of SMS - 1 & 2	RN-240715001 S11	15.07.2025	62	6.6	403996	18.2	61.3	136.8
50		SMS-3 RMHS	RN-240715001 S16	17.07.2025	78	8.1	470970	22.1	-	-
51	WRM	WRM Reheating Furnace	RN-240715001 S10	11.07.2025	393	10.7	29433	23.4	72.6	165.1
52	Blooming Mill	BM Reheating Furnace	RN-240715001 S09	10.07.2025	362	9.6	49704	25.6	88.7	188.1
53	Sinter Plant	Sinter Process	RN-240715001 S14	16.07.2025	122	6.3	497063	73.4	76.2	155.4
54		Sinter Dedusting	RN-240715001 S15	16.07.2025	112	6.1	262607	26.8	-	-
55		Sinter Product House	RN-240715001 S23	23.07.2025	52	8.7	72343	29.1	-	-
56	Pellet Plant	Pellet Kiln	RN-240715001 S22	23.07.2025	123	7.4	550953	20.5	112.4	134.5
57	MRF-1	MBF - 1 Stoves	RN-240715001 S18	18.07.2025	265	13.2	51458.9	16.1	112.4	64.1
58		MBF - 1 Cast House	RN-240715001 S12	15.07.2025	44	5.6	57837	19.2	40.2	55.3

59	MBF-1	MBF - 1 Ground Hopper	RN-240715001 S13	15.07.2025	48	12.2	25173	17.1	-	-
60		MBF - 1 Stock House	RN-240715001 S17	18.07.2025	47	6.7	24520	18.2	-	-
61	MBF-2	MBF - 2 Stoves	RN-240715001 S24	24.07.2025	124	6.1	66807	18.6	71.3	102.7
62		MBF - 2 Cast House	RN-240715001 S25	24.07.2025	38	8.3	159267	17.3	40.2	46.0
63		MBF - 2 PCI Stack	RN-240715001 S07	09.07.2025	67	13.2	31830	16.4	-	-
64		MBF - 2 Stock House	RN-240715001 S01	01.07.2025	50	9.4	105193	18.4	-	-
65		MBF - 2 RMHS	RN-240715001 S05	04.07.2025	50	6.4	31762	15.1	-	-
66		MBF - 2 RMHS-1	RN-240715001 S04	04.07.2025	40	7.8	67188	20.3	-	-
67	COKE OVEN	Coke Route	RN-240715001 S21	22.07.2025	38	17.2	150125	20.2	134.5	334.6
68	CPP	CPP 30 MW	RN-240715001 S01	06.08.2025	132	9.4	244717	24.3	521.5	224.1
69		WHRB - 1 & 40 TPH	RN-240715001 S11	29.08.2025	192	7.0	125056	47.5	364.1	80.1
70		WHRB - 2 & 3 (DRI-2&3)	RN-240715001 S05	21.08.2025	138	7.2	146700	30.1	304.5	64.2
71		WHRB - 4 & 5 (DRI-4&5)	RN-240715001 S03	20.08.2025	125	7.4	155804	28.4	331.6	132.1
72		Coke Oven WHRB - 1	RN-240715001 S06	22.08.2025	192	12.0	131471	22.4	232.1	54.2
73		Coke Oven WHRB - 2	RN-240715001 S07	22.08.2025	187	10.5	116637	19.5	264.1	83.3
74	SMS	FES of SMS - 1 & 2	RN-240715001 S08	25.08.2025	68	6.7	399948	18.3	58.5	128.5
75		FES of SMS - 3	RN-240715001 S12	29.08.2025	87	6.5	369383	22.4	55.4	123.4
76		SMS-3 RMHS	RN-240715001 S10	28.08.2025	55	8.6	350877	17.6	-	-
77	Sinter Plant	Sinter Process	RN-240715001 S04	21.08.2025	145	7.3	548318	45.0	74.2	142.1
78	MBF - 2	MBF - 2 RMHS-1	RN-240715001 S09	28.08.2025	46	5.9	49754	20.4	-	-
79	CPP	WHRB - 1 & 40 TPH	RN-250303003 S03	10.09.2025	180	7.4	136836	38.6	368.3	88.3
80		WHRB - 2 & 3 (DRI-2&3)	RN-250303003 S04	10.09.2025	145	8.3	165857	33.4	309.1	74.0
81		WHRB - 4 & 5 (DRI-4&5)	RN-250303003 S13	18.09.2025	111	7.1	154901	28.3	335.8	140.3
82		Coke Oven WHRB - 1	RN-250303003 S05	11.09.2025	225	11.8	120999	18.6	236.3	62.4
83		Coke Oven WHRB - 2	RN-250303003 S06	11.09.2025	195	10.6	115950	20.2	268.7	39.1
84	SMS	FES of SMS - 1 & 2	RN-250303003 S07	12.09.2025	60	6.7	411476	20.9	62.7	136.7
85		FES of SMS - 3	RN-250303003 S08	12.09.2025	85	7.4	424387	23.7	60.0	133.2
86	WRM	WRM Reheating Furnace	RN-250303003 S09	15.09.2025	390	8.3	23044	21.3	76.8	173.3
87	Blooming Mill	BM Reheating Furnace	RN-250303003 S10	15.09.2025	380	8.9	44592	24.7	93.3	197.9
88	Sinter Plant	Sinter Process	RN-250303003 S01	05.09.2025	115	6.4	517935	47.6	78.4	150.3
89	Pellet Plant	Pellet Kiln	RN-250303003 S02	09.09.2025	134	8.0	577135	19.2	117.0	144.3
90	MBF-2	MBF - 2 Stoves	RN-250303003 S11	16.09.2025	115	5.9	65804	16.9	75.5	110.9
91		MBF - 2 Cast House	RN-250303003 S12	16.09.2025	40	8.7	164616	18.6	44.8	55.8



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16138

TEST REPORT

/ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	2	1
Discipline: Chemical	Group: Atmospheric Pollution										Sub-Group: Stack Emission						
Report Issue Date: 09-07-2025	Test Report No.: RN-240715001S01																
Sample ID: 250707AP09001	Sample Description: Stack Emission																
Challan No./P.O. No.: 3000173714/J02	Challan No./P.No. Date: 15-07-2024																
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamahuria Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																	
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test								
Sampling Protocol: IS:11255; 2009									Sampling Date: 01-07-2025(11:00 am - 11:56 am)								
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																	
Sampling Location: MBF-2 STOCK HOUSE																	
Field Meteorological Information						A. Temp. (°C): 29			R.H. (%): 72			W.C.: Partly Sunny			W.D.: SE to NW		
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 07-07-2025						Testing Started: 07-07-2025						Testing Ended: 09-07-2025					

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	30
Emission Due to	--	Port Hole Height from Ground Level (m)	23
Plat Form	Permanent	Inner Dimension of Stack (m)	2.1
Stack Description	MBF-2 STOCK HOUSE	Type of Fuel Used	---
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter

Flue Gas Temperature (°C): 50 Flue Gas Velocity (m/s): 9.4 Flue Gas Volumetric Flow Rate (Nm³/hr): 105193

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	18.4
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	---
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	---
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	---
5.	Carbon Monoxide (CO)	IS 13270:1992	ppm	---	---
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	---

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

Specific Contractual Notes:-

- The laboratory accepts responsibility for content of this report.
- This report shall not be reproduced except in full, without approval of the MD.
- This report is intended for only guidance and not for legal purpose or for advertisement.
- Any complaint about this report should be communicated in writing within 7 days of its issue.
- Total liability of Institute for Environmental Management will be limited to invoiced amount only.
- In case of feedback/ complaints, please send an email at sm@iemeco@gmail.com

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	6	2	2
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Stack Emission						
Report Issue Date: 09-07-2025									Test Report No.: RN-240715001S02									
Sample ID: 250707AP13001									Sample Description: Stack Emission									
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024									
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																		
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test									
Sampling Protocol: IS:11255: 2009									Sampling Date: 03-07-2025(10:00 am - 10:53 am)									
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Sampling Location: COKE OVEN WHRB UNIT-1																		
Field Meteorological Information			A. Temp. (°C): 29			R.H. (%): 74			W.C.: Semi-Cloudy			W.D.: NW to SE						
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 07-07-2025						Testing Started: 07-07-2025						Testing Ended: 09-07-2025						

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	45.5
Emission Due to	Oven	Port Hole Height from Ground Level (m)	32
Plat Form	Permanent	Inner Dimension of Stack (m)	2.5
Stack Description	COKE OVEN WHRB UNIT-1	Type of Fuel Used	Coking Coal
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	N/A
Flue Gas Temperature (°C): 183		Flue Gas Velocity (m/s): 9.9	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 110743

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	20.1
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	251.2
3.	Oxides of Nitrogen (NO _x)	IS 11255 (Part-7)	mg/Nm ³	---	63.9
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	8.8
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	76
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	8.8

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

T. Ahmad
(Tauqeer Ahmad)
Technical Manager

Authorized Signatory

S. C. Jain
(S. C. Jain)
Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	6	2	3
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Stack Emission						
Report Issue Date: 09-07-2025									Test Report No.: RN-240715001S03									
Sample ID: 250707AP13002									Sample Description: Stack Emission									
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024									
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																		
E-mail Id- kishor.pramanik1@tatasteel.com																		
M/s Tata Steel Limited,																		
(Formerly Tata Steel Long Products Limited),																		
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																		
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test									
Sampling Protocol: IS:11255; 2009									Sampling Date: 03-07-2025 (12:30pm -01:25 pm)									
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Sampling Location: Coke Oven WHRB 2																		
Field Meteorological Information			A. Temp. (°C): 29				R.H. (%): 74				W.C.: Semi-Cloudy				W.D.: NW to SE			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 07-07-2025						Testing Started: 07-07-2025						Testing Ended: 09-07-2025						

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	45.5
Emission Due to	Oven	Port Hole Height from Ground Level (m)	32
Plat Form	Permanent	Inner Dimension of Stack (m)	2.5
Stack Description	Coke Oven WHRB 2	Type of Fuel Used	Coking Coal
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	None
Flue Gas Temperature (°C): 168	Flue Gas Velocity (m/s): 9.6	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 111555	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	17.5
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	278.6
3.	Oxides of Nitrogen (NO _x)	IS 11255 (Part-7)	mg/Nm ³	---	95.5
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	7.9
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	82
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	10.6

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
	
(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-18135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	6	2	4
Discipline: Chemical					Group: Atmospheric Pollution										Sub-Group: Stack Emission			
Report Issue Date: 09-07-2025									Test Report No.: RN-240715001S04									
Sample ID: 250707AP14001									Sample Description: Stack Emission									
Challan No./P.O. No.: 3000173714/302									Challan No./P.No. Date: 15-07-2024									
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																		
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test									
Sampling Protocol: IS:11255: 2009									Sampling Date: 04-07-2025(01:00 pm - 02:07 pm)									
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Sampling Location: MBF-2 RMHS-1																		
Field Meteorological Information			A. Temp. (°C): 30				R.H. (%): 76				W.C.: Semi-Cloudy				W.D.: NW to SE			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 07-07-2025						Testing Started: 07-07-2025						Testing Ended: 09-07-2025						

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	35.5
Emission Due to	Raw material Circuit	Port Hole Height from Ground Level (m)	22
Plat Form	Permanent	Inner Dimension of Stack (m)	1.816
Stack Description	MBF-2 RMHS-1	Type of Fuel Used	---
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter
Flue Gas Temperature (°C): 40	Flue Gas Velocity (m/s): 7.8	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 67188	

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	20.3
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	---
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	---
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	---
5.	Carbon Monoxide (CO)	IS 13270:1992	ppm	---	---
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	---

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C)
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

Authorized Signatory

T. Ahmad

C. Jain

(Tauqeer Ahmad)

(C. Jain)

Technical Manager

Director

—End of Report—



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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	2	5		
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Stack Emission							
Report Issue Date: 09-07-2025									Test Report No.: RN-240715001S05										
Sample ID: 250707API4002									Sample Description: Stack Emission										
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024										
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test										
Sampling Protocol: IS:11255; 2009									Sampling Date: 04-07-2025(11:00 am - 11:37 am)										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: MBF-2 RMHS																			
Field Meteorological Information				A. Temp. (°C): 30				R.H. (%): 70				W.C.: Partly Sunny				W.D.: SE to NW			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 07-07-2025						Testing Started: 07-07-2025						Testing Ended: 09-07-2025							

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	30
Emission Due to	Furnace	Port Hole Height from Ground Level (m)	24.5
Plat Form	Permanent	Inner Dimension of Stack (m)	1.4
Stack Description	MBF-2 RMHS	Type of Fuel Used	RMHS
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter
Flue Gas Temperature (°C): 50		Flue Gas Velocity (m/s): 6.4	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 31762

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	15.1
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	--
3.	Oxides of Nitrogen (NO _x)	IS 11255 (Part-7)	mg/Nm ³	---	--
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	--
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	--
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	--

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C)
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by

T. Ahmad
(Tauqeer Ahmad)
Technical Manager

Authorized Signatory

(Dr. S. C. Jain)
Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	2	6		
Discipline: Chemical					Group: Atmospheric Pollution							Sub-Group: Stack Emission							
Report Issue Date: 16-07-2025									Test Report No.: RN-240715001S06										
Sample ID: 250714AP14001									Sample Description: Stack Emission										
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024										
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																			
E-mail Id- kishor.pramanik1@tatasteel.com																			
M/s Tata Steel Limited,																			
(Formerly Tata Steel Long Products Limited),																			
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test										
Sampling Protocol: IS:11255: 2009									Sampling Date: 08-07-2025(10:30 am - 11:02 am)										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: WHRB - 2 & 3 (DRI-2 & 3)																			
Field Meteorological Information				A. Temp. (°C): 28				R.H. (%): 70				W.C.: Semi-Cloudy				W.D.: NW to SE			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 14-07-2025						Testing Started: 14-07-2025						Testing Ended: 16-07-2025							

Information obtained from Customer

Stack Identification	Common	Stack Height from Ground Level (m)	63
Emission Due to	DRI Making Process	Port Hole Height from Ground Level (m)	20.2
Plat Form	Permanent	Inner Dimension of Stack (m)	3.2
Stack Description	WHRB - 2 & 3 (DRI-2 & 3)	Type of Fuel Used	Coal
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	ESP
Flue Gas Temperature (°C): 120	Flue Gas Velocity (m/s): 7.4	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 157347	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	31.2
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	322.1
3.	Oxides of Nitrogen (NO _x)	IS 11255 (Part-7)	mg/Nm ³	---	72.6
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	14.2
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	130
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	12.4

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C)
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

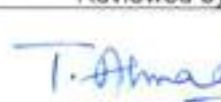
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Reviewed by

Authorized Signatory


 (Tauqueer Ahmad)
 Technical Manager


 (Dr. S. C. Jain)
 Director

---End of Report---



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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	2	7		
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Stack Emission							
Report Issue Date: 16-07-2025									Test Report No.: RN-240715001S07										
Sample ID: 250714AP16001									Sample Description: Stack Emission										
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024										
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																			
E-mail Id- kishor.pramanik1@tatasteel.com																			
M/s Tata Steel Limited,																			
(Formerly Tata Steel Long Products Limited),																			
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test										
Sampling Protocol: IS:11255; 2009									Sampling Date: 09-07-2025(10:05 am - 10:45 am)										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: MBF - 2 PCI																			
Field Meteorological Information				A. Temp. (°C): 26				R.H. (%): 74				W.C.: Semi-Cloudy				W.D.: South to North			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 14-07-2025						Testing Started: 14-07-2025						Testing Ended: 16-07-2025							

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	30.2
Emission Due to	PCI handling	Port Hole Height from Ground Level (m)	30
Plat Form	Permanent	Inner Dimension of Stack (m)	1
Stack Description	MBF - 2 PCI	Type of Fuel Used	PCI
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter
Flue Gas Temperature (°C): 67		Flue Gas Velocity (m/s):13.2	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 31830

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	16.4
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	---
3.	Oxides of Nitrogen (NO _x)	IS 11255 (Part-7)	mg/Nm ³	---	---
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	---
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	---
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	---

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations; or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by

Authorized Signatory

T. Ahmad

(Signature)

(Tauqeer Ahmad)

(Dr. S. C. Jain)

Technical Manager

Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	2	8		
Discipline: Chemical					Group: Atmospheric Pollution								Sub-Group: Stack Emission						
Report Issue Date: 16-07-2025									Test Report No.: RN-240715001S08										
Sample ID: 250714AP18001									Sample Description: Stack Emission										
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024										
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																			
E-mail Id- kishor.pramanik1@tatasteel.com																			
M/s Tata Steel Limited,																			
(Formerly Tata Steel Long Products Limited),																			
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test										
Sampling Protocol: IS:11255: 2009									Sampling Date: 10-07-2025(10:30 am - 11:36 am)										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: WHRB - 4 & 5 (DRI-4&5)																			
Field Meteorological Information				A. Temp. (°C): 27				R.H. (%): 68				W.C.: Partly Sunny				W.D.: SE to NW			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 14-07-2025						Testing Started: 14-07-2025						Testing Ended: 16-07-2025							

Information obtained from Customer

Stack Identification	Common	Stack Height from Ground Level (m)	63
Emission Due to	DRI Making Process	Port Hole Height from Ground Level (m)	22.2
Plat Form	Permanent	Inner Dimension of Stack (m)	3.2
Stack Description	WHRB - 4 & 5 (DRI-4&5)	Type of Fuel Used	Coal
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	ESP
Flue Gas Temperature (°C): 108	Flue Gas Velocity (m/s): 7.7	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 168649	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	30.1
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	342.6
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	140.4
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	13.2
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	360
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	12

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C)
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

T. Ahmad

(Tauqeer Ahmad)

Technical Manager

Authorized Signatory

(Dr. S. C. Jain)

Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	2	9
Discipline: Chemical							Group: Atmospheric Pollution							Sub-Group: Stack Emission			
Report Issue Date: 16-07-2025									Test Report No.: RN-240715001S09								
Sample ID: 250714AP18002									Sample Description: Stack Emission								
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024								
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																	
E-mail Id- kishor.pramanik1@tatasteel.com																	
M/s Tata Steel Limited,																	
(Formerly Tata Steel Long Products Limited),																	
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																	
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test								
Sampling Protocol: IS:11255; 2009									Sampling Date: 10-07-2025(12:30 pm - 01:24 pm)								
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																	
Sampling Location: Blooming Mill (RHF)																	
Field Meteorological Information			A. Temp. (°C): 27				R.H. (%): 68				W.C.: Partly Sunny				W.D.: SE to NW		
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 14-07-2025							Testing Started: 14-07-2025							Testing Ended: 16-07-2025			

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	80
Emission Due to	Reheating Furnace	Port Hole Height from Ground Level (m)	22
Plat Form	Permanent	Inner Dimension of Stack (m)	2
Stack Description	Blooming Mill (RHF)	Type of Fuel Used	BF Gas & LDO
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	None
Flue Gas Temperature (°C): 362	Flue Gas Velocity (m/s): 9.6	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 49704	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	25.6
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	88.7
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	188.1
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	14.4
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	90
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	16.4

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
(Tauqueer Ahmad)	(Dr. S/C Jain)
Technical Manager	Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - lem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	3	0		
Discipline: Chemical					Group: Atmospheric Pollution								Sub-Group: Stack Emission						
Report Issue Date: 16-07-2025									Test Report No.: RN-240715001S10										
Sample ID: 250714AP19001									Sample Description: Stack Emission										
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024										
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																			
E-mail Id- kishor.pramanik1@tatasteel.com																			
M/s Tata Steel Limited,																			
(Formerly Tata Steel Long Products Limited),																			
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test										
Sampling Protocol: IS:11255; 2009									Sampling Date: 11-07-2025(11:00 am - 11:49 am)										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: Wire Rod Mill (RHF)																			
Field Meteorological Information				A. Temp. (°C): 31				R.H. (%): 64				W.C.: Partly Sunny				W.D.: NW to SE			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 14-07-2025						Testing Started: 14-07-2025						Testing Ended: 16-07-2025							

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	55
Emission Due to	Reheating	Port Hole Height from Ground Level (m)	30
Plat Form	Permanent	Inner Dimension of Stack (m)	1.5
Stack Description	Wire Rod Mill (RHF)	Type of Fuel Used	BF & LDO
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	N/A
Flue Gas Temperature (°C): 393	Flue Gas Velocity (m/s):10.7	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 29433	

---Test Result---

SL. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	23.4
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	72.6
3.	Oxides of Nitrogen (NO _x)	IS 11255 (Part-7)	mg/Nm ³	---	165.1
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	14.4
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	120
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	16.6

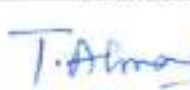
Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C)
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by _____ Authorized Signatory


 (Tauqeer Ahmad)
 Technical Manager


 (Dr. S. C. Jain)
 Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	3	1		
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Stack Emission							
Report Issue Date: 23-07-2025									Test Report No.: RN-240715001S11										
Sample ID: 250721AP15001									Sample Description: Stack Emission										
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024										
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																			
E-mail Id- kishor.pramanik1@tatasteel.com																			
M/s Tata Steel Limited,																			
(Formerly Tata Steel Long Products Limited),																			
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test										
Sampling Protocol: IS:11255; 2009									Sampling Date: 15-07-2025 (10:00 am - 10:35 am)										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: SMS-1 & 2 FES																			
Field Meteorological Information				A. Temp. (°C): 30				R.H. (%): 72				W.C.: Semi-Cloudy				W.D.: SW to NE			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 21-07-2025						Testing Started: 21-07-2025						Testing Ended: 23-07-2025							

Information obtained from Customer

Stack Identification	Common	Stack Height from Ground Level (m)	46.1
Emission Due to	EAF	Port Hole Height from Ground Level (m)	36
Plat Form	Permanent	Inner Dimension of Stack (m)	5
Stack Description	SMS-1 & 2 FES	Type of Fuel Used	Electricity
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	FES
Flue Gas Temperature (°C): 62		Flue Gas Velocity (m/s): 6.6	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 403996

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	18.2
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	61.3
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	136.8
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	18.2
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	164
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	19

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by

Authorized Signatory

T. Ahmad

(Signature)

(Tauqeer Ahmad)

(Dr. S. C. Jain)

Technical Manager

Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	3	2		
Discipline: Chemical					Group: Atmospheric Pollution							Sub-Group: Stack Emission							
Report Issue Date: 23-07-2025									Test Report No.: RN-240715001S12										
Sample ID: 250721AP17001									Sample Description: Stack Emission										
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024										
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																			
E-mail Id- kishor.pramanik1@tatasteel.com																			
M/s Tata Steel Limited,																			
(Formerly Tata Steel Long Products Limited),																			
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test										
Sampling Protocol: IS:11255; 2009									Sampling Date: 15-07-2025(01:00 pm - 01:42 pm)										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: MBF-I CAST HOUSE																			
Field Meteorological Information				A. Temp. (°C): 30				R.H. (%): 72				W.C.: Semi-Cloudy				W.D.: SW to NE			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 21-07-2025						Testing Started: 21-07-2025						Testing Ended: 23-07-2025							

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	30
Emission Due to	Blast Furnace Process	Port Hole Height from Ground Level (m)	25
Plat Form	Permanent	Inner Dimension of Stack (m)	2
Stack Description	MBF-I CAST HOUSE	Type of Fuel Used	Coke,PCI
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter
Flue Gas Temperature (°C):44	Flue Gas Velocity (m/s):5.6	Flue Gas Volumetric Flow Rate (Nm ³ /hr):57837	

---Test Result---

SL. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	19.2
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	40.2
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	55.3
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	--
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	--
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	--

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by	Authorized Signatory
<i>T. Ahmad</i>	<i>[Signature]</i>
(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	3	3
Discipline: Chemical					Group: Atmospheric Pollution							Sub-Group: Stack Emission					
Report Issue Date: 23-07-2025									Test Report No.: RN-240715001S13								
Sample ID: 250721AP17002									Sample Description: Stack Emission								
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024								
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																	
E-mail Id- kishor.pramanik1@tatasteel.com																	
M/s Tata Steel Limited,																	
(Formerly Tata Steel Long Products Limited),																	
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																	
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test								
Sampling Protocol: IS:11255: 2009									Sampling Date: 15-07-2025(03:00 pm - 03:43 pm)								
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																	
Sampling Location: MBF-1 Ground Hopper																	
Field Meteorological Information			A. Temp. (°C): 30				R.H. (%): 72				W.C.: Semi-Cloudy				W.D.: SW to NE		
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 21-07-2025						Testing Started: 21-07-2025						Testing Ended: 23-07-2025					

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	30
Emission Due to	Crushing	Port Hole Height from Ground Level (m)	22
Plat Form	Permanent	Inner Dimension of Stack (m)	30.9
Stack Description	MBF-1 Ground Hopper	Type of Fuel Used	RMHS
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter
Flue Gas Temperature (°C):48	Flue Gas Velocity (m/s):12.2	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 25173	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	17.1
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	---
3.	Oxides of Nitrogen (NO _x)	IS 11255 (Part-7)	mg/Nm ³	---	6.2
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	---
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	---
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	---

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by	Authorized Signatory
	
(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	3	4
Discipline: Chemical									Group: Atmospheric Pollution						Sub-Group: Stack Emission		
Report Issue Date: 23-07-2025									Test Report No.: RN-240715001S14								
Sample ID: 250721AP18001									Sample Description: Stack Emission								
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024								
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																	
E-mail Id- kishor.pramanik1@tatasteel.com																	
M/s Tata Steel Limited,																	
(Formerly Tata Steel Long Products Limited),																	
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																	
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test								
Sampling Protocol: IS:11255; 2009									Sampling Date: 16-07-2025 (10:30 am - 11:07 am)								
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																	
Sampling Location: Sinter Plant Process ESP																	
Field Meteorological Information			A. Temp. (°C): 29					R.H. (%): 70			W.C.: Semi-Cloudy			W.D.: West to East			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 21-07-2025						Testing Started: 21-07-2025						Testing Ended: 23-07-2025					

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	78
Emission Due to	Sinter Making Process	Port Hole Height from Ground Level (m)	31.2
Plat Form	Permanent	Inner Dimension of Stack (m)	6.2
Stack Description	Sinter Plant Process ESP	Type of Fuel Used	BF Gas & Coal.Coke
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	ESP
Flue Gas Temperature (°C): 122	Flue Gas Velocity (m/s): 6.3	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 497063	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	73.4
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	76.2
3.	Oxides of Nitrogen (NO _x)	IS 11255 (Part-7)	mg/Nm ³	---	155.4
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	11.4
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	3242
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	24

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

Authorized Signatory

T. Ahmad

(Signature)

(Tauqeer Ahmad)

(Dr. S. C. Jain)

Technical Manager

Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - lem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	6	3	5	
Discipline: Chemical	Group: Atmospheric Pollution										Sub-Group: Stack Emission								
Report Issue Date: 23-07-2025										Test Report No.: RN-240715001S15									
Sample ID: 250721AP18002										Sample Description: Stack Emission									
Challan No./P.O. No.: 3000173714/J02										Challan No./P.No. Date: 15-07-2024									
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Type of Industry: Iron & Steel										Condition of Sample: Fit For Test									
Sampling Protocol: IS:11255; 2009										Sampling Date: 16-07-2025 (01:15 pm - 01:53 pm)									
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: Sinter plant Dedusting																			
Field Meteorological Information A. Temp. (°C): 29 R.H. (%): 70 W.C.: Semi-Cloudy W.D.: West to East																			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 21-07-2025										Testing Started: 21-07-2025					Testing Ended: 23-07-2025				

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	50
Emission Due to	Raw Material Circuit	Port Hole Height from Ground Level (m)	26.5
Plat Form	Permanent	Inner Dimension of Stack (m)	4.5
Stack Description	Sinter plant Dedusting	Type of Fuel Used	---
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	ESP
Flue Gas Temperature (°C): 122	Flue Gas Velocity (m/s): 6.1	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 26.8	

---Test Result---

SL. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	26.8
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	---
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	---
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	---
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	---
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	---

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
<i>T. Ahmad</i>	<i>[Signature]</i>
(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	3	6
Discipline: Chemical					Group: Atmospheric Pollution							Sub-Group: Stack Emission					
Report Issue Date: 23-07-2025									Test Report No.: RN-240715001S16								
Sample ID: 250721AP19001									Sample Description: Stack Emission								
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024								
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																	
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test								
Sampling Protocol: IS:11255; 2009									Sampling Date: 17-07-2025 (10:30 am - 11:35 am)								
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																	
Sampling Location: SMS-3 FES																	
Field Meteorological Information			A. Temp. (°C): 31			R.H. (%): 68			W.C.: Partly Sunny			W.D.: SE to NW					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 21-07-2025						Testing Started: 21-07-2025						Testing Ended: 23-07-2025					

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	43
Emission Due to	EAF	Port Hole Height from Ground Level (m)	33.3
Plat Form	Permanent	Inner Dimension of Stack (m)	5
Stack Description	SMS-3 FES	Type of Fuel Used	Electricity
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter
Flue Gas Temperature (°C): 78		Flue Gas Velocity (m/s): 8.1	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 470970

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	22.1
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	50.2
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	136.5
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	10.2
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	68
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	12

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

Authorized Signatory

(Tauqeer Ahmad)

(Dr. S. C. Jain)

Technical Manager

Director

---End of Report---



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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	3	7		
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Stack Emission							
Report Issue Date: 23-07-2025									Test Report No.: RN-240715001S17										
Sample ID: 250721AP20001									Sample Description: Stack Emission										
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024										
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																			
E-mail Id- kishor.pramanik1@tatasteel.com																			
M/s Tata Steel Limited,																			
(Formerly Tata Steel Long Products Limited),																			
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test										
Sampling Protocol: IS:11255: 2009									Sampling Date: 18-07-2025 (10:20 am - 10:55 am)										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: MBF-I STOCK HOUSE																			
Field Meteorological Information				A. Temp. (°C): 32				R.H. (%): 72				W.C.: Partly Sunny				W.D.: SE to NW			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 21-07-2025						Testing Started: 21-07-2025						Testing Ended: 23-07-2025							

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	30
Emission Due to	Raw Material Circuit	Port Hole Height from Ground Level (m)	27
Plat Form	Permanent	Inner Dimension of Stack (m)	1.2
Stack Description	MBF-1 STOCK HOUSE	Type of Fuel Used	---
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter
Flue Gas Temperature (°C):47	Flue Gas Velocity (m/s):6.7	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 24520	

--- Test Result ---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	18.2
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	--
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	--
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	--
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	--
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	--

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by

Authorized Signatory

T. Ahmad

(Signature)

(Tauqeer Ahmad)

(Dr. S. C. Jain)

Technical Manager

Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	6	3	8
Discipline: Chemical					Group: Atmospheric Pollution										Sub-Group: Stack Emission			
Report Issue Date: 23-07-2025									Test Report No.: RN-240715001S18									
Sample ID: 250721AP20002									Sample Description: Stack Emission									
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024									
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																		
E-mail Id- kishor.pramanik1@tatasteel.com																		
M/s Tata Steel Limited,																		
(Formerly Tata Steel Long Products Limited),																		
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																		
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test									
Sampling Protocol: IS:11255; 2009									Sampling Date: 18-07-2025 (12:30 pm - 01:10 pm)									
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Sampling Location: MBF-1 STOVE																		
Field Meteorological Information			A. Temp. (°C): 32				R.H. (%): 72				W.C.: Partly Sunny				W.D.: SE to NW			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 21-07-2025						Testing Started: 21-07-2025						Testing Ended: 23-07-2025						

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	45.1
Emission Due to	Furnace	Port Hole Height from Ground Level (m)	--
Plat Form	Permanent	Inner Dimension of Stack (m)	1.6
Stack Description	MBF-1 STOVE	Type of Fuel Used	Coke, PCI
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Wet gas Cleaning plant
Flue Gas Temperature (°C):265	Flue Gas Velocity (m/s):13.2	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 51458.9	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	16.1
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	112.4
3.	Oxides of Nitrogen (NO _x)	IS 11255 (Part-7)	mg/Nm ³	---	64.1
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	8.2
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	3845
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	4.8

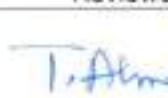
Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

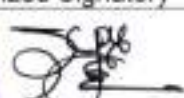
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Reviewed by _____ Authorized Signatory


 (Tauqeer Ahmad)
 Technical Manager


 Dr. S. C. Jain
 Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	3	9		
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Stack Emission							
Report Issue Date: 30-07-2025									Test Report No.: RN-240715001S19										
Sample ID: 250728AP10001									Sample Description: Stack Emission										
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024										
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																			
E-mail Id- kishor.pramanik1@tatasteel.com																			
M/s Tata Steel Limited,																			
(Formerly Tata Steel Long Products Limited),																			
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test										
Sampling Protocol: IS:11255; 2009									Sampling Date: 21-07-2025(11:10 am - 11:44 am)										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: WHRB-I (DRI-1) & 40 TPH																			
Field Meteorological Information				A. Temp. (°C): 31				R.H. (%): 65				W.C.: Semi-Cloudy				W.D.: SW to NE			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 28-07-2025						Testing Started: 28-07-2025						Testing Ended: 30-07-2025							

Information obtained from Customer

Stack Identification	Common	Stack Height from Ground Level (m)	63
Emission Due to	Kiln	Port Hole Height from Ground Level (m)	32
Plat Form	Permanent	Inner Dimension of Stack (m)	3.2
Stack Description	WHRB-I (DRI-I) & 40 TPH	Type of Fuel Used	Coal
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	ESP
Flue Gas Temperature (°C):123		Flue Gas Velocity (m/s):6.9	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 145109

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	54.3
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	392.5
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	83.1
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	9.4
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	--
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	--

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

Authorized Signatory

T. Ahmad
(Tauqeer Ahmad)
Technical Manager

S. C. Jain
(S. C. Jain)
Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	6	4	0
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Stack Emission						
Report Issue Date: 30-07-2025									Test Report No.: RN-240715001S20									
Sample ID: 250728AP11001									Sample Description: Stack Emission									
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024									
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																		
E-mail Id- kishor.pramanik1@tatasteel.com																		
M/s Tata Steel Limited,																		
(Formerly Tata Steel Long Products Limited),																		
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																		
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test									
Sampling Protocol: IS:11255; 2009									Sampling Date: 22-07-2025 (11:00 am - 11:34 am)									
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Sampling Location: 25 MW CPP																		
Field Meteorological Information			A. Temp. (°C): 32				R.H. (%): 70				W.C.: Partly Sunny				W.D.: SE to NW			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 28-07-2025						Testing Started: 28-07-2025						Testing Ended: 30-07-2025						

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	79.7
Emission Due to	Power generation	Port Hole Height from Ground Level (m)	26.5
Plat Form	Permanent	Inner Dimension of Stack (m)	3.6
Stack Description	25 MW CPP	Type of Fuel Used	Coal
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	ESP
Flue Gas Temperature (°C):118	Flue Gas Velocity (m/s):6.9	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 187899	

--- Test Result ---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	62.1
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	553.1
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	369.6
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	11.8
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	80
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	14

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by

Authorized Signatory

(Tauqeer Ahmad)

(Dr. S. C. Jain)

Technical Manager

Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	6	4	1
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Stack Emission						
Report Issue Date: 30-07-2025									Test Report No.: RN-240715001S21									
Sample ID: 250728AP11002									Sample Description: Stack Emission									
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024									
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																		
E-mail Id- kishor.pramanik1@tatasteel.com																		
M/s Tata Steel Limited,																		
(Formerly Tata Steel Long Products Limited),																		
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																		
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test									
Sampling Protocol: IS:11255; 2009									Sampling Date: 22-07-2025 (01:30 pm - 02:01 pm)									
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Sampling Location: COKE ROUTE																		
Field Meteorological Information			A. Temp. (°C): 32			R.H. (%): 70			W.C.: Partly Sunny			W.D.: SE to NW						
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 28-07-2025						Testing Started: 28-07-2025						Testing Ended: 30-07-2025						

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	35.5
Emission Due to	---	Port Hole Height from Ground Level (m)	25
Plat Form	Permanent	Inner Dimension of Stack (m)	1.82
Stack Description	COKE ROUTE	Type of Fuel Used	---
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter
Flue Gas Temperature (°C): 38		Flue Gas Velocity (m/s): 17.2	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 150125

--- Test Result ---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	20.2
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	134.5
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	334.6
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	--
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	--
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	--

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

Authorized Signatory

T. Ahmar
(Tauqeer Ahmar)
Technical Manager

S. C. Jain
(Dr. S. C. Jain)
Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	6	4	2
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Stack Emission						
Report Issue Date: 30-07-2025									Test Report No.: RN-240715001S22									
Sample ID: 250728AP12001									Sample Description: Stack Emission									
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024									
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																		
E-mail Id- kishor.pramanik1@tatasteel.com																		
M/s Tata Steel Limited,																		
(Formerly Tata Steel Long Products Limited),																		
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																		
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test									
Sampling Protocol: IS:11255; 2009									Sampling Date: 23-07-2025 (10:10 am - 10:42 am)									
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Sampling Location: Pellet Plant (Kiln Stack)																		
Field Meteorological Information			A. Temp. (°C): 32				R.H. (%): 64			W.C.: Partly Sunny				W.D.: SE to NW				
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 28-07-2025						Testing Started: 28-07-2025						Testing Ended: 30-07-2025						

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	78
Emission Due to	Kiln	Port Hole Height from Ground Level (m)	31
Plat Form	Permanent	Inner Dimension of Stack (m)	6.0
Stack Description	Pellet Plant (Kiln Stack)	Type of Fuel Used	Coal
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	ESP
Flue Gas Temperature (°C): 123		Flue Gas Velocity (m/s): 7.4	Flue Gas Volumetric Flow Rate (Nm³/hr): 550953

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	20.5
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	112.4
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	134.5
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	18.8
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	114
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	16.6

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by

Authorized Signatory

(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	4	3
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Stack Emission					
Report Issue Date: 30-07-2025									Test Report No.: RN-240715001S23								
Sample ID: 250728AP12002									Sample Description: Stack Emission								
Challan No./P.O. No.: 3000173714/302									Challan No./P.No. Date: 15-07-2024								
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																	
E-mail Id- kishor.pramanik1@tatasteel.com																	
M/s Tata Steel Limited,																	
(Formerly Tata Steel Long Products Limited),																	
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																	
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test								
Sampling Protocol: IS:11255; 2009									Sampling Date: 23-07-2025 (12:30 pm - 01:30 pm)								
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																	
Sampling Location: Sinter Plant Product Bin																	
Field Meteorological Information			A. Temp. (°C): 32			R.H. (%): 64			W.C.: Partly Sunny			W.D.: SE to NW					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 28-07-2025						Testing Started: 28-07-2025						Testing Ended: 30-07-2025					

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	35.5
Emission Due to	Sinter production Circuit	Port Hole Height from Ground Level (m)	22
Plat Form	Permanent	Inner Dimension of Stack (m)	1.82
Stack Description	Sinter Plant Product Bin	Type of Fuel Used	Coal
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter
Flue Gas Temperature (°C): 52	Flue Gas Velocity (m/s): 8.7	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 72343	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	29.1
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	---
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	---
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	---
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	---
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	---

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by

Authorized Signatory

T. Ahmad

Dr. S. C. Jain

(Tauqeer Ahmad)

(Dr. S. C. Jain)

Technical Manager

Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	4	4		
Discipline: Chemical					Group: Atmospheric Pollution							Sub-Group: Stack Emission							
Report Issue Date: 30-07-2025									Test Report No.: RN-240715001S24										
Sample ID: 250728AP13001									Sample Description: Stack Emission										
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024										
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																			
E-mail Id- kishor.pramanik1@tatasteel.com																			
M/s Tata Steel Limited,																			
(Formerly Tata Steel Long Products Limited),																			
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test										
Sampling Protocol: IS:11255; 2009									Sampling Date: 24-07-2025(10:05 am - 10:43am)										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: MBF-2 STOVE																			
Field Meteorological Information				A. Temp. (°C): 29				R.H. (%): 72				W.C.: Semi-Cloudy				W.D.: SE to NW			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 28-07-2025						Testing Started: 28-07-2025						Testing Ended: 30-07-2025							

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	50
Emission Due to	Blast Furnace process	Port Hole Height from Ground Level (m)	30
Plat Form	Permanent	Inner Dimension of Stack (m)	2.3
Stack Description	MBF-2 STOVE	Type of Fuel Used	Coke, PCI
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Dry GCP
Flue Gas Temperature (°C): 124	Flue Gas Velocity (m/s): 6.1	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 66807	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	18.6
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	71.3
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	102.7
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	15.2
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	40
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	15

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by	Authorized Signatory
(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - lem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	6	4	5
Discipline: Chemical									Group: Atmospheric Pollution						Sub-Group: Stack Emission			
Report Issue Date: 30-07-2025									Test Report No.: RN-240715001S25									
Sample ID: 250728AP13002									Sample Description: Stack Emission									
Challan No./P.O. No.: 3000173714/J02									Challan No./P.No. Date: 15-07-2024									
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																		
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test									
Sampling Protocol: IS:11255; 2009									Sampling Date: 24-07-2025(12:30 pm - 01:33 pm)									
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Sampling Location: MBF - 2 CAST HOUSE																		
Field Meteorological Information			A. Temp. (°C): 29				R.H. (%): 72				W.C.: Semi-Cloudy				W.D.: SE to NW			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 28-07-2025									Testing Started: 28-07-2025						Testing Ended: 30-07-2025			

Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	30.3
Emission Due to	Blast Furnace Process	Port Hole Height from Ground Level (m)	25
Plat Form	Permanent	Inner Dimension of Stack (m)	2.7
Stack Description	MBF - 2 CAST HOUSE	Type of Fuel Used	Coke, PCI
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter
Flue Gas Temperature (°C): 38	Flue Gas Velocity (m/s): 8.3	Flue Gas Volumetric Flow Rate (Nm ³ /hr): 159267	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	---	17.3
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	---	40.2
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	---	46
4.	Carbon Dioxide (CO ₂)	IS 13270:1992	% v/v	---	---
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	---
6.	Oxygen (O ₂)	IS 13270:1992	% v/v	---	---

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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- In case of feedback/ complaints, please send an email at lem2012@rediffmail.com

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

Authorized Signatory

 (Tauqeer Ahmad)
 Technical Manager

(Dr. S. C. Jain)
 Director

---End of Report---

Amibent Air Quality Monitoring

SN.	Sampling Location	Report No.	Sampling on	SO2 (µg/m3)	NO2 (µg/m3)	PM10 (µg/m3)	PM2.5 (µg/m3)	CO (mg/m3)	Ozone (µg/m3)	Lead (µg/m3)	Ammonia (µg/m3)	Benzene (µg/m3)	Benzo(a)pyrene (ng/m3)	Arsenic (ng/m3)	Nickel (ng/m3)
1	Plant North Side Boundary	RN-240715001A03	01-04-2025	24.3	46.1	136.2	29.3	BDL(MDL 0.1)	25.0	0.5	40.3	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
2	Plant North Side Boundary	RN-240715001A07	15-04-2025	28.6	41.8	90.3	41.8	BDL(MDL 0.1)	30.5	0.6	42.1	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
3	Plant West Side Boundary	RN-240715001A04	01-04-2025	24.8	43.6	199.2	67.1	BDL(MDL 0.1)	33.9	0.5	57.9	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
4	Plant West Side Boundary	RN-240715001A08	15-04-2025	26.4	44.7	95.4	49.1	BDL(MDL 0.1)	31.9	0.5	52.4	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
5	Plant East Side Boundary	RN-240715001A01	03-04-2025	27.0	42.4	82.5	34.6	BDL(MDL 0.1)	29.0	0.4	47.7	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
6	Plant East Side Boundary	RN-240715001A09	16-04-2025	22.2	43.9	93.6	37.0	BDL(MDL 0.1)	29.3	0.4	44.3	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
7	Plant South Side Boundary	RN-240715001A02	03-04-2025	28.8	51.4	103.4	32.5	BDL(MDL 0.1)	34.0	0.5	44.1	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
8	Plant South Side Boundary	RN-240715001A10	16-04-2025	27.0	46.1	95.3	52.1	BDL(MDL 0.1)	28.2	0.4	52.5	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
9	Plant North Side Boundary	RN-240715001A03	27-05-2025	26.7	52.8	78.4	37.5	BDL(MDL 0.1)	27.5	0.4	43.6	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
10	Plant West Side Boundary	RN-240715001A04	27-05-2025	27.2	50.3	88.6	45.2	BDL(MDL 0.1)	36.4	0.4	61.6	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
11	Plant East Side Boundary	RN-240715001A01	26-05-2025	29.4	49.1	77.8	42.1	BDL(MDL 0.1)	31.5	0.3	51.0	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
12	Plant South Side Boundary	RN-240715001A02	26-05-2025	31.2	58.1	98.7	35.8	BDL(MDL 0.1)	36.5	0.4	47.4	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
13	Plant North Side Boundary	RN-240715001A03	20.06.2025	22.5	46.4	69.9	30.6	BDL(MDL 0.1)	15.0	0.3	36.1	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
14	Plant West Side Boundary	RN-240715001A04	20.06.2025	22.4	43.7	81.7	37.8	BDL(MDL 0.1)	23.5	0.4	54.0	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
15	Plant East Side Boundary	RN-240715001A01	21.06.2025	25.2	42.7	69.3	35.2	BDL(MDL 0.1)	19.0	0.4	43.5	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
16	Plant South Side Boundary	RN-240715001A02	21.06.2025	26.4	51.5	91.8	28.4	BDL(MDL 0.1)	23.6	0.3	40.2	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
17	Plant North Side Boundary	RN-240715001A01	03.07.2025	20.3	43.1	66.5	31.3	BDL(MDL 0.1)	16.5	0.4	33.7	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
18	Plant West Side Boundary	RN-240715001A02	03.07.2025	19.8	40.1	78.1	36.7	BDL(MDL 0.1)	25.4	0.5	51.2	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
19	Plant East Side Boundary	RN-240715001A03	08.07.2025	23.0	39.4	65.9	31.0	BDL(MDL 0.1)	20.5	0.5	41.1	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
20	Plant South Side Boundary	RN-240715001A04	08.07.2025	23.8	47.9	88.2	41.5	BDL(MDL 0.1)	25.5	0.4	37.4	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
21	Plant North Side Boundary	RN-250303003A03	20.08.2025	18.5	40.7	63.3	29.1	BDL(MDL 0.1)	15.6	0.4	31.0	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
22	Plant West Side Boundary	RN-250303003A04	20.08.2025	18.0	37.7	74.3	34.2	BDL(MDL 0.1)	24.5	0.5	48.5	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
23	Plant East Side Boundary	RN-250303003A05	21.08.2025	21.2	37.0	62.7	28.8	BDL(MDL 0.1)	19.6	0.5	38.4	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
24	Plant South Side Boundary	RN-250303003A06	21.08.2025	22.0	45.5	84.4	38.8	BDL(MDL 0.1)	24.6	0.4	34.7	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
25	Plant North Side Boundary	RN-250303003A01	05.09.2025	20.9	43.9	68.1	31.3	BDL(MDL 0.1)	18.2	0.4	33.6	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
26	Plant West Side Boundary	RN-250303003A02	05.09.2025	21.1	44.3	79.9	36.8	BDL(MDL 0.1)	26.7	0.5	50.3	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
27	Plant East Side Boundary	RN-250303003A03	10.09.2025	23.6	49.6	67.5	31.1	BDL(MDL 0.1)	22.2	0.4	41.0	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
28	Plant South Side Boundary	RN-250303003A04	10.09.2025	25.1	52.7	90.0	41.4	BDL(MDL 0.1)	26.8	0.4	36.5	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-18135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	9	9	2		
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Ambient Air							
Report Issue Date: 10-09-2025									Test Report No.: RN-250303003A01										
Sample ID: 250908AP09001									Sample Description: Ambient Air										
Challan No./P.O. No.: 3000179897/J02									Challan No./ P.No. Date: 03-03-2025										
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																			
E-mail Id- kishor.pramanik1@tatasteel.com																			
M/s Tata Steel Limited,																			
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Information obtained from customer (if any): N/A																			
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test										
Sampling Protocol: IS 5182									Sampling Date: 05-09-2025 to 06-09-2025										
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series																			
Sampling Location: STATION-I PLANT NORTH SIDE BOUNDARY																			
Field Meteorological Information				A. Temp. (°C): 28				R.H. (%): 62				W.C.: Semi-Cloudy				W.D.: West to East			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 08-09-2025						Testing Started: 08-09-2025						Testing Ended: 10-09-2025							

---Test Results---

Sl.No.	Parameters	Test Method No.	Unit	Norms**	Results
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006	µg/m ³	100	68.1
2.	Particulate Matter (PM _{2.5})	IS 5182 Part 24:2019	µg/m ³	60	31.3
3.	Sulphur Dioxide (SO ₂)	IS 5182 Part-02	µg/m ³	80	20.9
4.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06	µg/m ³	80	43.9
5.	Ammonia (NH ₃)	IS 5182 Part 25	µg/m ³	400	33.6
6.	Ozone (O ₃)	IS 5182 Part 09	µg/m ³	180	18.2
7.	Arsenic (as As)	USEPA I.O. 3.2	ng/m ³	---	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	µg/m ³	1.0	0.4
9.	Nickel (Ni)	IS 5182 Part 26	ng/m ³	---	BDL (MDL-4)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

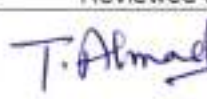
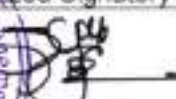
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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

Authorized Signatory

(Tauqeer Ahmad) (S. C. Jain)
 Technical Manager Director

---End of Report---

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

TEST REPORT

Discipline: Chemical		Group: Atmospheric Pollution		Sub-Group: Ambient Air	
Report Issue Date: 10-09-2025			Test Report No.: RN-250303003A01		
Sample ID: 250908AP09001			Sample Description: Ambient Air		
Challan No./P.O. No.: 3000179897/002			Challan No./ P.No. Date: 03-03-2025		
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108					
Information obtained from customer (if any): N/A					
Type of Industry: Iron & Steel			Condition of Sample: Fit for Test		
Sampling Protocol: IS 5182			Sampling Date: 05-09-2025 to 06-09-2025		
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
Sampling Location: STATION-I PLANT NORTH SIDE BOUNDARY					
Field Meteorological Information		A. Temp. (°C): 28		R.H. (%): 62	
				W.C.: Semi-Cloudy	
				W.D.: West to East	
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi					
Sample Receiving Date: 08-09-2025		Testing Started: 08-09-2025		Testing Ended: 10-09-2025	

----Test Results----

Sl. No.	Parameters	Test Method	Unit	Limits	Result
10.	Benzene (C ₆ H ₆)	IS 5182 Part 11: 2006	µg/m ³	--	BDL (MDL- 0.5)
11.	Benzo (a) Pyrene (Bap) Particulate Phase Only	IS 5182 Part 12: 2004	ng/m ³	--	BDL (MDL0.01)
12.	Carbon Monoxide	IEM/SOP/Air-01:2022	mg/m ³	--	BDL (MDL 0.1)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by _____ Authorized Signatory

T. Ahmad

(Tauqeer Ahmad)

Technical Manager



(Dr. S. C. Jain)

(Dr. S. C. Jain)

Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	9	9	3		
Discipline: Chemical						Group: Atmospheric Pollution						Sub-Group: Ambient Air							
Report Issue Date: 10-09-2025									Test Report No.: RN-250303003A02										
Sample ID: 250908AP09002									Sample Description: Ambient Air										
Challan No./P.O. No.: 3000179897/J02									Challan No./ P.No. Date: 03-03-2025										
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																			
E-mail Id- kishor.pramanik1@tatasteel.com																			
M/s Tata Steel Limited,																			
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Information obtained from customer (if any): N/A																			
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test										
Sampling Protocol: IS 5182									Sampling Date: 05-09-2025 to 06-09-2025										
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series																			
Sampling Location: STATION-2 PLANT WEST SIDE BOUNDARY																			
Field Meteorological Information				A. Temp. (°C): 28				R.H. (%): 62				W.C.: Semi-Cloudy				W.D.: West to East			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 08-09-2025						Testing Started: 08-09-2025						Testing Ended: 10-09-2025							

---Test Results---

SL.No.	Parameters	Test Method No.	Unit	Norms**	Results
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006	µg/m ³	100	79.9
2.	Particulate Matter (PM _{2.5})	IS 5182 Part 24:2019	µg/m ³	60	36.8
3.	Sulphur Dioxide (SO ₂)	IS 5182 Part-02	µg/m ³	80	21.1
4.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06	µg/m ³	80	44.3
5.	Ammonia (NH ₃)	IS 5182 Part 25	µg/m ³	400	50.3
6.	Ozone (O ₃)	IS 5182 Part 09	µg/m ³	180	26.7
7.	Arsenic (as As)	USEPA I.O. 3.2	ng/m ³	---	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	µg/m ³	1.0	0.5
9.	Nickel (Ni)	IS 5182 Part 26	ng/m ³	---	BDL (MDL-4)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

Authorized Signatory

(Tauqeer Ahmad) (Dr. S. C. Jain)

Technical Manager Director

---End of Report---

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

TEST REPORT

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 10-09-2025	Test Report No.: RN-250303003A02	
Sample ID: 250908AP09002	Sample Description: Ambient Air	
Challan No./P.O. No.: 3000179897/J02	Challan No./ P.No. Date: 03-03-2025	
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108		
Information obtained from customer (if any): N/A		
Type of Industry: Iron & Steel	Condition of Sample: Fit for Test	
Sampling Protocol: IS 5182	Sampling Date: 05-09-2025 to 06-09-2025	
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: STATION-2 PLANT WEST SIDE BOUNDARY		
Field Meteorological Information	A. Temp. (°C): 28	R.H. (%): 62
	W.C.: Semi-Cloudy	W.D.: West to East
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi		
Sample Receiving Date: 08-09-2025	Testing Started: 08-09-2025	Testing Ended: 10-09-2025

---Test Results---

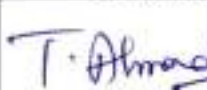
Sl. No.	Parameters	Test Method	Unit	Limits	Result
10.	Benzene (C ₆ H ₆)	IS 5182 Part 11: 2006	µg/m ³	--	BDL (MDL- 0.5)
11.	Benzo (a) Pyrene (Bap) Particulate Phase Only	IS 5182 Part 12: 2004	ng/m ³	--	BDL (MDL0.01)
12.	Carbon Monoxide	IEM/SOP/Air-01:2022	mg/m ³	--	BDL (MDL 0.1)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
	
(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	9	9	4											
Discipline: Chemical			Group: Atmospheric Pollution										Sub-Group: Ambient Air																
Report Issue Date: 17-09-2025										Test Report No.: RN-250303003A03																			
Sample ID: 250915AP13001										Sample Description: Ambient Air																			
Challan No./P.O. No.: 3000179897/302										Challan No./ P.No. Date: 03-03-2025																			
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																													
Information obtained from customer (if any): N/A																													
Type of Industry: Iron & Steel										Condition of Sample: Fit for Test																			
Sampling Protocol: IS 5182										Sampling Date: 10-09-2025 to 11-09-2025																			
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series																													
Sampling Location: STATION-3 PLANT EAST SIDE BOUNDARY																													
Field Meteorological Information										A. Temp. (°C): 26					R.H. (%): 72					W.C.: Semi-Cloudy					W.D.: South to North				
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																													
Sample Receiving Date: 15-09-2025										Testing Started: 15-09-2025										Testing Ended: 17-09-2025									

---Test Results---

SLNo.	Parameters	Test Method No.	Unit	Norms**	Results
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006	µg/m ³	100	67.5
2.	Particulate Matter (PM _{2.5})	IS 5182 Part 24:2019	µg/m ³	60	31.1
3.	Sulphur Dioxide (SO ₂)	IS 5182 Part-02	µg/m ³	80	23.6
4.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06	µg/m ³	80	49.6
5.	Ammonia (NH ₃)	IS 5182 Part 25	µg/m ³	400	41.0
6.	Ozone (O ₃)	IS 5182 Part 09	µg/m ³	180	22.2
7.	Arsenic (as As)	USEPA I.O. 3.2	ng/m ³	---	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	µg/m ³	1.0	0.4
9.	Nickel (Ni)	IS 5182 Part 26	ng/m ³	---	BDL (MDL-4)

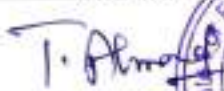
Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by _____ Authorized Signatory


 (Tauqeer Ahmad)
 Technical Manager


 (Dr. S. C. Jain)
 Director

---End of Report---

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

TEST REPORT

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 17-09-2025	Test Report No.: RN-250303003A02	
Sample ID: 250915AP13001	Sample Description: Ambient Air	
Challan No./P.O. No.: 3000179897/J02	Challan No./ P.No. Date: 03-03-2025	
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108		
Information obtained from customer (if any): N/A		
Type of Industry: Iron & Steel	Condition of Sample: Fit for Test	
Sampling Protocol: IS 5182	Sampling Date: 10-09-2025 to 11-09-2025	
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: STATION-3 PLANT EAST SIDE BOUNDARY		
Field Meteorological Information	A. Temp. (°C): 26	R.H. (%): 72
	W.C.: Semi-Cloudy	W.D.: South to North
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi		
Sample Receiving Date: 15-09-2025	Testing Started: 15-09-2025	Testing Ended: 17-09-2025

---Test Results---

Sl. No.	Parameters	Test Method	Unit	Limits	Result
10.	Benzene (C ₆ H ₆)	IS 5182 Part 11: 2006	µg/m ³	--	BDL (MDL- 0.5)
11.	Benzo (a) Pyrene (Bap) Particulate Phase Only	IS 5182 Part 12: 2004	ng/m ³	--	BDL (MDL0.01)
12.	Carbon Monoxide	IEM/SOP/Air-01:2022	mg/m ³	--	BDL (MDL 0.1)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by	Authorized Signatory
	
(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	9	9	5
Discipline: Chemical					Group: Atmospheric Pollution								Sub-Group: Ambient Air					
Report Issue Date: 17-09-2025									Test Report No.: RN-250303003A04									
Sample ID: 250915AP13002									Sample Description: Ambient Air									
Challan No./P.O. No.: 3000179897/J02									Challan No./ P.No. Date: 03-03-2025									
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																		
Information obtained from customer (if any): N/A																		
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test									
Sampling Protocol: IS 5182									Sampling Date: 10-09-2025 to 11-09-2025									
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series																		
Sampling Location: STATION-4 PLANT SOUTH SIDE BOUNDARY																		
Field Meteorological Information			A. Temp. (°C): 26				R.H. (%): 72				W.C.: Semi-Cloudy				W.D.: South to North			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 15-09-2025						Testing Started: 15-09-2025						Testing Ended: 17-09-2025						

----Test Results----

Sl.No.	Parameters	Test Method No.	Unit	Norms**	Results
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23-2006	µg/m ³	100	90.0
2.	Particulate Matter (PM _{2.5})	IS 5182 Part 24-2019	µg/m ³	60	41.4
3.	Sulphur Dioxide (SO ₂)	IS 5182 Part-02	µg/m ³	80	25.1
4.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06	µg/m ³	80	52.7
5.	Ammonia (NH ₃)	IS 5182 Part 25	µg/m ³	400	36.5
6.	Ozone (O ₃)	IS 5182 Part 09	µg/m ³	180	26.8
7.	Arsenic (as As)	USEPA I.O. 3.2	ng/m ³	----	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	µg/m ³	1.0	0.4
9.	Nickel (Ni)	IS 5182 Part 26	ng/m ³	----	BDL (MDL-4)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by	Authorized Signatory
<i>T. Ahmad</i>	<i>S. C. Jain</i>
(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

----End of Report----



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TEST REPORT

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 17-09-2025	Test Report No.: RN-250303003A04	
Sample ID: 250915API3002	Sample Description: Ambient Air	
Challan No./P.O. No.: 3000179897/J02	Challan No./ P.No. Date: 03-03-2025	
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108		
Information obtained from customer (if any): N/A		
Type of Industry: Iron & Steel	Condition of Sample: Fit for Test	
Sampling Protocol: IS 5182	Sampling Date: 10-09-2025 to 11-09-2025	
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: STATION-4 PLANT SOUTH SIDE BOUNDARY		
Field Meteorological Information	A. Temp. (°C): 26	R.H. (%): 72
	W.C.: Semi-Cloudy	W.D.: South to North
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi		
Sample Receiving Date: 15-09-2025	Testing Started: 15-09-2025	Testing Ended: 17-09-2025

---Test Results---

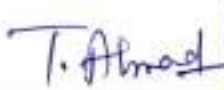
Sl. No.	Parameters	Test Method	Unit	Limits	Result
10.	Benzene (C ₆ H ₆)	IS 5182 Part 11: 2006	µg/m ³	--	BDL (MDL- 0.5)
11.	Benzo (a) Pyrene (Bap) Particulate Phase Only	IS 5182 Part 12: 2004	ng/m ³	--	BDL (MDL0.01)
12.	Carbon Monoxide	IEM/SOP/Air-01:2022	mg/m ³	--	BDL (MDL 0.1)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by	Authorized Signatory
 (Tauqeer Ahmad)	 (S. C. Jain)
Technical Manager	Director

---End of Report---

List of Major Air Pollution Control (APC) Systems installed.

SN	Unit	Stack attached to	APC
1	CPP	DRI based WHRB-1	ESP
2		DRI based WHRB-2	ESP
3		DRI based WHRB-3	ESP
4		DRI based WHRB-4	ESP
5		DRI based WHRB-5	ESP
6		25 MW_CPP	ESP
7		30 MW_CPP	ESP
8		40 TPH_CPP	ESP
9	Sinter Plant	Sinter Process	ESP
10		Sinter Dedusting	ESP
11		Flux Crusher	Bag-Filter
12		Flux Screen	Bag-Filter
13		Sinter Product House	Bag-Filter
14	Pellet Plant	Pellet Process	ESP
15		PCI	BAG-FILTER
16		Dryer	BAG-FILTER
17		TG Building	BAG-FILTER
18	Coke Oven	Coke Route	Bag-Filter
19	SMS	SMS-1&2 _FES	Bag-Filter
20		LRF-1 & 3	Bag-Filter
21		SMS-3 _FES	Bag-Filter
22		RMHS-2 _SMS-2	Bag-Filter
23		RMHS-3 _SMS-3	Bag-Filter
25	MBF	MBF-1 _Cast House	Bag-Filter
26		MBF-1 _Stock House	Bag-Filter
27		MBF-1 _Ground Hopper	Bag-Filter
28		MBF-2 _Cast House	Bag-Filter
29		MBF-2 _Stock House	Bag-Filter
30		MBF-2 _PCI	Bag-Filter
31		MBF-2 _RMHS	Bag-Filter
32		MBF-2 _Dry Gcp	Bag-Filter
33		MBF-2 RMHS-1	Bag-Filter
34	DRI	DE-1 _DRI-1 Product Circuit	Bag-Filter
35		DE-1A _DRI-1,2,3 Product Circuit	Bag-Filter
36		DE-2 _DRI-1,2,3 PSB	Bag-Filter
37		DE-2A _DRI-1,2,3 PSB	Bag-Filter
38		DE-3 _DRI-4 & 5 Product Circuit	Bag-Filter
39		DE-4 _DRI-4 & 5 PSB	Bag-Filter
40		DE-5 _DRI-3 Product Circuit	Bag-Filter
41		DE-6 _DRI-2 Product Circuit	Bag-Filter
39		DE-7 _Intermediate Bin DRI-1,2,3	Bag-Filter
40		DE-8 _DRI-1,2,3 PSB	Bag-Filter



Installation of New Bag Filter at MBF-2 RMHs



Adequate APCS have been Installed at different

Sewage Treatment Plant (250 KLD)

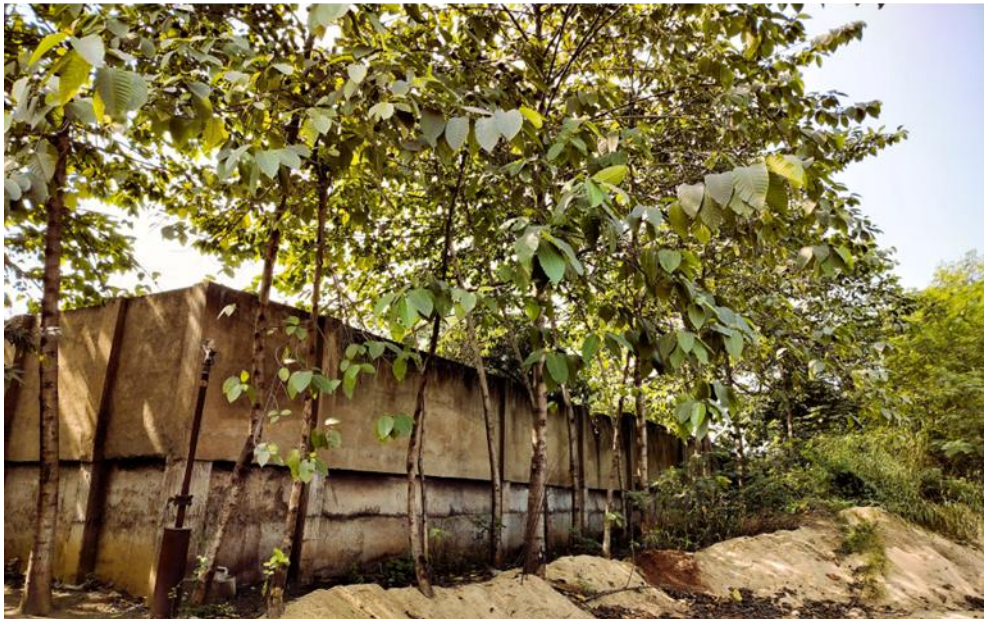


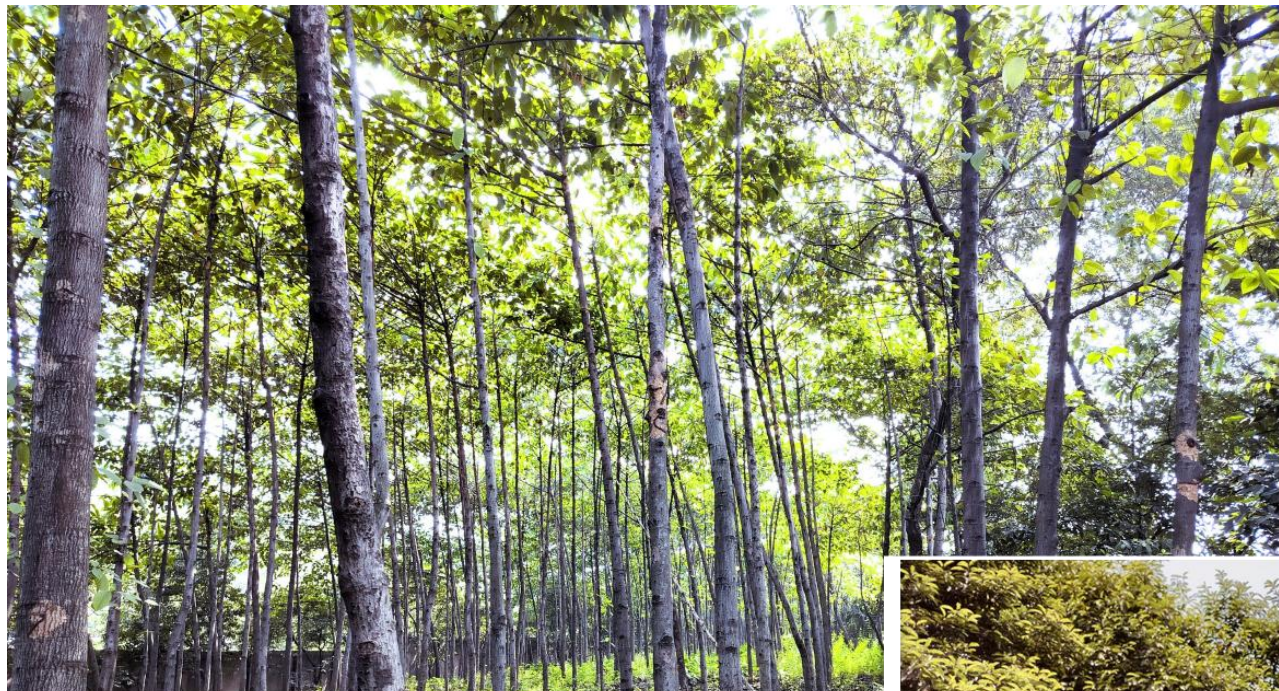
Effluent Treatment Plant (7200KLD)





Green Belt developed inside the Plant







9 October 2025 at 12:05 pm

Reservoir

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
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TEST REPORT

Discipline: Chemical		Group: Atmospheric Pollution		Sub-Group: Work Environment & Indoor Air	
Report Issue Date: 16-07-2025			Test Report No.: RN-230714001FE02		
Sample ID: 250714API5001			Sample Description: Work Zone Air		
Challan No./P.O. No.: 3000173714/J02			Challan No./ P.No. Date: 15-07-2024		
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108					
Information obtained from customer (if any): N/A					
Type of Industry: Iron & Steel			Condition of Sample: Fit for Test		
Sampling Protocol: IS Method 5182			Sampling Date: 09-07-2025		
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
Sampling Location: MBF-2 NEAR CAST HOUSE PLATFORM					
Field Meteorological Information		A. Temp. (°C): 26	R.H. (%): 74	W.C.: Semi-Cloudy	W.D.: South to North
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi					
Sample Receiving Date: 14-07-2025		Testing Started: 14-07-2025		Testing Ended: 16-07-2025	

—Test Results—

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006 RA 2017	µg/m ³	---	1172.8
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017	µg/m ³	---	39.2
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06: 2006 RA 2017	µg/m ³	---	71
4.	Lead (Pb)	IS 5182 Part-22	µg/m ³	---	0.50
5.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m ³	---	BDL (MDL- 1.8)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the Environmental (Protection) Rule – 1986.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

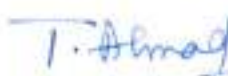
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Reviewed by

Authorized Signatory



(Tauqeer Ahmad)

Technical Manager




(Dr. S. C. Jain)

Director

—End of Report—



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
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Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TEST REPORT

Discipline: Chemical		Group: Atmospheric Pollution		Sub-Group: Work Environment & Indoor Air	
Report Issue Date: 16-07-2025			Test Report No.: RN-230714001FE03		
Sample ID: 250714AP17001			Sample Description: Work Zone Air		
Challan No./P.O. No.: 3000173714/J02			Challan No./ P.No. Date: 15-07-2024		
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108					
Information obtained from customer (if any): N/A					
Type of Industry: Iron & Steel			Condition of Sample: Fit for Test		
Sampling Protocol: IS Method 5182			Sampling Date: 10-07-2025		
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
Sampling Location: DRI 4,5 NEAR PSB DISPATCH ROOM					
Field Meteorological Information		A. Temp. (°C): 27	R.H. (%): 68	W.C.: Partly Sunny	W.D.: SE to NW
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi					
Sample Receiving Date: 14-07-2025		Testing Started: 14-07-2025		Testing Ended: 16-07-2025	

---Test Results---

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Suspended Particulate Matter (SPM)	IS 5182 Part 04	µg/m ³	---	1630.6
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017	µg/m ³	---	32.8
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06: 2006 RA 2017	µg/m ³	---	60.1
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m ³	---	BDL(MDL-1.8)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the Environmental (Protection) Rule - 1986,
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

T. Ahmad

(Tauqeer Ahmad)

Technical Manager

Authorized Signatory

S. C. Jain

(Dr. S. C. Jain)

Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TEST REPORT

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Work Environment & Indoor Air	
Report Issue Date: 16-07-2025	Test Report No.: RN-230714001FE04		
Sample ID: 250714AP17002	Sample Description: Work Zone Air		
Challan No./P.O. No.: 3000173714/J02	Challan No./ P.No. Date: 15-07-2024		
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108			
Information obtained from customer (if any): N/A			
Type of Industry: Iron & Steel	Condition of Sample: Fit for Test		
Sampling Protocol: IS Method 5182	Sampling Date: 10-07-2025		
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: DRI-4 & 5 RMHS			
Field Meteorological Information	A. Temp. (°C): 27	R.H. (%): 68	W.C.: Partly Sunny W.D.: SE to NW
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi			
Sample Receiving Date: 14-07-2025	Testing Started: 14-07-2025		Testing Ended: 16-07-2025

---Test Results---

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Suspended Particulate Matter (SPM)	IS 5182 Part 04	µg/m ³	---	1429.3
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017	µg/m ³	---	33.7
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06: 2006 RA 2017	µg/m ³	---	65.1
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m ³	---	BDL(MDL-1.8)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the Environmental (Protection) Rule - 1986.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by

Authorized Signatory

T. Ahmad

S. C. Jain

(Tauqueer Ahmad)

(S. C. Jain)

Technical Manager

Director

---End of Report---



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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TEST REPORT

Discipline: Chemical		Group: Atmospheric Pollution		Sub-Group: Work Environment & Indoor Air	
Report Issue Date: 16-07-2025			Test Report No.: RN-230714001FE05		
Sample ID: 250714AP17003			Sample Description: Work Zone Air		
Challan No./P.O. No.: 3000173714/J02			Challan No./ P.No. Date: 15-07-2024		
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108					
Information obtained from customer (if any): N/A					
Type of Industry: Iron & Steel			Condition of Sample: Fit for Test		
Sampling Protocol: IS Method 5182			Sampling Date: 10-07-2025		
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
Sampling Location: DRI 4,5 NEAR ESP HOPPER					
Field Meteorological Information		A. Temp. (°C): 27	R.H. (%): 68	W.C.: Partly Sunny	W.D.: SE to NW
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi					
Sample Receiving Date: 14-07-2025		Testing Started: 14-07-2025		Testing Ended: 16-07-2025	

---Test Results---

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Suspended Particulate Matter (SPM)	IS 5182 Part 04	µg/m ³	---	1762.8
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017	µg/m ³	---	36.2
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06: 2006 RA 2017	µg/m ³	---	57.2
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m ³	---	BDL(MDL-1.8)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the Environmental (Protection) Rule - 1986.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by	Authorized Signatory
	
(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

---End of Report---



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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TEST REPORT

Discipline: Chemical		Group: Atmospheric Pollution		Sub-Group: Work Environment & Indoor Air	
Report Issue Date: 23-07-2025			Test Report No.: RN-230714001FE07		
Sample ID: 250721API4002			Sample Description: Work Zone Air		
Challan No./P.O. No.: 3000173714/J02			Challan No./ P.No. Date: 15-07-2024		
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108					
Information obtained from customer (if any): N/A					
Type of Industry: Iron & Steel			Condition of Sample: Fit for Test		
Sampling Protocol: IS Method 5182			Sampling Date: 15-07-2025		
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
Sampling Location: SMS 1 & 2 NEAR EAF PLATFORM					
Field Meteorological Information		A. Temp. (°C): 30	R.H. (%): 72	W.C.: Semi-Cloudy	W.D.: SW to NE
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi					
Sample Receiving Date: 21-07-2025		Testing Started: 21-07-2025		Testing Ended: 23-07-2025	

—Test Results—

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006 RA 2017	µg/m ³	---	1373.9
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017	µg/m ³	---	29.5
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06: 2006 RA 2017	µg/m ³	---	52
4.	Lead (Pb)	IS 5182 Part-22	µg/m ³	---	0.46
5.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m ³	---	BDL (MDL- 1.8)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the Environmental (Protection) Rule - 1986.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by	Authorized Signatory
	
(Tauqueer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

—End of Report—



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TEST REPORT

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Work Environment & Indoor Air
Report Issue Date: 23-07-2025	Test Report No.: RN-230714001FE08	
Sample ID: 250721AP16001	Sample Description: Work Zone Air	
Challan No./P.O. No.: 3000173714/J02	Challan No./ P.No. Date: 15-07-2024	
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108		
Information obtained from customer (if any): N/A		
Type of Industry: Iron & Steel	Condition of Sample: Fit for Test	
Sampling Protocol: IS Method 5182	Sampling Date: 15-07-2025	
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: MBF-1 NEAR RMHS		
Field Meteorological Information	A. Temp. (°C): 30	R.H. (%): 72
	W.C.: Semi-Cloudy	W.D.: SW to NE
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi		
Sample Receiving Date: 21-07-2025	Testing Started: 21-07-2025	Testing Ended: 23-07-2025

---Test Results---

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006 RA 2017	µg/m ³	---	1715.7
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017	µg/m ³	---	42.9
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06: 2006 RA 2017	µg/m ³	---	84.6
4.	Lead (Pb)	IS 5182 Part-22	µg/m ³	---	0.50
5.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m ³	---	BDL(MDL-1.8)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the Environmental (Protection) Rule – 1986.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by	Authorized Signatory
	
(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TEST REPORT

Discipline: Chemical		Group: Atmospheric Pollution		Sub-Group: Work Environment & Indoor Air	
Report Issue Date: 23-07-2025			Test Report No.: RN-230714001FE09		
Sample ID: 250721AP16002			Sample Description: Work Zone Air		
Challan No./P.O. No.: 3000173714/J02			Challan No/ P.No. Date: 15-07-2024		
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108					
Information obtained from customer (if any): N/A					
Type of Industry: Iron & Steel			Condition of Sample: Fit for Test		
Sampling Protocol: IS Method 5182			Sampling Date: 15-07-2025		
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
Sampling Location: MBF-I NEAR CAST HOUSE PLATFORM					
Field Meteorological Information		A. Temp. (°C): 30	R.H. (%): 72	W.C.: Semi-Cloudy	W.D.: SW to NE
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi					
Sample Receiving Date: 21-07-2025		Testing Started: 21-07-2025		Testing Ended: 23-07-2025	

---Test Results---

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Particulate Matter (PM ₁₀)	IS 5182 Part-23:2006 RA 2017	µg/m ³	---	1184.7
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017	µg/m ³	---	39.1
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06: 2006 RA 2017	µg/m ³	---	74.4
4.	Lead (Pb)	IS 5182 Part-22	µg/m ³	---	0.50
5.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m ³	---	BDL(MDL-1.8)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the Environmental (Protection) Rule – 1986.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by	Authorized Signatory
	
(Tauqeer Ahmad)	(Dr. S. C. Jain)
Technical Manager	Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
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TC-18135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	6	1	1
Discipline: Chemical	Group: Water									Sub-Group: Ground water								
Report Issue Date: 16-07-2025	Test Report No.: RN-230714001GW1																	
Sample ID: 250712WA01001	Sample Description: Ground Water (Bore well)																	
Challan No./P.O. No.: 3000173714/J02	Challan No./ P.No. Date: 15-07-2024																	
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																		
Information obtained from customer (if any): N/A																		
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test									
Sampling Protocol: I.S 17614 (Part-1):2025									Sampling Date: 12-07-2025									
Protocol: CPCB Guideline & IS Method 3025 Series & APHA																		
Sampling Location: BAGANPDDA																		
Field Meteorological Information A. Temp. (°C): 30 R.H. (%): 70 W.C.: Semi-Cloudy W.D.: SE to NW																		
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 12-07-2025						Testing Started: 12-07-2025						Testing Ended: 16-07-2025						

—Test Result—

Sl. No.	Tested Parameters	Unit	Method No.	Norms**		Results
				Acceptable	Permissible	
1.	PH Value	---	IS 3025 (Part - 11)	6.5 to 8.5	No Relaxation	7.1
2.	Conductivity	µs/cm	IS 3025 (Part - 14)	--	--	503
3.	Taste	---	IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable
4.	Turbidity	NTU	IS 3025 (Part - 10)	1	5	<1
5.	Colour	Hazen	IS 3025 (Part - 04)	5	15	<5
6.	Odour	---	IS 3025 (Part - 05)	Agreeable	Agreeable	Agreeable
7.	Total Dissolved Solids	mg/l	IS 3025 (Part - 16)	500	2000	355
8.	Calcium (as Ca)	mg/l	IS 3025 (Part - 40)	75	200	52.1
9.	Total Alkalinity (as CaCO ₃)	mg/l	IS 3025 (Part - 23)	200	600	144
10.	Total Hardness (as CaCO ₃)	mg/l	IS 3025 (Part - 21)	200	600	192
11.	Chloride (as Cl)	mg/l	IS 3025 (Part - 32)	250	1000	56
12.	Sulphate (as SO ₄)	mg/l	IS 3025 (Part - 24)	200	400	45.1
13.	Magnesium (as Mg)	mg/l	APHA 3500 Mg B. 2023	30	100	15.1
14.	Copper	mg/l	APHA 3111 B.2023	0.05	1.5	BDL (MDL - 0.2)
15.	Chromium	mg/l	APHA 3111 B.2023	0.05	No Relaxation	BDL (MDL - 0.2)
16.	Zinc	mg/l	APHA 3111 B.2023	5	15	0.98

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Reviewed by

Authorized Signatory

T. Ahmad

(Tauqeer Ahmad)

Technical Manager

S. C. Jain

(Dr. S. C. Jain)

Director

—End of Report—



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TEST REPORT

—Test Result—

Sl. No.	Tested Parameters	Unit	Method No.	Norms**		Results
				Acceptable	Permissible	
17.	Nickel	mg/l	APHA 3111 B.2023	0.3	No Relaxation	BDL (MDL - 0.2)
18.	Mercury	mg/l	APHA 3112 C.2023	0.001	No Relaxation	BDL (MDL - 0.05)
19.	Arsenic	mg/l	APHA 3114 C.2023	0.01	No Relaxation	BDL (MDL - 0.02)
20.	Manganese	mg/l	APHA 3111 B.2023	0.1	No Relaxation	BDL (MDL - 0.2)
21.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)	--	--	BDL (MDL - 0.1)
22.	Fluoride (as F)	mg/l	APHA 4500 F D. 2023	1.0	1.5	0.48
23.	Iron	mg/l	APHA 3111 B.2023	1.0	No Relaxation	0.35
24.	Lead	mg/l	APHA 3111 B.2023	0.01	No Relaxation	BDL (MDL - 0.2)

Env. Condition of Lab.	Laboratory is maintaining Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	IS 10500:2012
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Mahendranath Mahto
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by _____ Authorized Signatory

(Tauqeer Ahmad)

Technical Manager

(Dr. S. C. Jain)

Director

—End of Report—



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-18135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	6	1	2
Discipline: Chemical			Group: Water										Sub-Group: Ground water					
Report Issue Date: 16-07-2025										Test Report No.: RN-230714001GW2								
Sample ID: 250712WA01002										Sample Description: Ground Water (Bore well)								
Challan No./P.O. No.: 3000173714/J02										Challan No./ P.No. Date: 15-07-2024								
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																		
E-mail Id- kishor.pramanik1@tatasteel.com																		
M/s Tata Steel Limited,																		
(Formerly Tata Steel Long Products Limited),																		
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																		
Information obtained from customer (if any): N/A																		
Type of Industry: Iron & Steel										Condition of Sample: Fit for Test								
Sampling Protocol: I.S 17614 (Part-1):2025										Sampling Date: 12-07-2025								
Protocol: CPCB Guideline & IS Method 3025 Series & APHA																		
Sampling Location: JHARGOVINDPUR																		
Field Meteorological Information A. Temp. (°C): 30 R.H. (%): 70 W.C.: Semi-Cloudy W.D.: SE to NW																		
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 12-07-2025						Testing Started: 12-07-2025						Testing Ended: 16-07-2025						

---Test Result---

Sl. No.	Tested Parameters	Unit	Method No.	Norms**		Results
				Acceptable	Permissible	
1.	PH Value	---	IS 3025 (Part - 11)	6.5 to 8.5	No Relaxation	7.2
2.	Conductivity	µs/cm	IS 3025 (Part - 14)	--	--	418
3.	Taste	---	IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable
4.	Turbidity	NTU	IS 3025 (Part - 10)	1	5	<1
5.	Colour	Hazen	IS 3025 (Part - 04)	5	15	<5
6.	Odour	---	IS 3025 (Part - 05)	Agreeable	Agreeable	Agreeable
7.	Total Dissolved Solids	mg/l	IS 3025 (Part - 16)	500	2000	291
8.	Calcium (as Ca)	mg/l	IS 3025 (Part - 40)	75	200	41.7
9.	Total Alkalinity (as CaCO ₃)	mg/l	IS 3025 (Part - 23)	200	600	104
10.	Total Hardness (as CaCO ₃)	mg/l	IS 3025 (Part - 21)	200	600	164
11.	Chloride (as Cl)	mg/l	IS 3025 (Part - 32)	250	1000	38
12.	Sulphate (as SO ₄)	mg/l	IS 3025 (Part - 24)	200	400	34
13.	Magnesium (as Mg)	mg/l	APHA 3500 Mg B. 2023	30	100	14.6
14.	Copper	mg/l	APHA 3111 B.2023	0.05	1.5	BDL (MDL - 0.2)
15.	Chromium	mg/l	APHA 3111 B.2023	0.05	No Relaxation	BDL (MDL - 0.2)
16.	Zinc	mg/l	APHA 3111 B.2023	5	15	0.91

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Reviewed by

Authorized Signatory

T. Ahmad
(Tauqeer Ahmad)
Technical Manager

S. C. Jain
(S. C. Jain)
Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

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Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

---Test Result---

Sl. No.	Tested Parameters	Unit	Method No.	Norms**		Results
				Acceptable	Permissible	
17.	Nickel	mg/l	APHA 3111 B.2023	0.3	No Relaxation	BDL (MDL- 0.2)
18.	Mercury	mg/l	APHA 3112 C.2023	0.001	No Relaxation	BDL (MDL - 0.05)
19.	Arsenic	mg/l	APHA 3114 C.2023	0.01	No Relaxation	BDL (MDL - 0.02)
20.	Manganese	mg/l	APHA 3111 B.2023	0.1	No Relaxation	BDL (MDL - 0.2)
21.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)	--	--	BDL (MDL - 0.1)
22.	Fluoride (as F)	mg/l	APHA 4500 F D. 2023	1.0	1.5	0.39
23.	Iron	mg/l	APHA 3111 B.2023	1.0	No Relaxation	0.31
24.	Lead	mg/l	APHA 3111 B.2023	0.01	No Relaxation	BDL (MDL - 0.2)

Env. Condition of Lab.	Laboratory is maintaining Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	IS 10500 :2012
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Mahendranath Mahto
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by _____ Authorized Signatory

(Tauqeer Ahmad)

Technical Manager

(Dr. S. C. Jain)

Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	1	3		
Discipline: Chemical								Group: Water						Sub-Group: Ground water					
Report Issue Date: 16-07-2025								Test Report No.: RN-230714001GW3											
Sample ID: 250712WA01003								Sample Description: Ground Water (Bore well)											
Challan No./P.O. No.: 3000173714/J02								Challan No./ P.No. Date: 15-07-2024											
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																			
E-mail Id- kishor.pramanik1@tatasteel.com																			
M/s Tata Steel Limited,																			
(Formerly Tata Steel Long Products Limited),																			
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Information obtained from customer (if any): N/A																			
Type of Industry: Iron & Steel										Condition of Sample: Fit for Test									
Sampling Protocol: IS 17614 (Part-1):2025										Sampling Date: 12-07-2025									
Protocol: CPCB Guideline & IS Method 3025 Series & APHA																			
Sampling Location: NEEMDIH																			
Field Meteorological Information				A. Temp. (°C): 30				R.H. (%): 70				W.C.: Semi-Cloudy				W.D.: SE to NW			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 12-07-2025						Testing Started: 12-07-2025						Testing Ended: 16-07-2025							

---Test Result---

Sl. No.	Tested Parameters	Unit	Method No.	Norms**		Results
				Acceptable	Permissible	
1.	PH Value	---	IS 3025 (Part - 11)	6.5 to 8.5	No Relaxation	7.4
2.	Conductivity	µs/cm	IS 3025 (Part - 14)	--	--	559
3.	Taste	---	IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable
4.	Turbidity	NTU	IS 3025 (Part - 10)	1	5	<1
5.	Colour	Hazen	IS 3025 (Part - 04)	5	15	<5
6.	Odour	---	IS 3025 (Part - 05)	Agreeable	Agreeable	Agreeable
7.	Total Dissolved Solids	mg/l	IS 3025 (Part - 16)	500	2000	397
8.	Calcium (as Ca)	mg/l	IS 3025 (Part - 40)	75	200	59.3
9.	Total Alkalinity (as CaCO ₃)	mg/l	IS 3025 (Part - 23)	200	600	164
10.	Total Hardness (as CaCO ₃)	mg/l	IS 3025 (Part - 21)	200	600	216
11.	Chloride (as Cl)	mg/l	IS 3025 (Part - 32)	250	1000	68
12.	Sulphate (as SO ₄)	mg/l	IS 3025 (Part - 24)	200	400	55.1
13.	Magnesium (as Mg)	mg/l	APHA 3500 Mg B. 2023	30	100	16.5
14.	Copper	mg/l	APHA 3111 B.2023	0.05	1.5	BDL (MDL - 0.2)
15.	Chromium	mg/l	APHA 3111 B.2023	0.05	No Relaxation	BDL (MDL - 0.2)
16.	Zinc	mg/l	APHA 3111 B.2023	5	15	0.88

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Reviewed by  Authorized Signatory

(Tauqeer Ahmed) (Dr. S. C. Jain)

Technical Manager

Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

—Test Result—

Sl. No.	Tested Parameters	Unit	Method No.	Norms**		Results
				Acceptable	Permissible	
17.	Nickel	mg/l	APHA 3111 B.2023	0.3	No Relaxation	BDL (MDL- 0.2)
18.	Mercury	mg/l	APHA 3112 C.2023	0.001	No Relaxation	BDL (MDL - 0.05)
19.	Arsenic	mg/l	APHA 3114 C.2023	0.01	No Relaxation	BDL (MDL - 0.02)
20.	Manganese	mg/l	APHA 3111 B.2023	0.1	No Relaxation	BDL (MDL - 0.2)
21.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)	--	--	BDL (MDL - 0.1)
22.	Fluoride (as F)	mg/l	APHA 4500 F D. 2023	1.0	1.5	0.59
23.	Iron	mg/l	APHA 3111 B.2023	1.0	No Relaxation	0.25
24.	Lead	mg/l	APHA 3111 B.2023	0.01	No Relaxation	BDL (MDL - 0.2)

Env. Condition of Lab.	Laboratory is maintaining Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	IS 10500 :2012
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Mahendranath Mahto
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by

Authorized Signatory

T. Ahmed

(Dr. S. C. Jain)

(Tauqeer Ahmad)

(Dr. S. C. Jain)

Technical Manager

Director

—End of Report—



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Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-18135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	1	4
Discipline: Chemical									Group: Water					Sub-Group: Ground water			
Report Issue Date: 16-07-2025									Test Report No.: RN-230714001GW4								
Sample ID: 250712WA01004									Sample Description: Ground Water (Bore well)								
Challan No./P.O. No.: 3000173714/302									Challan No./ P.No. Date: 15-07-2024								
Name and Contact Details of Customer: Kishor Pramanik (9905340012)																	
E-mail Id- kishor.pramanik1@tatasteel.com																	
M/s Tata Steel Limited,																	
(Formerly Tata Steel Long Products Limited),																	
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																	
Information obtained from customer (if any): N/A																	
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test								
Sampling Protocol: IS 17614 (Part-1):2025									Sampling Date: 12-07-2025								
Protocol: CPCB Guideline & IS Method 3025 Series & APHA																	
Sampling Location: JHARKHULI																	
Field Meteorological Information			A. Temp. (°C): 30			R.H. (%): 70			W.C.: Semi-Cloudy			W.D.: SE to NW					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 12-07-2025						Testing Started: 12-07-2025						Testing Ended: 16-07-2025					

---Test Result---

Sl. No.	Tested Parameters	Unit	Method No.	Norms**		Results
				Acceptable	Permissible	
1.	PH Value	---	IS 3025 (Part - 11)	6.5 to 8.5	No Relaxation	6.9
2.	Conductivity	µs/cm	IS 3025 (Part - 14)	--	--	470
3.	Taste	---	IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable
4.	Turbidity	NTU	IS 3025 (Part - 10)	1	5	<1
5.	Colour	Hazen	IS 3025 (Part - 04)	5	15	<5
6.	Odour	---	IS 3025 (Part - 05)	Agreeable	Agreeable	Agreeable
7.	Total Dissolved Solids	mg/l	IS 3025 (Part - 16)	500	2000	330
8.	Calcium (as Ca)	mg/l	IS 3025 (Part - 40)	75	200	48.1
9.	Total Alkalinity (as CaCO ₃)	mg/l	IS 3025 (Part - 23)	200	600	124
10.	Total Hardness (as CaCO ₃)	mg/l	IS 3025 (Part - 21)	200	600	178
11.	Chloride (as Cl)	mg/l	IS 3025 (Part - 32)	250	1000	52
12.	Sulphate (as SO ₄)	mg/l	IS 3025 (Part - 24)	200	400	41.1
13.	Magnesium (as Mg)	mg/l	APHA 3500 Mg B. 2023	30	100	14.1
14.	Copper	mg/l	APHA 3111 B.2023	0.05	1.5	BDL (MDL - 0.2)
15.	Chromium	mg/l	APHA 3111 B.2023	0.05	No Relaxation	BDL (MDL - 0.2)
16.	Zinc	mg/l	APHA 3111 B.2023	5	15	0.93

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Reviewed by _____ Authorized Signatory

T. Ahmad
(Tauqeer Ahmad)
Technical Manager

Dr. S. C. Jain
(Dr. S. C. Jain)
Director

---End of Report---



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

—Test Result—

Sl. No.	Tested Parameters	Unit	Method No.	Norms**		Results
				Acceptable	Permissible	
17.	Nickel	mg/l	APHA 3111 B.2023	0.3	No Relaxation	BDL (MDL - 0.2)
18.	Mercury	mg/l	APHA 3112 C.2023	0.001	No Relaxation	BDL (MDL - 0.05)
19.	Arsenic	mg/l	APHA 3114 C.2023	0.01	No Relaxation	BDL (MDL - 0.02)
20.	Manganese	mg/l	APHA 3111 B.2023	0.1	No Relaxation	BDL (MDL - 0.2)
21.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)	--	--	BDL (MDL - 0.1)
22.	Fluoride (as F)	mg/l	APHA 4500 F D. 2023	1.0	1.5	0.43
23.	Iron	mg/l	APHA 3111 B.2023	1.0	No Relaxation	0.29
24.	Lead	mg/l	APHA 3111 B.2023	0.01	No Relaxation	BDL (MDL - 0.2)

Env. Condition of Lab.	Laboratory is maintaining Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	IS 10500:2012
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Mahendranath Mahto
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by

T. Ahmad
(Tauqeer Ahmad)
Technical Manager

Authorized Signatory

Dr. S. C. Jain
(Dr. S. C. Jain)
Director

—End of Report—

Treated Effluent Water Quality Report

Month	Sampling location	Sampling on	pH	TSS (mg/l)	BOD (mg/l)	COD (mg/l)	O&G (mg/l)	NH3 (mg/l)	CN (mg/l)	Phenol (mg/l)
Apr'25	ETP OUTLET	16-04-2025	8.1	29	12	56	BDL (MDL- 4)	5.6	BDL(MDL-0.05)	0.3
May'25	ETP OUTLET	31-05-2025	8.2	34	13	64	BDL (MDL- 4)	6.1	BDL(MDL-0.05)	0.35
Jun'25	ETP OUTLET	20.06.2025	7.8	39	15	72	BDL (MDL- 4)	6.3	BDL(MDL-0.05)	0.39
Jul'25	ETP OUTLET	08.07.2025	8.1	45	17	80	BDL (MDL- 4)	6.7	BDL(MDL-0.05)	0.43



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Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	6	4	9		
Discipline: Chemical					Group: Pollution & Environment								Sub-Group: Waste Water						
Report Issue Date: : 11-07-2025									Test Report No.: RN-240715001WW2										
Sample ID: 250708PE01002									Sample Description: Waste Water (Effluent)										
Challan No./P.O. No.: 3000173714/J02									Challan No./ P.No. Date: 15-07-2024										
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Information obtained from customer (if any): N/A																			
Type of Industry: STEEL INDUSTRY									Condition of Sample: Fit for Test										
Sampling Protocol: I.S: 17614(Part-1):2025									Sampling Date: 08-07-2025										
Protocol: CPCB Guideline & IS Method 3025 Series																			
Sampling Location: ETP Outlet																			
Field Meteorological Information				A. Temp. (°C): 28				R.H. (%): 70				W.C.: Semi-Cloudy				W.D.: NW to SE			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 08-07-2025						Testing Started: 08-07-2025						Testing Ended: 11-07-2025							

----Test Results----

Sl. No.	Tested Parameters	Unit	Method No.	Norms**	Results
1.	pH value at 25°C	----	IS 3025 (Part-11)	5.5 – 9.0	8.1
2.	Total Suspended Solids (TSS)	mg/l	IS 3025 (Part-17)	100	45
3.	Biological Oxygen Demand (BOD)	mg/l	IS 3025 (Part-44)	30	16.9
4.	Chemical Oxygen Demand (COD)	mg/l	IS 3025 (Part-58)	250	80
5.	Ammonical Nitrogen as N	mg/l	IS 3025 (Part-34)	50	6.7
6.	Phenols as C ₆ H ₅ OH	mg/l	APHA 5530 C:2023	10	0.43
7.	Oil & Grease	mg/l	IS 3025 (Part-39)	0.2	BDL(MDL-4)
8.	Cyanide as CN	mg/l	APHA 4500-CN C:2023	1.0	BDL(MDL-0.05)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the Environmental (Protection) Rule – 1986
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Mahendranath Mahato
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by


(Tauqeer Ahmad)
Technical Manager

Authorized Signatory


(Dr. S. C. Jain)
Director

----End of Report----

Ambient Noise Monitoring Report

Sampling on	Plant North Side Boundary		Plant South Side Boundary		Plant East Side Boundary		Plant West Side Boundary	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
Apr'25	74.1	63.2	72.4	62.4	71.9	65.3	69.6	67.7
May'25	73.4	62.4	70.4	64.7	73.5	62.2	68.8	60.8
Jun'25	71.1	59.8	67.9	61.9	71.2	59.6	66.3	58.0
July'25	69.3	58.0	66.1	60.1	66.1	60.1	64.5	56.2
Aug'25	67.5	56.2	64.3	58.3	67.6	56.0	62.7	54.4
Sept'25	70.9	59.0	67.6	60.7	71.2	58.8	66.0	56.8



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	9	9	8			
Discipline: Chemical	Group: Atmospheric Pollution								Sub-Group: Ambient Noise Level (Excluding Vibrations)												
Report Issue Date: 10-09-2025									Test Report No.: RN-250303003N01												
Sample ID: 250908AP10001									Sample Description: Ambient Noise Level												
Challan No./P.O. No.: 3000179897/J02									Challan No./ P.No. Date: 03-03-2025												
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																					
Information obtained from customer (if any): N/A																					
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test												
Sampling Protocol: IS 5182									Sampling Date: 05-09-2025 to 06-09-2025												
Protocol: CPCB Guideline & IS Method 9989:1981																					
Sampling Location: STATION-I PLANT NORTH SIDE BOUNDARY																					
Field Meteorological Information									A. Temp. (°C): 28				R.H. (%): 62				W.C.: Semi-Cloudy			W.D.: West to East	
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																					
Sample Receiving Date: 08-09-2025						Testing Started: 08-09-2025						Testing Ended: 10-09-2025									

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Results		Norms**
				Day Time	Night Time	
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	70.9	59.0	Day - 75 Night - 70

Note: -

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq: It is an energy mean of the noise level, over a specified period.

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by

Authorized Signatory

T. Ahmad

(Dr. S. C. Jain)

(Tauqeer Ahmad)

(Dr. S. C. Jain)

Technical Manager

Director

----End of Report----



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	9	9	9	
Discipline: Chemical			Group: Atmospheric Pollution						Sub-Group: Ambient Noise Level (Excluding Vibrations)										
Report Issue Date: 10-09-2025									Test Report No.: RN-250303003N2										
Sample ID: 250908AP10002									Sample Description: Ambient Noise Level										
Challan No./P.O. No.: 3000179897/J02									Challan No./ P.No. Date: 03-03-2025										
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																			
Information obtained from customer (if any): N/A																			
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test										
Sampling Protocol: I.S 5182									Sampling Date: 05-09-2025 to 06-09-2025										
Protocol: CPCB Guideline & IS Method 9989:1981																			
Sampling Location: STATION-2 PLANT WEST SIDE BOUNDARY																			
Field Meteorological Information			A. Temp. (°C): 28				R.H. (%): 62			W.C.: Semi-Cloudy				W.D.: West to East					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 08-09-2025						Testing Started: 08-09-2025						Testing Ended: 10-09-2025							

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Results		Norms**
				Day Time	Night Time	
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	66.0	56.8	Day - 75 Night - 70

Note: -

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq: It is an energy mean of the noise level, over a specified period.

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	- The results relate only to the item tested, calibrated or sampled. - Additions to, deviations, or exclusions from the method is not practiced if not mentioned. - Results from external providers are not used if not specified.

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Reviewed by

Authorized Signatory


 (Tauqeer Ahmad)
 Technical Manager


 (Dr. S. C. Jain)
 Director

----End of Report----



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Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	0	1	0	0	0			
Discipline: Chemical			Group: Atmospheric Pollution							Sub-Group: Ambient Noise Level (Excluding Vibrations)												
Report Issue Date: 17-09-2025									Test Report No.: RN-250303003N3													
Sample ID: 250915AP14001									Sample Description: Ambient Noise Level													
Challan No./P.O. No.: 3000179897/J02									Challan No./ P.No. Date: 03-03-2025													
Name and Contact Details of Customer: Kishor Pramanik (9905340012) E-mail Id- kishor.pramanik1@tatasteel.com M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																						
Information obtained from customer (if any): N/A																						
Type of Industry: Iron & Steel										Condition of Sample: Fit for Test												
Sampling Protocol: I.S 5182										Sampling Date: 10-09-2025 to 11-09-2025												
Protocol: CPCB Guideline & IS Method 9989:1981																						
Sampling Location: STATION-3 PLANT EAST SIDE BOUNDARY																						
Field Meteorological Information										A. Temp. (°C): 26					R.H. (%): 72			W.C.: Semi-Cloudy			W.D.: South to North	
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																						
Sample Receiving Date: 15-09-2025							Testing Started: 15-09-2025							Testing Ended: 17-09-2025								

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Results		Norms**
				Day Time	Night Time	
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	71.2	58.8	Day - 75 Night - 70

Note: -

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq: It is an energy mean of the noise level, over a specified period.

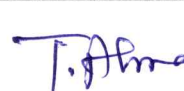
Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
Sample Drawn by	Rahul Singh & Team
Disclaimers	• The results relate only to the item tested, calibrated or sampled. • Additions to, deviations, or exclusions from the method is not practiced if not mentioned. • Results from external providers are not used if not specified.

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Reviewed by

Authorized Signatory

 (Tauqeer Ahmad)
 Technical Manager

 (Dr. S. C. Jain)
 Director

----End of Report----



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TC-16135

TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	5	0	0	0	0	0	1	0	0	1		
Discipline: Chemical	Group: Atmospheric Pollution								Sub-Group: Ambient Noise Level (Excluding Vibrations)											
Report Issue Date: 23-09-2025									Test Report No.: RN-250303003N4											
Sample ID: 250915AP14002									Sample Description: Ambient Noise Level											
Challan No./P.O. No.: 3000179897/J02									Challan No./ P.No. Date: 03-03-2025											
Name Name and Contact Details of Customer: Kishor Pramanik (9905340012)																				
E-mail Id- kishor.pramanik1@tatasteel.com																				
M/s Tata Steel Limited,																				
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																				
Information obtained from customer (if any): N/A																				
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test											
Sampling Protocol: IS 5182									Sampling Date: 10-09-2025 to 11-09-2025											
Protocol: CPCB Guideline & IS Method 9989:1981																				
Sampling Location: STATION-4 PLANT SOUTH SIDE BOUNDARY																				
Field Meteorological Information									A. Temp. (°C): 26			R.H. (%): 72			W.C.: Semi-Cloudy			W.D.: South to North		
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																				
Sample Receiving Date: 20-09-2025						Testing Started: 20-09-2025						Testing Ended: 23-09-2025								

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Results		Norms**
				Day Time	Night Time	
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	67.6	60.7	Day - 75 Night - 70

Note: -

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
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6. Leq: It is an energy mean of the noise level, over a specified period.

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sourabh
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Authorized Signatory

(T. Ahmad)

(Dr. S. C. Jain)

Technical Manager

Director

----End of Report----

Half Yearly update of key sensitive locations (till Sept'26)

TSL Gamharia



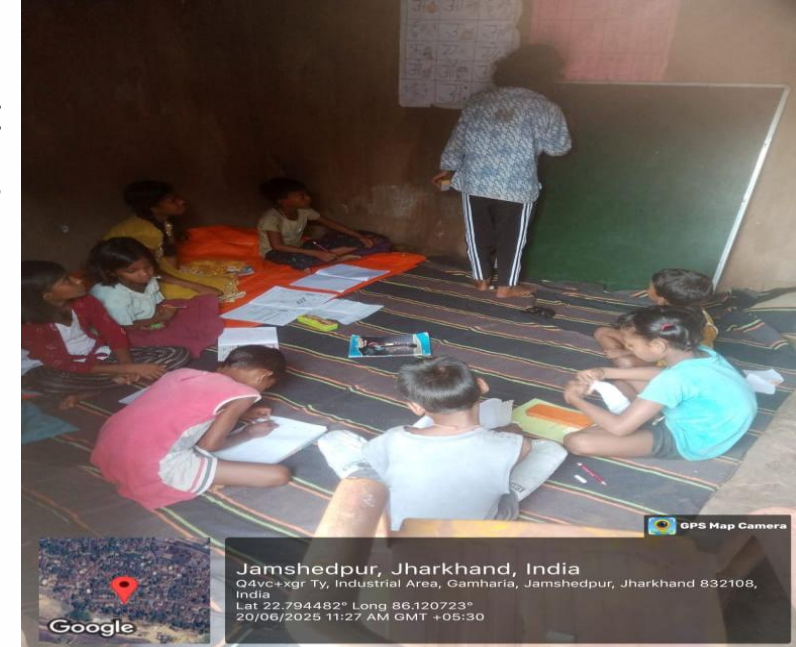
Scaling Up NRBC...

After Successful household survey Completion in the remaining bastis adjacent to TSG to identify out-of-school children and assess their educational needs. Large Number of Out of School /Drop out student identified. **Twenty Non-Residential Bridge Course** centres in different vulnerable locations of Gamharia. The teacher/volunteer also identified from local area aswell to sustain the centre and improve education level of students. currently 767 Students is enrolled in which 368 are girls.

PLC: Primary learning center (PLC) of Bara Gamharia and Dugdha is in continue in which 75 students is enroll. New center of Chhota Gamharia start operation after assessment and interview of teacher. Currently 30 Students enroll in this center.

Super 20 Promotion Drive

Publicity, propaganda, door to door campaign and covering nearby colleges for SUPER20 program is on to identify and encourage talented girls for giving them wings to their career. The drive focused on outreach and motivation for underprivileged youth.



Disaster Response - Flood

“Emergency Support Services”

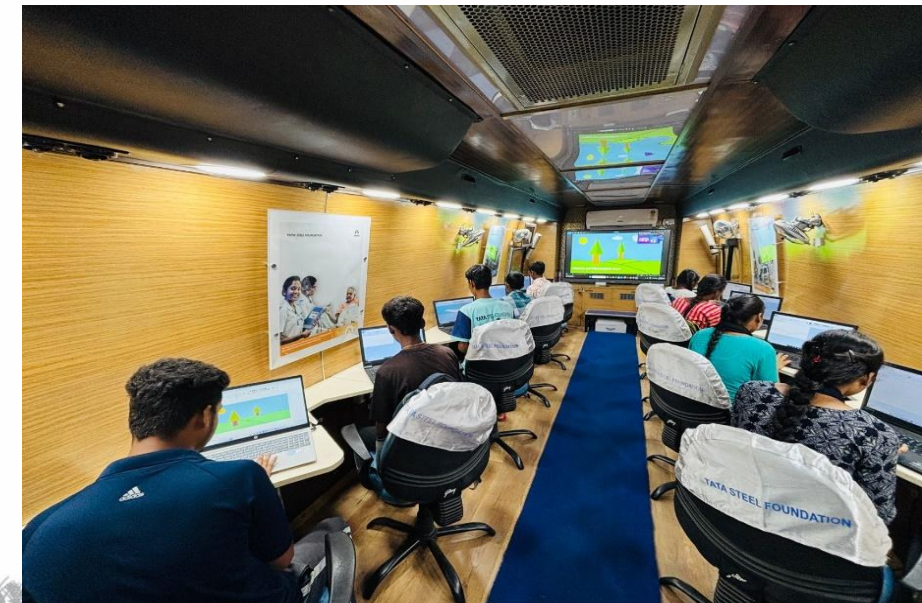
Flash floods coupled with huge discharges of rain waters from all sides affected the low-lying areas and non-concrete houses. Tree uprooted, tilting of electric posts, obstructed main pathways, heavy wind in some areas in and around plant especially Jhurkuli village disrupted the normal life. Villagers had to remain without power for more than 40 hours and waterlogging all around. Villagers approached TSF for immediate help, with help of the environment department, removed the fallen trees making the road fully accessible for the household. Another 200 households of municipality slums and villages were supported with necessary food essentials and tarpaulin to devastated houses. Residents of that area share their gratitude through a thankful letter.



Kaushalyaan Convocation Ceremony

The Kaushalyan programme was organized in Amdih village with the objective of enhancing digital literacy and computer skills among rural students. A total of 98 students from Kuchideh, Dugdha, and Barkatand actively participated in the training sessions.

Mr. Ranjan Kumar Singh, Chief Tata Steel Limited Gamharia felicitated certificates to the students in the graduation ceremony. The Deputy Mukhiya appreciated the trainer, volunteer and TSF staff present during the event for guiding the students to share the knowledge with their friends and colleagues.



Drinking Water

May is typically one of the hottest months in many parts of India, including Jharkhand, where TSG located. This intense heat has several direct and indirect implications for water scarcity

Dugdha village which are part of Dugdha Panchayat in Gamharia ward having population about 1600, which are facing Shortage of portable drinking water especially in summer season.

The water is having high TDS with iron contains beyond acceptable limit. The entire population of the village depends on few water outlets for drinking purposes for which they have to cover a long patch to fetch the water.

After continuous demand from community member for availability of drinking water in peak summer and health concern. An alternative and temporary solution to supply portable drinking water through TSUISL is supplied for 45 days in dugdha village.



On the eve of 121st birthday of Sir JRD Tata, a plantation drive of 50 different fruit bearing plants were undertaken inside Utkramit Madhya Vidyalaya, Jhargovindpur. Mr. Ranjan Singh, Chief TSG and Mr. BK Dinda, Gen. Secy. TKU along with other dignitaries involved school students in this plantation programme. M/s. Maa Construction voluntarily committed school authorities for bush cutting and cleaning of school premises and do further plantation. The students were gifted pen & pencils. Mr. Prasana Pradhan Mr. Ashutosh & Mr. Jagannath were among the team who helped Tata.



mPHU (mobile Public Health Unit) is continuous running on weekly basis in Four location i.e Jhurkuli, Namo Pra, Bagan Para and Gorai Para. It is mobile clinics — offer a wide range of benefits that significantly improve healthcare access and outcomes, particularly for underserved populations of sensitive areas.

By being present in the community, mobile clinics foster trust between healthcare providers and residents, and it improve community engagement. 55 people got benefited from these regular camp.



Nukkad Natak

A Street Skit was organized at Nimpada Basti by Youth Leadership Programme (YLP) students of Gamharia to spread awareness about dengue among the locals. The play conveyed key messages on its symptoms, how dengue spreads, and prevention. These twenty-two youngsters focussed on behaviour change component, seeking timely medical attention in case of fever or other symptoms. Post the fifteen minutes play, the YLP students conducted small group session & one-to-one interaction with the residents of Basti to address their minor queries & confusions, further reinforcing the message of health & hygiene. Nearly 100 spectators connected the performance with their daily living and urged such awareness as an effective medium for generating awareness in a simple and engaging manner. They liked the SING BAJA drums & beats to gather the mass for the Nukkad Natak, the team was happy to get a platform to do contribute for their locals. .



TSF is creating path for remote citizens of Saraikela district who often don't avail benefits of social security measures of government. Mukhyamantri Abua Swasthya Yojana, is one such state-government schemes of Jharkhand that provides health coverage to marginalized communities up to 15 lakhs during hospitalisation & further treatment. Upperbera village is just near to Tata Growth Shop. These residents due to lack of awareness, incomplete information regarding eligibility, complex application processes, administrative barriers were not availing its benefits. As Mrs. Sabita Hansda mentioned that she visit twice a week in block but doesn't listen about Abua Helath insurence, TSF team only know about it to mePublic Entitlement through Health initiative are in continue in different villages. Till 24th September 2025 TSF Gamharia team unlock **Rs. 31.92 crore** for the wellbeing of community.

SL No	Village/Panchayat	Potential Leverage (in Lakh)
1	Jhurkuli	317.5
2	Dugdha	490.00
3	Chhota Gamharia	185.00
3	Tetuldanga	80.00
4	Bada Gamharia	1770.00
5	Saharbera	15
6	Upperbera	330.00
7	Sapra	5
Total		3192.5



**Compliance status report for the conditions prescribed in the
Corporate Responsibility for Environmental Protection (CREP) of TSG**

SN.	Condition	Compliance status/Action taken
1	Coke Oven Plant: To meet the parameters PLD (% leaking doors), PLL (% leaking lids), PLO (% leaking off take) of the notified standards under EPA. To rebuild at least 40% of the coke oven batteries* in next 10 years by December 2012.	Our Coke Oven Plant is non-recovery type coke oven and this requirement is not applicable.
2	Steel Melting Shop: Steel Melting Shop Fugitive Emission Status To reduce 30% by March 2004 and 100% by March 2008 (including installation of secondary de-dusting facilities).	Dedicated secondary Fume Extractive System are installed in EAF & LRF and fugitive emissions are significantly reduced. To measure the stack emission dedicated online dust Monitors are installed in the respective stacks and it's data uploading to JSPCB & CPCB Server on real time basis.
3	Blast Furnace - Direct inject of reducing agents in blast furnace	Pulverized Coal injection (PCI) system installed and commissioned along with bag filter as an air pollution control measures (bag filter with stack) to reduce fugitive emission during direct injection.
4	Solid Waste / Hazardous Waste Management: Utilization of Steel Melting Shop (SMS) / Blast Furnace (BF) slag as per the following. • By 2004 – 70% • By 2006 – 80% and • By 2007 – 100% Hazardous Waste: - Charge of tar sludge / ETP sludge to coke oven by June 2003. - Inventorization of Hazardous waste as per Hazardous waste (M & H) Rules, 1989 as amended in 2000 and implementation of the rules by December 2003. (Tar sludge, acid sludge, waste lubricating oil and type fuel fall in the category of HZ).	Solid waste generated within the plant are segregated and most of the waste are recycled back in process. (i) Rolling mill scrap is partially recycled as steel scrap in SMS and partially sold as scrap to outside vendor. (ii) Mill scale is used in sinter making process at Sinter Plant. (iii) FES Dust from SMS is being used in sinter plant. (iv) Flue Dust from blast furnace, Bag Filter Dust and wet GCP dust is also used in Sinter plant. (v) 100% Blast furnace slag is sold to open market. (Used by major cement industry). (vi) Metal is recovered from slag of arc furnace and recycled. (vii) Used Oil / Waste Oil / Spent oil is collected and stored in designated place and sold to authorized recycler.

**Compliance status report for the conditions prescribed in the
Corporate Responsibility for Environmental Protection (CREP) of TSG**

		Hazardous Waste: Our coke oven plant is non-recovery type and hence Tar sludge & ETP sludge is not applicable. The waste oil and other hazardous wastes generated is being disposed to authorized vendors as per the Hazardous Waste Management Rule 2016.
5	Water Conservation / Water Pollution - To reduce specific water consumption to 5 m ³ / t for long products and 8 m ³ / t for flat products by December 2005.	We maintained Zero Effluent Discharge. There are only evaporation losses. We are presently manufacturing only long products and our specific water consumption is well within the prescribed limit
6	Installation of continuous stack monitoring	Stack monitoring facilities are provided at all major stacks. 7 online gas analysers and 23 online dust monitors are installed covering all major stacks for monitoring of emission from the stacks as per CTO condition and the real time data of PM, SO ₂ & NO _x are transmitted to JSPCB / CPCB servers. Apart from the above, manual monitoring is being conducted by a NABL accredited external laboratory on monthly basis. The monitoring results are well within the permissible limits.
7	To operate the existing pollution control equipment efficiently and to keep proper record of run hours, failure time and efficiency with immediate effect. Compliance report in this regard be submitted to CPCB / SPCB every three months.	The pollution control equipments are being operated efficiently and proper records are maintained for running hours, failure time and efficiency. Any failure leads to APC is resulted exceedance alarm from CPCB server and justification along with corrective action reports are being submitted to RTDMS Portal.
8	To implement the recommendations of Life Cycle Assessment (LCA) study sponsored by MoEF by December 2003.	Being Complied

**Compliance status report for the conditions prescribed in the
Corporate Responsibility for Environmental Protection (CREP) of TSG**

9	The industry will initiate the steps to adopt the following clean technologies measures to improve the performance of industry towards production, energy and environment. • Energy recovery of top Blast Furnace (BF) gas. • Use of Tar- free runner linings. • De- dusting of Cast house at tap holes, runners, skimmers ladle and charging points. • Suppression of fugitive emissions using nitrogen gas or other inert gas • To study the possibility of slag and fly ash transportation back to the abandoned mines, to the abandoned mines, to fill up the cavities through empty railway wagons while they return back to the mines and its implementation. • Processing of the waste containing flux & ferrous wastes through waste recycling plant. • To implement rainwater harvesting • Reduction Green House Gases by: 1. Reduction in power consumption 2. Use of by –products gases for power generation 3. Promotion of Energy Optimisation technology including energy/ audit • To set targets for Resource Conservation such as Raw material, energy and water consumption to match International Standards. • Up-gradation in the monitoring and analysis facilities for air and water pollution. Also, to impart elaborate training to the manpower so that realistic data is obtained in the environmental monitoring laboratories.	• Our BF gas pressure (plant capacity is 0.65 MTPA only) is not adequate to install TRT. • Our coke oven plant is non-recovery type and hence not applicable. • The de-dusting system commissioned at MBF-I & II cast house covering tap holes, runners, skimmers ladles and charging points. • Water sprinkling system, Dry & Wet fog systems and the compressed air are used for suppression of fugitive emissions at RMHs area. • Since we are purchasing raw materials from outside sources, it is not applicable. • The waste containing flux & ferrous waste is utilized to the maximum extent possible in the Pellet & Sinter plant. 100 % of waste containing flux and ferrous is utilized in the pellet & Sinter plant. • Rainwater harvesting structures are created within the premises to harvest rainwater. Open reservoirs within the plant also act as sink for rainwater during rainy season the water of which is used in the plant. • Various initiatives and measures are being taken to reduce the GHG emissions and present level of GHG emission is 4.44 tCO₂e/tcs. Major focus are being given to maximise the waste heat utilisation, Reduction of Coal / Coke rate in BF & DRI Process, Maximum utilization of Char, resource conservation. To reduce the power consumption VFDs are being installed wherever possible. LED lights are installed to replace the sodium vapor lamps and many Kaizens are implemented to conserve power. By product BF gas is being used as fuel in Power Plant, Mills, Sinter Production Process.
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**Compliance status report for the conditions prescribed in the
Corporate Responsibility for Environmental Protection (CREP) of TSG**

	• To Improve overall housekeeping.	• A separate Environment cell is already available and need based training is being imparted to the monitoring personnels as and when required. • Mechanized housekeeping is introduced to done within the plant. Fixed and mobile sprinklers are deployed at required locations for suppression of fugitive dust.
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OFFICE OF THE CHIEF CONSERVATOR OF FORESTS-CUM-CHIEF
WILD LIFE WARDEN, JHARKHAND, RANCHI

Letter no.- 1221

Dated- 26/7/04

From,

Chief Conservator of Forests-cum-
Chief Wild Life Warden,
Jharkhand, Ranchi

To,

M/s Usha Martin Limited,
(Usha Alloys & Steels Divn.)
Gamharia, Jamshedpur

**Sub: Aerial Distance between Usha Martin Factory at Gamharia and
specified points of Dalma Wildlife Sanctuary boundary.**

Ref: Companies letter no. Nil dated-28.04.2004.

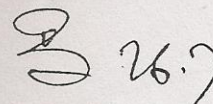
Sir,

In response to your letter under reference, a report was sought from the Divisional Forest Officer, Wild Life Division, Ranchi and Conservator of Forests, Wild Life Circle, Ranchi. On the basis of their reports it is stated that the distances between the three points on the boundary of the Dalma Wildlife Sanctuary and the location of the factory at Gamaharia are as under:

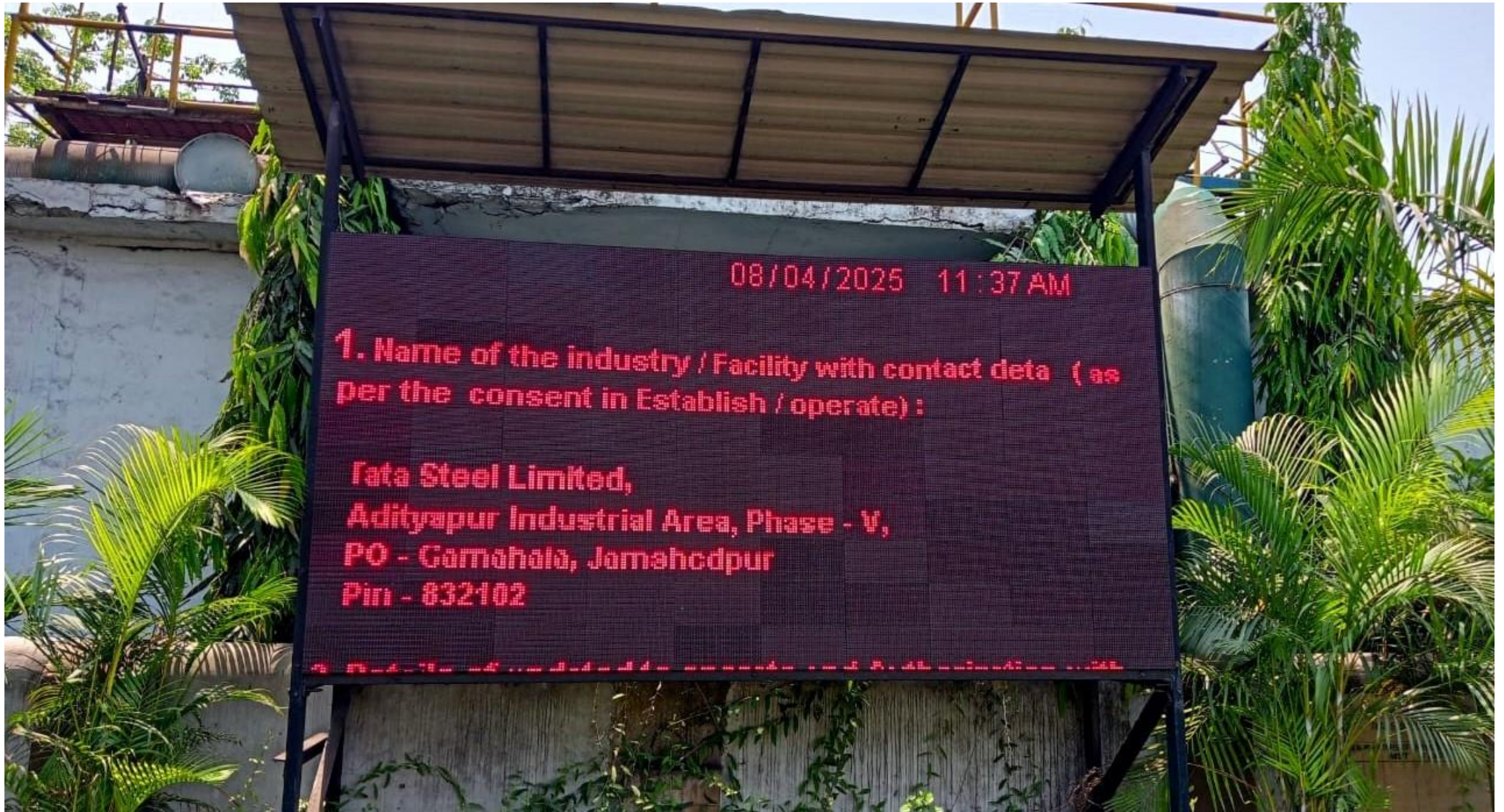
- | | | | | |
|----|------------|---|--|-----------------|
| 1) | Dalgaon | - | the north west corner of the sanctuary | - 15.75 Km. |
| 2) | Machabera | - | the south east corner of the sanctuary | - 33.75 Km. and |
| 3) | Dimna Jhor | - | the mid point of the sanctuary | - 15.50 Km. |

Since the content of the letter from the MOEF is not clear to us, no further comments are being made.

Yours sincerely,



Chief Conservator of Forests-cum-
Chief Wild Life Warden,
Jharkhand, Ranchi



Your (**Half Yearly Compliance Report**) has been **Submitted** with following details

Proposal No	IA/JH/IND/6114/2007
Compliance ID	127028161
Compliance Number(For Tracking)	EC/M/COMPLIANCE/127028161/2025
Reporting Year	2024
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	20-05-2025
RO/SRO Name	Shri Senthil Kumar Sampath
RO/SRO Email	agmu156@ifs.nic.in
State	JHARKHAND
RO/SRO Office Address	Integrated Regional Offices, Ranchi

Note:- SMS and E-Mail has been sent to Shri Senthil Kumar Sampath, JHARKHAND with Notification to Project Proponent.

Your (**Half Yearly Compliance Report**) has been **Submitted** with following details

Proposal No	IA/JH/IND/132216/2019
Compliance ID	127092303
Compliance Number(For Tracking)	EC/M/COMPLIANCE/127092303/2025
Reporting Year	2024
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	22-05-2025
RO/SRO Name	Shri Senthil Kumar Sampath
RO/SRO Email	agmu156@ifs.nic.in
State	JHARKHAND
RO/SRO Office Address	Integrated Regional Offices, Ranchi

Note:- SMS and E-Mail has been sent to Shri Senthil Kumar Sampath, JHARKHAND with Notification to Project Proponent.

जमशेदपुर, रविवार
1 जुलाई, 2012

07

पहुंचे यूएसए प्रतिनिधि हुए अमेरिकी



मेधि व अन्य.

फोटो : प्रभात खबर

प्रभावित हुए.

सदस्यों के साथ बैठक की

कुल्यानंद यूनेस्को क्लब के सदस्यों के साथ अमेरिकी प्रतिनिधियों ने होटल एल्कोल में बैठक की. जिसमें ग्रामीण क्षेत्र के भ्रमण पर विस्तृत चर्चा की गयी. बैठक में प्रतिनिधियों ने कहा कि

याद किये गये सिद्धो-कान्हू

में हूल दिवस कान्हू याद किये द्वारा आयोजित ई सोरेन उपस्थित सच्चे नायक थे.

रामदास हेंब्रम, मोरूडीह चौक सरा के नेतृत्व में संताली ऑर्केस्ट्रा ए. जिन्हें सफल आदि की अहम



भूमिका रही. करनडीह आदिवासी भवन में केंद्रीय प्रधान महासचिव दिल बहादुर ने कहा कि भ्रष्टाचार खत्म करने के लिए आजसू व जेपीपी 15 नवंबर से आंदोलन शुरू करेंगी. इसमें कृतिवास मंडल, सुनील, राजेश, राजेश घोपाल आदि उपस्थित थे. झामिमो द्वारा परसुडीह मंडल अध्यक्ष रूद्र मुंडा के नेतृत्व में मोटरसाइकिल रैली निकाली गयी.

धरोहर को भी देखा



अमेरिकी प्रतिनिधियों की ग्रामीणों द्वारा धान से बनाये गये मुकूट को देखकर आंखें खुली रह गयी. इस दौरान प्रतिनिधियों ने संतालियों के जाहेरथान (पूजा स्थल) समेत अन्य सांस्कृतिक धरोहरों को भी देखा.

अमेरिकी सरकार द्वारा जो-जो सुविधा प्राप्त हो सकती है, उसे अतिशीघ्र पूरा करने का प्रयास किया जायेगा.

छोटा कादल वाटरशेड समिति गठित

गमहरिया ■ सामाजिक संस्था केजीवीके व आइडब्ल्यूएमपी गोविंदपुर प्रोजेक्ट द्वारा छोटा कादल व रूतडीह में वाटरशेड समिति गठित की गयी. इसमें गोवर्धन मंडल अध्यक्ष, लक्ष्मी धर महतो सचिव व लखन टुडू कोषाध्यक्ष मनोनीत किया गया. वहीं रूतडीह गांव में माझीराम सरदार अध्यक्ष, जगबंधु महतो सचिव व कालीचरण कोषाध्यक्ष बनाया गया. समिति चयन में आरके त्रिपाठी, राजीव कुमार, गेंदा टुडू, रतन कुमार, मोनिका व विजय पाल आदि उपस्थित थे.



डॉक्टर्स डे चिकित्सक सम्मानित होंगे आज

आदित्यपुर ■ डॉक्टर्स डे पर रविवार को आइएमए जमशेदपुर की ओर से एमजीएम अस्पताल में रक्तदान शिविर लगाया जायेगा. शाम में डॉ फतेह बहादुर सिंह, डॉ केके अय्यर, डॉ उमेश लुकतुके को सम्मानित किया जायेगा. इस अवसर पर कोल्हान आयुक्त अविनाश कुमार होंगे. इसकी जानकारी सचिव डॉ मृत्युंजय सिंह ने दी.

उषा मार्टिन लिमिटेड

(उषा एलॉयज एंव स्टील्स डिवीजन)

पॉंचवा चरण, आदित्यपुर औद्योगिक क्षेत्र,
गमहरिया, जिला: सरायकेला-खरसावाँ

आम सूचना

सर्वसाधारण को सूचित किया जाता है कि मेसर्स उषा मार्टिन लिमिटेड (उषा एलॉयज एवं स्टील्स डिवीजन) आदित्यपुर औद्योगिक क्षेत्र, पॉंचवा चरण, गांव तथा तहसील गमहरिया, जिला: सरायकेला खरसावाँ के लौह एवं स्टील इकाई के विस्तार एवं कोक ओवेन प्लांट (0.5 MTPA), आयसन ओर वाशिंग प्लांट (2.7 MTPA) एवं पेलेटाइजेशन प्लांट (1.2 MTPA) को स्थापित करने हेतु, पर्यावरण एवं वन मंत्रालय, भारत सरकार, नई दिल्ली के पत्रांक संख्या-F.No.J-11011/611/2010-IA II(I), दिनांक 25.10.2011 द्वारा पर्यावरणीय स्वीकृति निर्गत किया गया है. जिन्हें भी पर्यावरणीय स्वीकृति संबंधित जानकारी प्राप्त करनी हो इसकी प्रतिलिपि झारखण्ड राज्य प्रदूषण नियंत्रण पथर्ष के क्षेत्रीय कार्यालय एवं पर्यावरण एवं वन मंत्रालय, भारत सरकार के वेबसाईट <http://envfor.nic.in> पर उपलब्ध है।

डॉ० विजय शर्मा
(संयुक्त कार्यकारी निदेशक)

एफ इण्डिया लिमिटेड

01 झारखण्ड, इण्डिया

526 दिनांक 30/06/2012

नेविदाई आमंत्रित करता है.

कार्य का नाम

ऑफ मक/डेबरी/स्लैग/स्कल

लॉम एसएमएस - 2

ऑफ मक/डेबरी/स्लैग/स्कल/स्टील



युनाइटेड बैंक ऑफ इंडिया

11, हेमंता बसु सारणी, कोलकाता-700 001, टेलीफोन 233 1396 (सी), 233 1321 (ओ)
फैक्स 0651 233 1396, झारखंड क्षेत्र, सलूजा बिल्डिंग, पीपी कपाउंड, रांची-834001

विक्री सूचना

जबकि युनाइटेड बैंक ऑफ इंडिया के प्राधिकृत अधिकारी ने सिक्योरिटी इंटेरेस्ट (इंफोर्समेंट) नियम 2002 के साथ पठित सिक्योरिटी इंजेक्शन एंड रिकसट्रक्शन ऑफ फायनांशियल असेट्स एंड इंफोर्समेंट ऑफ सिक्योरिटी इंटेरेस्ट अधिनियम, 2002 के अंतर्गत शक्तियों का प्रयोग करते हुए तथा नीचे उल्लेखित ऋणकर्ताओं / जमानतदारों के सुरक्षित आस्तियों के कब्जे के अनुसार अधोस्ताधारी के द्वारा युनाइटेड बैंक ऑफ इंडिया के सुरक्षित ऋण की वसूली के लिए, नीचे दिये गये विवरण के अनुसार संपत्तियों की खरीद के लिए प्रस्ताव आमंत्रित किये जाते हैं:-

संपत्तियों का विवरण

क्रम	खाता का नाम / ऋणकर्ता	संपत्तियों का विवरण	सुरक्षित राशि (रु)	पेशगी राशि (रु)	नोटिफिकेशन
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JHARKHAND STATE POLLUTION CONTROL BOARD
T.A. DIVISION BUILDING (GROUND FLOOR), H.E.C., DHURWA, RANCHI -834004
Phone.:2400852, 2400851, Fax:0651- 2400850 www.jspcb.org

FORM 2
[See rule 6(2)]

**FORM FOR GRANT OR RENEWAL OF AUTHORIZATION BY STATE POLLUTION
CONTROL BOARD TO THE OCCUPIERS, RECYCLERS, REPROCESSORS, REUSERS, USER
AND OPERATORS OF DISPOSAL FACILITIES**

1. No. of authorization and date of issue: JSPCB/HO/RNC/HWM-18227614/2025/36 10/05/2025
2. Reference of application(No. and date): 18227614 07/01/2024
3. Tata Steel Limited, Gamharia, Main Plant-1 of T V Narendran is hereby granted an authorisation based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilisation, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated at Main Plant-1, Adityapur Industrial area (Phase-5), Gamharia, Dist - Saraikela-Kharsawan, Jharkhand

Details of Authorisation

Sl.No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorised mode of disposal or recycling or utilisation or co-processing, etc.	Quantity(ton/annum)
1	Schedule I (Wastes or residues containing oil(Cat 5.2))	Recovery and Reuse Authorized recyclers	35 KL/Annum
2	Schedule I (Discarded asbestos (Cat 15.2))	Recovery and Reuse Authorized recyclers	5 MT/Annum
3	Schedule I (Process wastes, residues and sludges (Discarded Paint) (Cat 21.1))	Recovery and Reuse Authorized recyclers	10 KI/annum
4	Schedule I (Spent solvents (Cat 21.2))	Recovery and Reuse Authorized recyclers	10 KI/annum
5	Schedule I ("Empty barrels/containers/liners contaminated with hazardous chemicals /wastes" (33.1))	Recovery and Reuse Authorized recyclers	25 MT/annum
6	Schedule I (Contaminated cotton rags or other cleaning materials(Cat 33.2))	Incineration-Captive	45 MT/Annum
7	Schedule I (Exhaust Air or Gas cleaning residue (Cat 35.1))	Recovery and Reuse Authorized recyclers	25000 MT/Annum
8	Schedule I (Chromium sludge from cooling water (Cat 35.5)	Common Landfill-TSDF	20 MT/ Annum
9	Schedule I (Spent ion exchange resin containing toxic metals (35.2))	Common Landfill-TSDF	2 MT/Annum
10	Schedule II (Used Glass Wool or insulation Material (Class C))	Common Landfill-TSDF	10 T/annum
11	Schedule II (Waste Chemicals(Class C)	Incineraton By authorized Agency	01 MT/annum
12	Schedule II (Insulated copper wire scrap or copper with pvc sheathing(S.NO. 7)	Incineraton By authorized Agency	10 MT/ Month
13	Schedule I (Used Spent oil (Cat 5.1))	Recovery and Reuse Authorized recyclers	70 KI /Annum

(1) The authorisation shall be valid for a period of Valid till 30.03.2025 years

(2) The authorisation is subject to the following general and specific conditions (Please specify any conditions that need to be imposed over and above general conditions, if any):

A General conditions of authorisation:

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.
4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.
5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.
6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on “Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty”
7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.
8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorisation.
11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
12. An application for the renewal of an authorisation shall be made as laid down under these Rules.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
14. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

B Specific conditions:

- (1) That, the renewal of authorization shall be made as laid down in the rules.
- (2) That, the occupier shall submit annual return in form IV as per the time line mention in the HoWM Rules, 2016 with details of manifest.
- (3) That, the occupier shall ensure the disposal of Hazardous Waste within time line through authorized recycler/ actual users and shall ensure that the Hazardous Waste should be entered in the passbook of recycler/ actual users.
- (4) That, the occupier shall maintain record of Hazardous Waste generated, utilized and disposed as per form - 3 of the Hazardous and other waste (Management & Handling) Rules, 2016 and shall produce to concerned SPCB officers at the time of inspection.
- (5) That, the occupier shall complied all directions given by standard operating procedure.
- (6) That, the occupier shall install and maintain the display board as per the provisions of HoWM Rules, 2016 and shall submit the photographs to ensure the compliance of the order of Hon'ble Supreme Court passed in 2003.

Memo No:JSPCB/HO/RNC/HWM-
18227614/2025/36
Date: 10/05/2025

(Rajeev Lochan Bakshi)
Member Secretary

Copy To:

Chief Inspector of Factory, Ranchi / Director of Mines, Government of Jharkhand, Ranchi/ Director of Industry, Government of Jharkhand, Ranchi/ Secretary, Jharkhand State Electricity Board, Plant Plaza Road, P.O. Dhurwa, Dist- Ranchi /Dy Commissioner, SERAIKELA KHARSAWAN/ D.F.O., SERAIKELA KHARSAWAN/ District Mining Officer, SERAIKELA KHARSAWAN / The Regional Officer, Regional Office-Cum-Laboratory, JSPCB, Jamshedpur for information and necessary action. He is directed to submit the compliance status report of the same.

(Rajeev Lochan Bakshi)
Member Secretary



JHARKHAND STATE POLLUTION CONTROL BOARD
T.A. DIVISION BUILDING (GROUND FLOOR), H.E.C., DHURWA, RANCHI -834004
Phone.:2400852, 2400851, Fax:0651- 2400850 www.jspcb.org

FORM 2
[See rule 6(2)]

**FORM FOR GRANT OR RENEWAL OF AUTHORIZATION BY STATE POLLUTION
CONTROL BOARD TO THE OCCUPIERS, RECYCLERS, REPROCESSORS, REUSERS, USER
AND OPERATORS OF DISPOSAL FACILITIES**

1. No. of authorization and date of issue: JSPCB/HO/RNC/HWM-18229301/2025/35 10/05/2025
2. Reference of application(No. and date): 18229301 07/01/2024
3. Tata Steel Limited, Gamharia of T V Narendran is hereby granted an authorisation based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilisation, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated at Main Plant-2, Adityapur Industrial Area (Phase - 5), Gamharia, District: Seraikela- kharsawan, Jharkhand

Details of Authorisation

Sl.No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorised mode of disposal or recycling or utilisation or co-processing, etc.	Quantity(ton/annum)
1	Schedule I (Organic residues (Cat 1.4))	Recovery and Reuse Authorized recyclers	1000 KL/Annum
2	Schedule I (Used Spent oil (5.1))	Recovery and Reuse Authorized recyclers	50 KI/annum
3	Schedule I (Wastes or residues containing oil(Cat 5.2))	Recovery and Reuse Authorized recyclers	30 KI/annum
4	Schedule I (Tar storage tank residue (Cat 13.5))	Recovery and Reuse Authorized recyclers	50 KI/annum
5	Schedule I (Discarded asbestos (15.2))	Recovery and Reuse Authorized recyclers	10 MT/ Annum
6	Schedule I (Process wastes, residues and sludges (Discarded Paint) (Cat 21.1))	Recovery and Reuse Authorized recyclers	5 MT/Annum
7	Schedule I (Spent solvents (21.2))	Recovery and Reuse Authorized recyclers	05 T/annum
8	Schedule I ("Empty barrels/containers/liners contaminated with hazardous chemicals /wastes" (Cat 33.1))	Recovery and Reuse Authorized recyclers	20 MT/ Annum
9	Schedule I (Contaminated cotton rags or other cleaning materials (Cat 33.2))	Incineration-Captive	15 MT/Annum
10	Schedule I (Spent ion exchange resin containing toxic metals (Cat 35.2))	Common Landfill-TSDF	10 MT/ Annum
11	Schedule I (Chemical sludge from waste water treatment (Cat 35.3))	Recovery and Reuse Authorized recyclers	300 MT/Annum
12	Schedule I (Chromium sludge from cooling water(35.5))	Common Landfill-TSDF	20 MT/ Annum
13	Schedule II (Used Glass Wool or insulation Material (Class C))	Common Landfill-TSDF	50 MT/Annum
14	Schedule II (Waste Chemicals (Class C))	Incineraton By authorized Agency	50 MT/Annum
15	Schedule IV (Insulated copper wire scrap or copper with pvc sheathing(S No. 7))	Incineraton By authorized Agency	10 MT/Annum

(1) The authorisation shall be valid for a period of 5 years (till 31.07.2025) years

(2) The authorisation is subject to the following general and specific conditions (Please specify any conditions that need to be imposed over and above general conditions, if any):

A General conditions of authorisation:

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.
4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.
5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.
6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on “Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty”
7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.
8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorisation.
11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
12. An application for the renewal of an authorisation shall be made as laid down under these Rules.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
14. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

B Specific conditions:

- (1) That, the occupier shall comply the provisions of the Environment Protection Act and Rules.
- (2) That, the authorization shall be produced at the time of inspection.
- (3) That, the occupier authorized shall not rent/sell or otherwise transport the H/W without obtaining prior permission of the Board.
- (4) That, any un-authorization change shall constitute a breach the authorization.
- (5) That, it is the duty of authorized person to take prior permission of the Board to close down the facility.
- (6) That, the renewal of authorization shall be made as laid down in the rules.
- (7) That, any other condition for compliance as per the guidelines issued by the MoEF for CPCB.
- (8) That, the occupier shall submit annual return for the financial year before 30th June, every year.
- (9) That, the occupier shall comply all the conditions.
- (10) That, the occupier shall submit quarterly and annual information on hazardous wastes consumed its source, products generated or resources conserved (specifying the details like type and quantity of resources conserved) to the concerned SPCB.
- (11) That, the occupier shall comply all directions given in standard operating procedure.
- (12) The previous auth. issued vide dated 30.3.2019 is revised up to this extent.

Memo No:JSPCB/HO/RNC/HWM-
18229301/2025/35
Date: 10/05/2025

(Rajeev Lochan Bakshi)
Member Secretary

Copy To:

Dy Commissioner, Jamshedpur / The Regional Officer, Regional Office-Cum-Laboratory, JSPCB, Jamshedpur for information and necessary action. He is directed to submit the compliance status report of the same.

(Rajeev Lochan Bakshi)
Member Secretary