

#### Ref. No. - TSG/EC/SBWM-1/2023-24/May-24/02

21/05/2024

#### 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, Ranchi

**Subject:** Half yearly environmental clearance compliance report of Straight Bar & Wire Mill Division-1 for the period from October 2023 to March 2024

#### **Reference:**

Environment clearance vide letter no. EC/SEIAA/2015-16/872/2015/262 dt. 05.11.2018

Sir,

We are herewith submitting half yearly compliance report of Straight Bar & Wire Mill Division-1 at Adityapur Industrial Area, Village: Bara Gamharia, Tehsil: Gamharia, District: Saraikela-Kharsawan. The compliance report is for the period from October 2023 to March 2024.

This is for your kind information and necessary records please.

Thanking you,

Yours sincerely For Tata Steel Limited, Gamharia Straight Bar & Wire Mill Division-1

mm a (V Karthikeyan) Head -Environment & Sustainability

Cc:

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

#### TATA STEEL LIMITED

Tata Steel Gamharia Seraikela Kharsawan Jamshedpur 832 108 India Tel 065771 02349 Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India Tel 91 22 6665 8282 Website www.tatasteel.com Corporate Identity Number L27100MH1907PLC000260

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### COMPLIANCE OF STIPULATED CONDITIONS OF ENVIRONMENTAL CLEARANCE

S1 No	Conditions	Compliance status
A. Spe	cific conditions	
01	<ul> <li>I. This Environmental Clearance is valid subject to the following condition below-That this project has-A. Obtained all legal rights to operate at concerned place.</li> <li>B. Complied with all existing concerned laws of the land.</li> <li>C. Complied with the decisions of SEIAA on the issue of environmental clearance till date.</li> </ul>	Noted and being followed.
II. Stat	tutory compliance	
02	I. The project proponent shall obtain forest clearance under the provisions of Forest (conservation) Act. 1986, In case of the diversion of forest land for non- forest purpose involved in the project.	Not applicable since it falls under approved industrial area.
03	II. The project proponent shall obtain clearance from the national board for wildlife, if applicable.	Not applicable since it falls under approved industrial area.
04	III. The project proponent shall prepare a site- specific conservation plan & wildlife Management plan and approved by the chief wildlife warden. The recommendations of the approved site-specific conservation plan/ wildlife management plan shall be implemented in consultation with the state forest department. The implementation report shall be furnished along with the six- monthly compliance report. (in case of the presence of schedule-I species in the study area)	Not applicable since it falls under approved industrial area.
05	IV. The project proponent shall obtain Consent to Establish / Operate under the provision of air (prevention & control of pollution) Act. 1981 and the water (prevention & control of pollution) Act. 1974 from the concerned state pollution control Board/committee.	The Consent to Establish and Consent to Operate were obtained from Jharkhand State Pollution Control Board vide letter No. JSPCB/HO/RNC/CTE- 13774242/2022/465 dt. 24/10/2022 and JSPCB/HO/RNC/CTO- 17527598/2024/624 dt. 05/04/2024

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06	V. The project proponent shall obtain the necessary permission from the Central Ground water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.	Not applicable as because no ground water is drawn.
07	VI. The project proponent shall obtain authorization under the Hazardous and other waste management rules, 2016 as amended from time to time.	Hazardous waste authorization for the existing facility was obtained vide reference no. JSPCB/HO/RNC/HWM- 9206683/2021/10 Dt. 01/03/2021
III. Air	quality monitoring and preservation	
08	I. The project proponent shall install 24x7 continuous emission monitoring system at process stack to monitor stack emission with respect to standards prescribed in environment (Protection) Rules 1986 vide G.S.R 277(E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time; S.O. 3305 (E) dated 7th December 2015(Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	The unit doesn't have an induction furnace of Electric Arc Furnace and is only a stand- alone mill and doesn't come under the purview of notification G.S.R 277 (E) dt.31.03.2012 (Integrated Iron and Steel Plant Standards) and S.O.3305 (E) dt.07.12.2015 (Thermal Power Plant standards) mentioned in the condition.
09	II. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Fugitive emission is monitored on monthly basis through NABL / JSPCB accredited laboratory.
10	III. The project proponent shall install system carryout continuous ambient Air Quality monitoring for common criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOX in reference to SO2 and NOX emission) within and outside the plant area (at last at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions. (case to case basis small plants: Manual; Large plants: Continuous)	Manual ambient air monitoring is undertaken by NABL / JSPCB accredited laboratory. Ambient Air Quality Monitoring Report attached as Annexure - 1

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11	IV. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive	Monthly monitoring is done regularly through NABL accredited laboratory. Stack Emission Monitoring Report
	emission to Regional Office of MoEFCC, Zonal office of CPCB and regional office of SPCB along with six monthly monitoring report	attached as Annexure - 2
12	V. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources.	It is a small Reheating Furnace, there is not require any Air Pollution Control Device, however water sprinklers have been installed to control the fugitive emission during vehicle movement
13	VI. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Not applicable as it is a finishing mill with no significant pollution potential.
14	VII. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	Noted and steps will be taken to maintain the area clean and tidy.
15	VIII. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting agglomeration.	Not applicable since it is only a small finishing mill.
16	IX. The project proponent shall use leak proof trucks/ dumpers carrying coal and other raw materials and cover them with tarpaulin.	Not applicable since it is only a small finishing mill. Raw materials such as coal will not be used.
17	X. The project proponent shall provide covered sheds for raw materials like scrap and sponge iron, lump ore, coke, coal, etc.	Not applicable since it is only a small finishing mill.
18	XI. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.	Not applicable since it is only a small finishing mill.
19	XII. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels houses, Oil Cellars.	Noted and all required safeguard will be incorporated in new construction.
IV. Wa	ter quality monitoring and preservation	

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20	I. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (protection) Rules 1986 vide G.S.R 277(E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants ) as amended from time to time ) and connected to SPCB and CPCB online service and calibrate these system from time to time according to equipment supplier specification through labs recognized under environment (Protection) Act.1986 or NABL accredited laboratories. (case to case basis Small plants: Manual Large Plants: Continuous)	The wastewater generated will be under close loop water circuit and no effluent will be discharged.
21	II. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act. 1986 and NABL Accredited laboratories.	Ground Water Quality Monitoring is carried out through NABL / JSPCB accredited laboratory and report submitted. Ground Water Quality Analysis Report attached as annexure - 3
22	III. The project proponent shall submit monthly summary report of continuous effluent monitoring and result of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF & CC, Zonal office of CPCB and Regional Office along with six- monthly monitoring report.	It is zero effluent discharge plant and all water will be recycled back in process for cooling. Manual monitoring reports of ground water will be submitted at required frequency as specified in environment clearance.
23	IV. Adhere to Zero liquid Discharge.	Noted and complied.
24	V. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	The quantity of sewage generation is too low for establishing STP. Therefore, domestic waste water is treated through septic tank - soak pit arrangement.
25	VI. The project proponent shall provide the ETP the effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31 <sup>st</sup> March 2012 (applicable to IF/EAF) as amended from time to time.	The wastewater generated is under close loop water circuit and no effluent is discharged.
26	VII. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off n the event of heavy rains and to check the water pollution due to surface run off	Not applicable since raw materials will not be used in the process. It is only a small finishing mill.

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27	VIII. The project proponent shall practice rainwater harvesting to maximum possible extent.	Rainwater harvesting structures are created within the premises to harvest rainwater.
28	IX. The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.	Noted and effort shall be made to minimize total water consumption.
V. Nois	se monitoring and prevention	
29	I. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six- monthly compliance report.	Ambient noise level is maintained within the norms specified under the Environment Protection Act, 1986. <b>Ambient Noise monitoring report</b> <b>attached as Annexure - 4</b>
30	II. The ambient noise levels should conform to the standards prescribed under E(P)A Rules 1986 viz. 75 dB (A) during day time and 70 dB(A) during night time.	Ambient noise level is maintained within the norms specified under the Environment Protection Act, 1986.AmbientNoise monitoring report attached as Annexure - 4
VI. En	ergy Conservation Measures	
31	I. The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.	Recuperator is already installed for recovery of heat from waste gases.
32	II. Practice hot charging of slabs and billets/blooms as far as possible.	It is a stand-alone unit with no upstream facility available for hot charging.
33	III. Ensure installation of regenerative type burners on all reheating furnaces	High performance dual fuel burners are installed for ideal fuel efficiency.
34	IV. Provide solar power generation on rooftops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.	Noted and possibility shall be explored.
35	V. Provide the project proponent for led lights in their offices and residential areas.	Noted and shall be explored.
VII. Wa	aste Management	
36	I. Used refractories shall be recycled as far as possible.	Noted and shall be complied.

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37	II. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces	The quantum of metallic waste (mill scale) will be very negligible whereby briquetting will not be feasible. However, the collected mill scale, and other waste will be reused in the process or disposed of through authorized recyclers.
38	III. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry Regional Office.	Not applicable. No fly ash will be generated since it is only a small finishing mill.
39	IV. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & other waste (Management & Transboundary Movement) Rules, 2016.	Hazardous Carbonaceous Wastes viz. Waste oil, used Oil & grease etc. are collected and sold to authorized recyclers approved by the JSPCB as per the Hazardous & other waste (Management & Transboundary Movement) Rules, 2016.
40	V. Kitchen waste shall be composted or converted to biogas for further use.(to be decided on case to case basic depending on type and size of plant).	There is no kitchen facility in the premises.
viii. Gı	een Belt	
41	I. Green belt shall be developed in an area equal to 33% of the pant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter area cover the entire periphery of the plant.	The area is planted with over saplings and all open areas are covered with plantation to achieve 33% area. A captive nursery is developed at Tata Steel Limited, Gamharia (Main Plant-1) to grow saplings of various species including forest species. Species grown include Gulmohar, Karanj, Chakundi, Acacia siamia and Peltoform. Mature saplings are shifted to the various locations for plantation.
42	II. The project proponent shall prepare GHG emissions inventory for the plant and shall submit programme for reduction of the same including carbon sequestration including plantation.	Noted and shall be complied.
IX. Pu	blic hearing and human health issues	
43	I. Emergency Preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Emergency Preparedness plan (ERP) and Hazard identification and Risk Assessment (HIRA) documents are prepared for the unit.

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44	II. The project proponent shall carry out heat stress analysis for the workman who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.	Appropriate PPEs are provided for protection against heat. Heat stress analysis is done as part of Process safety management.
45	III. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such a fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	No construction work is envisaged.
X. Cor	porate Environment Responsibility	
46	I. The project proponent shall comply with the provisions contained in this Ministry's OM vied F.No. 22-65/2017-IA.III dated 1st may 2018, as applicable, regarding Corporate Environment Responsibility.	Noted and shall be complied.
47	II. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy prescribes for standard operating procedures to have proper checks and balances and to bring into focus any infringements/ deviation/ violation of the environmental/forest/ wildlife/ norms/ conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/ forest/ wildlife norms/ condition and/ or shareholders/ stake holder. The copy of the board resolution in this regards shall be submitted to the MoEF & CC as a part of six- monthly report.	Noted and shall be complied.
48	III. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	A centralized Environment Cell, staffed with qualified personnel, is established at Tata Steel Long Products Limited's main plant to ensure legal compliance, and maintain monitoring records of SBWM-I

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49	IV. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/ Regional Office along with the Six Monthly Compliance Report.	
50	V. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	The company shall conduct an annual self- audit of its environmental practices. The self- audit shall cover all relevant areas and activities and shall be carried out by Environment Experts of the company.
51	VI. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the plants shall be implemented.	Recommendations made in Corporate Responsibility for Environment Conservation (CREP) is regularly reviewed and implemented.
52	VII. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Health check-up for workers is done at periodic intervals and records maintained as per the Factories Act.
XI. Mis	scellaneous	
53	I. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Complied.
54	II. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies. Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied.
55	III. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including	Status of compliance of the EC conditions along with monitoring data is being uploaded on the website of the company.

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	results of monitored data on their website	
	and update the same on half-yearly basis.	
56	IV. The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	Noted and being complied.
57	V. The project proponent shall submit six- monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of the Environment, Forest and Climate Change at environment clearance portal.	Noted and being complied.
58	VI. The project proponent shall submit the environment statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Environmental Statement for each financial year is submitted regularly to JSPCB before 30 <sup>th</sup> of September every year.
59	VII. The project proponent shall inform the Regional Office as well as the maturity, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	Noted and shall be complied.
60	VIII. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Noted and shall be complied.
61	IX. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Experts Appraisal Committee.	Noted and shall be complied.
62	X. No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF & CC).	No expansion or modification in the plant shall be carried out without prior approval of MoEFCC.
63	XI. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract	Noted

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	action under the provisions of Environment	
	(Protection) Act, 1986.	
64	XII. The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.	Noted
65	XIII. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted
66	XIV. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	Noted
67	XV. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Courts of Law relating to the subject matter.	Noted
68	XVI. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted
B. Oth	er conditions :	
69	1. The authority reserves the right to add any new condition or modify the above conditions or to revoke the clearance if conditions stipulated above are not implemented to satisfaction of Authority or for that matter for any other administrative reason.	Noted
70	2. In view of MoEF & CC O.M. No. 22- 27/2015-IA-III, dated- 12.04.2016. The Environmental Clearance accorded shall be valid for a period of seven (07) years. The PP shall not increase production rate and make	Noted

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	modifications in process during the validity of Environmental Clearance.	
71	3. In case of any deviation or alteration in the project proposed from those submitted to SEIAA, Jharkhand for clearance, a fresh reference should be made to SEIAA assess the adequacy of the conditions imposed and to incorporate any new conditions if required	Noted

#### Ambient Air Quality Monitoring

		th Report No.	Sampling on	Parameters											
Sampling location	Month			SO2 (ug/m3)	NO2 (ug/m3)	PM10 (ug/m3)	PM2.5 (ug/m3)	CO (ug/m3)	Ozone (ug/m3)	Lead (ug/m3)	Ammonia (ug/m3)	Benzene (ug/m3)	Benzo(a)pyrene (ng/m3)	Arsenic (ng/m3)	Nickel (ng/m3)
	Oct-23	RN-230714001A5	03.10.2023	25.51	54.10	79.40	40.59	BDL(MDL 1.8)	28.93	0.19	40.74	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
SBWM Near QA	Oct-23	RN-230714001A11	10.10.2023	26.53	42.04	97.77	38.63	BDL(MDL 1.8)	30.33	0.15	42.16	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Building.	Oct-23	RN-230714001A17	16.10.2023	19.74	55.09	86.22	43.82	BDL(MDL 1.8)	23.22	0.24	48.40	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Oct-23	RN-230714001A23	25.10.2023	26.74	47.14	99.59	48.35	BDL(MDL 1.8)	26.19	0.36	52.44	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Nov-23	RN-230714001A5	01.11.2023	21.56	23.63	79.88	39.47	BDL(MDL 1.8)	21.47	0.16	39.48	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
SBWM Near QA	Nov-23	RN-230714001A11	07.11.2023	23.41	22.36	85.47	42.75	BDL(MDL 1.8)	23.69	0.18	42.48	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Building.	Nov-23	RN-230714001A17	14.11.2023	18.46	23.58	80.64	40.38	BDL(MDL 1.8)	20.42	0.19	43.97	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Nov-23	RN-230714001A23	22.11.2023	20.44	26.56	91.87	43.61	BDL(MDL 1.8)	24.62	0.30	45.97	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Dec-23	RN-230714001A5	08.12.2023	18.96	20.10	77.28	36.87	BDL(MDL 1.8)	24.92	0.17	36.88	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
SBWM Near QA	Dec-23	RN-230714001A11	15.12.2023	21.85	22.32	82.87	40.15	BDL(MDL 1.8)	21.09	0.19	39.88	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Building.	Dec-23	RN-230714001A17	22.12.2023	16.89	23.31	78.04	37.78	BDL(MDL 1.8)	17.82	0.20	40.58	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Dec-23	RN-230714001A23	28.12.2023	17.84	20.23	89.27	41.01	BDL(MDL 1.8)	22.02	0.32	43.37	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
SBWM Near QA	Jan-24	RN-230714001A5	03.01.2024	16.56	17.70	74.88	34.47	BDL(MDL 1.8)	22.52	0.16	34.48	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Building.	Jan-24	RN-230714001A10	09.01.2024	19.45	19.24	80.47	37.75	BDL(MDL 1.8)	18.69	0.17	37.48	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Feb-24	RN-230714001A5	15.02.2024	19.20	32.40	88.10	39.40	BDL(MDL 1.8)	22.60	0.19	41.50	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
SBWM Near QA Building.	Feb-24	RN-230714001A11	22.02.2024	21.30	42.70	82.50	35.10	BDL(MDL 1.8)	18.20	0.20	36.50	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Dununig.	Feb-24	RN-230714001A17	26.02.2024	18.40	36.70	92.30	42.50	BDL(MDL 1.8)	25.30	0.32	39.20	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Mar-24	RN-230714001A5	06.03.2024	21.30	46.20	82.30	40.50	BDL(MDL 1.8)	26.30	0.17	32.10	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
SBWM Near QA	Mar-24	RN-230714001A11	14.03.2024	23.30	30.50	89.20	42.50	BDL(MDL 1.8)	24.80	0.19	43.20	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Building.	Mar-24	RN-230714001A17	21.03.2024	24.50	38.10	88.40	38.10	BDL(MDL 1.8)	20.50	0.20	38.90	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Mar-24	RN-230714001A23	29.03.2024	20.40	32.70	94.20	45.30	BDL(MDL 1.8)	24.30	0.32	40.20	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)



# **Institute for Environmental Management**

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



## **Test Report**

.: Т	C	1	1	5	1	5	2 3	0	0	0	0	0	1	8	4	0
ne: Chemical				Gro	up: Atn	nosph	eric Pol	lutio	n	Sub	o-Gro	up: A	Ambie	ent Air		
Issue Date: 13-1	2-2023	3			-	Tes	t Repo	rt No	.: RN-2	307140	01A	5				
ID: 231211AP1	1005					Sar	nple D	escri	otion: A	mbient	t Air					
No./P.O. No.: 4	511012	2880				Cha	allan N	o./ P.	No. Da	te: 13-0	)7-20	23				
M/s Tata Si (Formerly T Gamaharia	ata St Phase	teel L e-V, A	ong P ditya	pur	ndust	rial A										
Industry: Iron &	Steel					Cus	stomer	Repr	esenta	tive: Sh	weta	Kum	ari			
Drawn by: IEM	Team					Sar	npling	Date	:08-12	-2023 to	09-	12-20	23	<i>.</i>		110
I: CPCB Guidelin	ne(NAA	QMS	/36/20	12-1	3) & IS	Meth	od 518	2 Ser	ies						5- C	
ng Location: SBM	1 NEAR	QA B	UILDIN	IG UI	VIT - 1											
eteorological In	format	tion	A. Te	mp.(	° <b>C):</b> 25	R.H	.(%): 6	5	W.C.:	Cloud	У		W.D.	: NW I	o SE	
<b>Receiving Date:</b>	: 11-12	-2023		Tes	ting St	arted:	11-12-	2023		Testin	g End	ded:	13-12	-2023		
			10		T	est Re	sults									
Parame	ters			Те	st Meth	od			Unit			Resu	lt		Nor	ns**
Particulate Matte	er (PM10	))	IS 518	32 Pa	rt 23:20	06 RA	2017	ł	ug/m <sup>3</sup>		77.28				10	00
Particulate Matte	er (PM <sub>2.1</sub>	5)	IS	518	2 Part 2	4: 2019		ł	ug/m <sup>3</sup>		36.87				6	0
Sulphure Dioxide	e (SO <sub>2</sub> )		IS 518	2 Pa	t 02: 20	01 RA	2017	ł	ug/m <sup>3</sup>		18.96				8	0
Nitrogen Dioxide	(NO <sub>2</sub> )		IS 518	2 Pa	t 06: 20	06 RA	2017	ł	ug/m <sup>3</sup>		20.1				8	0
Ammonia (NH <sub>3</sub> )			IS	518	2 Part 2	5: 2018		٢	ug/m <sup>3</sup>		36.88				40	00
Ozone (O <sub>3</sub> )			IS	518	2 Part 0	9: 1974					24.92				18	30
Arsenic (As)			L	JSEP.	A IO 3.2	: 1999		r 💫	ng/m <sup>3</sup>	1.15	BDL (MDL-2)				-	_
Lead (Pb)	-	N. Constant	IS 5182 Part 22:			2: 2004		4	µg/m <sup>3</sup>		0.17				1.	0
Nickel (Ni)	1		IS	518	2 Part 2	6: 2020		r	ng/m <sup>3</sup>		BD	_ (MD	)L-4)		-	-
					Er	nd of R	eport-						8			
Env.Condition of Lab. Laboratory testing area		u ic mo	inta	ining T	emper	ature	$27 \pm 2$	°C and	Relativ	e Hu	midit	v 65	-5 % i	n all		
ndition of Lab.									3			6	,		18	
ndition of Lab. iation	testi	ng ar	ea as p	er IS	196:1	966(C)		-	3	n Limit		<u>, 1</u>	,,			
	ne: Chemical Issue Date: 13-1 ID: 231211AP1 No./P.O. No.: 4 to: M/s Tata St (Formerly T Gamaharia Seraikela-K Industry: Iron & Drawn by: IEM ol: CPCB Guidelir ng Location: SBN eteorological In Receiving Date: Parame Particulate Matte Sulphure Dioxide Nitrogen Dioxide Ammonia (NH <sub>3</sub> ) Ozone (O <sub>3</sub> ) Arsenic (As) Lead (Pb)	ne: Chemical Issue Date: 13-12-2023 ID: 231211AP11005 No./P.O. No.: 451101 to: M/s Tata Steel Li (Formerly Tata St Gamaharia Phase Seraikela-Kharsa Industry: Iron & Steel Drawn by: IEM Team D: CPCB Guideline(NA/ ng Location: SBM NEAF eteorological Informat Receiving Date: 11-12 Parameters Particulate Matter (PM <sub>10</sub> Particulate Matter (PM <sub>2</sub> Sulphure Dioxide (SO <sub>2</sub> ) Nitrogen Dioxide (NO <sub>2</sub> ) Ammonia (NH <sub>3</sub> ) Ozone (O <sub>3</sub> ) Arsenic (As) Lead (Pb) Nickel (Ni)	ne: Chemical Issue Date: 13-12-2023 ID: 231211AP11005 No./P.O. No.: 4511012880 to: M/s Tata Steel Limited (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan, Industry: Iron & Steel Drawn by: IEM Team D: CPCB Guideline(NAAQMS ng Location: SBM NEAR QA B eteorological Information Receiving Date: 11-12-2023 Parameters Particulate Matter (PM <sub>10</sub> ) Particulate Matter (PM <sub>2.5</sub> ) Sulphure Dioxide (SO <sub>2</sub> ) Nitrogen Dioxide (NO <sub>2</sub> ) Armonia (NH <sub>3</sub> ) Ozone (O <sub>3</sub> ) Arsenic (As) Lead (Pb) Nickel (Ni)	ne: Chemical Issue Date: 13-12-2023 ID: 231211AP11005 No./P.O. No.: 4511012880 to: M/s Tata Steel Limited (Formerly Tata Steel Long F Gamaharia Phase-V, Aditya Seraikela-Kharsawan, Jhark Industry: Iron & Steel Drawn by: IEM Team D: CPCB Guideline(NAAQMS/36/20 ng Location: SBM NEAR QA BUILDIN eteorological Information A. Te Receiving Date: 11-12-2023 Particulate Matter (PM <sub>10</sub> ) IS 518 Particulate Matter (PM <sub>2.5</sub> ) IS Sulphure Dioxide (SO <sub>2</sub> ) IS 518 Nitrogen Dioxide (NO <sub>2</sub> ) IS 518 Nitrogen Dioxide (NO <sub>2</sub> ) IS 518 Ammonia (NH <sub>3</sub> ) IS Ozone (O <sub>3</sub> ) IS Arsenic (As) L Lead (Pb) IS	ne: Chemical Gro Issue Date: 13-12-2023 ID: 231211AP11005 No./P.O. No.: 4511012880 to: M/s Tata Steel Limited (Formerly Tata Steel Long Produce Gamaharia Phase-V, Adityapur I Seraikela-Kharsawan, Jharkhan Industry: Iron & Steel Drawn by: IEM Team D: CPCB Guideline(NAAQMS/36/2012-1 ng Location: SBM NEAR QA BUILDING UN eteorological Information A. Temp.( Receiving Date: 11-12-2023 Test Particulate Matter (PM <sub>10</sub> ) IS 5182 Par Particulate Matter (PM <sub>2.5</sub> ) IS 5182 Par Nitrogen Dioxide (SO <sub>2</sub> ) IS 5182 Par Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Par Ammonia (NH <sub>3</sub> ) IS 5182 Arsenic (As) USEP, Lead (Pb) IS 5182 Nickel (Ni) IS 5182	ne: Chemical Group: Atm Issue Date: 13-12-2023 ID: 231211AP11005 No./P.O. No.: 4511012880 to: M/s Tata Steel Limited (Formerly Tata Steel Long Products L Gamaharia Phase-V, Adityapur Indust Seraikela-Kharsawan, Jharkhand-832 Industry: Iron & Steel Drawn by: IEM Team ol: CPCB Guideline(NAAQMS/36/2012-13) & IS ng Location: SBM NEAR QA BUILDING UNIT - 1 eteorological Information A. Temp.(°C): 25 Receiving Date: 11-12-2023 Testing St T Parameters Test Meth Particulate Matter (PM <sub>10</sub> ) IS 5182 Part 23:20 Particulate Matter (PM <sub>10</sub> ) IS 5182 Part 22:20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 20 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 22 Ozone (O <sub>3</sub> ) IS 5182 Part 22 Nickel (Ni) IS 5182 Part 22 Nickel (Ni) IS 5182 Part 24 Er	Ine: Chemical         Group: Atmospheres           Issue Date: 13-12-2023         Test           ID: 231211AP11005         Sar           No./P.O. No.: 4511012880         Chat           to:         M/s Tata Steel Limited         Chat           (Formerly Tata Steel Long Products Limited         Gamaharia Phase-V, Adityapur Industrial A           Seraikela-Kharsawan, Jharkhand-832108         Industry: Iron & Steel         Cus           Drawn by: IEM Team         Sar           bl: CPCB Guideline(NAAQMS/36/2012-13) & IS Methon         Sar           ng Location: SBM NEAR QA BUILDING UNIT - 1         eteorological Information         A. Temp.(°C): 25         R. F.           Receiving Date: 11-12-2023         Testing Started:        Test Re           Particulate Matter (PM10)         IS 5182 Part 23:2006 RA         Particulate Matter (PM2.5)         IS 5182 Part 02: 2001 RA           Nitrogen Dioxide (SO2)         IS 5182 Part 02: 2001 RA         Nitrogen Dioxide (NO2)         IS 5182 Part 02: 2001 RA           Nitrogen Dioxide (NO2)         IS 5182 Part 02: 2001 RA         Ammonia (NH3)         IS 5182 Part 02: 2001 RA           Ozone (O3)         IS 5182 Part 03: 1999         Lead (Pb)         IS 5182 Part 22: 2004           Nickel (Ni)         IS 5182 Part 26: 2020        End of R	ne: Chemical Group: Atmospheric Pol Issue Date: 13-12-2023 Test Repo ID: 231211AP11005 Sample D No./P.O. No.: 4511012880 Challan N to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Industry: Iron & Steel Customer Drawn by: IEM Team Sampling D: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 518 ng Location: SBM NEAR QA BUILDING UNIT - 1 eteorological Information A. Temp.(°C): 25 R.H.(%): 69 Receiving Date: 11-12-2023 Testing Started: 11-12- Test Results Parameters Test Method Particulate Matter (PM <sub>10</sub> ) IS 5182 Part 23:2006 RA 2017 Particulate Matter (PM <sub>2.5</sub> ) IS 5182 Part 22: 2001 RA 2017 Nitrogen Dioxide (SO <sub>2</sub> ) IS 5182 Part 02: 2001 RA 2017 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 2001 RA 2017 Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 2001 RA 2017 Ammonia (NH <sub>3</sub> ) IS 5182 Part 02: 2004 RA 2017 Ammonia (NH <sub>3</sub> ) IS 5182 Part 03: 21999 Lead (Pb) IS 5182 Part 22: 2004 Nickel (Ni) IS 5182 Part 22: 2004 Nickel (Ni) IS 5182 Part 22: 2004	ne: Chemical Group: Atmospheric Pollution Issue Date: 13-12-2023 Test Report No ID: 231211AP11005 Sample Descrip No./P.O. No.: 4511012880 Challan No./ P. to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Industry: Iron & Steel Customer Repr Drawn by: IEM Team Sampling Date bl: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Ser ng Location: SBM NEAR QA BUILDING UNIT - 1 eteorological Information A. Temp.(°C): 25 R.H.(%): 65 Receiving Date: 11-12-2023 Testing Started: 11-12-2023 Test Results Parameters Test Method Particulate Matter (PM <sub>10</sub> ) IS 5182 Part 23:2006 RA 2017 I Particulate Matter (PM <sub>25</sub> ) IS 5182 Part 24: 2019 I Sulphure Dioxide (SO <sub>2</sub> ) IS 5182 Part 25: 2018 A Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 25: 2018 A Mitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 25: 2018 A Ozone (O <sub>3</sub> ) IS 5182 Part 25: 2018 A Ozone (O <sub>3</sub> ) IS 5182 Part 25: 2018 A Mickel (Ni) IS 5182 Part 26: 2020 r End of Report	ne: Chemical Group: Atmospheric Pollution Issue Date: 13-12-2023 Test Report No.: RN-2 ID: 231211AP11005 Sample Description: A No./P.O. No.: 4511012880 Challan No./ P.No. Da to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Industry: Iron & Steel Customer Representa Drawn by: IEM Team Sampling Date: 08-12: DI: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series ng Location: SBM NEAR QA BUILDING UNIT - 1 eteorological Information A. Temp.(°C): 25 R.H.(%): 65 W.C.: Receiving Date: 11-12-2023 Testing Started: 11-12-2023 Particulate Matter (PM <sub>10</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> Sulphure Dioxide (SO <sub>2</sub> ) IS 5182 Part 22: 2001 RA 2017 µg/m <sup>3</sup> Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 2001 RA 2017 µg/m <sup>3</sup> Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 25: 2018 µg/m <sup>3</sup> Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part 25: 2018 µg/m <sup>3</sup> Ammonia (NH <sub>3</sub> ) IS 5182 Part 25: 2018 µg/m <sup>3</sup> Arsenic (As) USEPA IO 3.2: 1999 ng/m <sup>3</sup> Lead (Pb) IS 5182 Part 26: 2020 ng/m <sup>3</sup> Nickel (Ni) IS 5182 Part 26: 2020 ng/m <sup>3</sup>	Ine: Chemical         Group: Atmospheric Pollution         Sub           Issue Date: 13-12-2023         Test Report No.: RN-230714C           ID: 231211AP11005         Sample Description: Ambient           No./P.O. No.: 4511012880         Challan No./ P.No. Date: 13-0           to:         M/s Tata Steel Limited         (Formerly Tata Steel Long Products Limited)           Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108         Seraikela-Kharsawan, Jharkhand-832108           Industry: Iron & Steel         Customer Representative: Sh           Drawn by: IEM Team         Sampling Date: 08-12-2023 to 01: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series           ng Location: SBM NEAR QA BUILDING UNIT - 1         eteorological Information         A. Temp.(°C): 25         R.H.(%): 65         W.C.: Cloud           Receiving Date: 11-12-2023         Testing Started: 11-12-2023         Testing Started: 11-12-2023         Testing           Particulate Matter (PM <sub>10</sub> )         IS 5182 Part 23: 2006 RA 2017         µg/m <sup>3</sup> Imp.           Particulate Matter (PM <sub>25</sub> )         IS 5182 Part 22: 2001 RA 2017         µg/m <sup>3</sup> Imp.           Sulphure Dioxide (SO <sub>2</sub> )         IS 5182 Part 25: 2018         µg/m <sup>3</sup> Imp.           Nitrogen Dioxide (NO <sub>2</sub> )         IS 5182 Part 25: 2018         µg/m <sup>3</sup> Imp.           Ozone (O <sub></sub>	me: Chemical         Group: Atmospheric Pollution         Sub-Gro           Issue Date: 13-12-2023         Test Report No.: RN-230714001A3           ID: 231211AP11005         Sample Description: Ambient Air           No./P.O. No.: 4511012880         Challan No./ P.No. Date: 13-07-20           to:         M/s Tata Steel Limited           (Formerly Tata Steel Long Products Limited)         Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108           Industry: Iron & Steel         Customer Representative: Shweta           Drawn by: IEM Team         Sampling Date: 08-12-2023 to 09-           N: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series         Industry: Iron & Steel           Drawn by: IEM Team         Sampling Date: 08-12-2023         Testing Earted: 11-12-2023           Ig Location: SBM NEAR QA BUILDING UNIT - 1         Eteorological Information         A. Temp.(*C): 25         R.H.(%): 65         W.C.:         Cloudy           Receiving Date: 11-12-2023         Testing Started: 11-12-2023         Testing End           Parameters         Test Method         Unit         Image: Part 23:2006         Particulate Matter (PM <sub>2.6</sub> )         IS 5182 Part 22: 2001         RA 2017         µg/m <sup>3</sup> Sulphure Dioxide (NO <sub>2</sub> )         IS 5182 Part 02: 2001         RA 2017         µg/m <sup>3</sup> Image: Part 22: 2004         µg/m <sup>3</sup>	ne: Chemical Group: Atmospheric Pollution Sub-Group: A Issue Date: 13-12-2023 Test Report No.: RN-230714001A5 ID: 231211AP11005 Sample Description: Ambient Air No./P.O. No.: 4511012880 Challan No./ P.No. Date: 13-07-2023 to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Industry: Iron & Steel Customer Representative: Shweta Kum Drawn by: IEM Team Sampling Date: 08-12-2023 to 09-12-20 N: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series Ing Location: SBM NEAR QA BUILDING UNIT - 1 eteorological Information A. Temp.(°C): 25 R.H.(%): 65 W.C.: Cloudy Receiving Date: 11-12-2023 Testing Started: 11-12-2023 Testing Ended: : Test Results Parameters Test Method Unit Resu Particulate Matter (PM <sub>2.5</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (SO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (SO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2007 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2008 RA 2017 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 23:2004 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NH <sub>3</sub> ) IS 5182 Part 23:2004 µg/m <sup>3</sup> 366.8 Sulphure Dioxide (NH <sub>3</sub> ) IS 5182 Part 23:20	ne: Chemical Group: Atmospheric Pollution Sub-Group: Ambie Issue Date: 13-12-2023 Test Report No.: RN-230714001A5 ID: 231211AP11005 Sample Description: Ambient Air No./P.O. No.: 4511012880 Challan No./ P.No. Date: 13-07-2023 to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Industry: Iron & Steel Customer Representative: Shweta Kumari Drawn by: IEM Team Sampling Date: 08-12-2023 to 09-12-2023 h: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series rg Location: SBM NEAR QA BUILDING UNIT - 1 eteorological Information A. Temp.(°C): 25 R.H.(%): 65 W.C.: Cloudy W.D. Receiving Date: 11-12-2023 Testing Started: 11-12-2023 Testing Ended: 13-12 Test Results Parameters Test Method Unit Result Particulate Matter (PM <sub>10</sub> ) IS 5182 Part 23:2006 RA 2017 µg/m <sup>3</sup> 36.87 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 22: 201 RA 2017 µg/m <sup>3</sup> 36.87 Sulphure Dioxide (NO <sub>2</sub> ) IS 5182 Part 02: 2001 RA 2017 µg/m <sup>3</sup> 36.88 Ozone (O <sub>3</sub> ) IS 5182 Part 09: 201 RA 2017 µg/m <sup>3</sup> 36.88 Ozone (O <sub>3</sub> ) IS 5182 Part 09: 9174 µg/m <sup>3</sup> 36.88 Ozone (O <sub>3</sub> ) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 36.88 Ozone (O <sub>3</sub> ) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Ni) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Ni) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Ni) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Ni) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Ni) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Ni) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Nii) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Nii) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Nii) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Nii) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Nii) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Nii) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Nii) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Nii) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Nii) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel (Nii) IS 5182 Part 22: 2004 µg/m <sup>3</sup> 30.17 Nickel	Ine: Chemical         Group: Atmospheric Pollution         Sub-Group: Ambient Air           Issue Date: 13-12-2023         Test Report No.: RN-230714001A5           ID: 231211AP11005         Sample Description: Ambient Air           No./P.O. No.: 4511012880         Challan No./ P.No. Date: 13-07-2023           to:         M/s Tata Steel Limited           (Formerly Tata Steel Long Products Limited)         Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108           Industry: Iron & Steel         Customer Representative: Shweta Kumari           Drawn by: IEM Team         Sampling Date: 08-12-2023 to 09-12-2023           I: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series         Ing Location: SBM NEAR QA BUILDING UNIT - 1           eteorological Information         A. Temp.(*C): 25         R.H.(%): 65         W.C.:         Cloudy         W.D.: NWt           Receiving Date: 11-12-2023         Testing Ended: 13-12-2023         Testing Ended: 13-12-2023          Test Results        Test Results        Test Results           Parameters         Test Method         Unit         Result           Particulate Matter (PM <sub>10</sub> )         IS 5182 Part 22: 2001 RA 2017         µg/m³         36.87           Sulphure Dioxide (NO <sub>2</sub> )         IS 5182 Part 25: 2018         µg/m³         36.88           Ozone (O <sub></sub>	Ine: Chemical         Group: Atmospheric Pollution         Sub-Group: Ambient Air           Issue Date: 13-12-2023         Test Report No.: RN-230714001A5         Ine: 231211AP11005         Sample Description: Ambient Air           No./P.O. No.: 4511012880         Challan No./ P.No. Date: 13-07-2023         Ine: 13-07-2023         Ine: 13-07-2023           to:         M/s Tata Steel Limited         Challan No./ P.No. Date: 13-07-2023         Ine: 13-07-2023           to:         M/s Tata Steel Long Products Limited)         Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108         Industry: Iron & Steel         Customer Representative: Shweta Kumari           Drawn by: IEM Team         Sampling Date: 08-12-2023 to 09-12-2023         I: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series         Ing Location: SBM NEAR QA BUILDING UNIT - 1           eteorological Information         A. Temp.(°C): 25         R.H.(%): 65         W.C.:         Cloudy         W.D.: NW to SE           Receiving Date: 11-12-2023         Testing Started: 11-12-2023         Testing Ended: 13-12-2023         Ine:

Remark Sample Comply with prescribed specification

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

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<ol> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal) (Pr. S. C. Jain)
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Dy. Quality Manager

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



Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System) ISO 45001:2018 (Occupational Health & Safety Management System )

## **Test Report**

Discipl	ine: Chemical		Group: Atm	ospheric Pollutic	on	Sub-Grou	p: Ambient A	Air			
Report	Issue Date: 13-1	.2-2023		Test Report No.: RN-230714001A5							
Sample	D: 231211AP1	1005		Sample Descri	iption: A	Ambient Air					
Challar	n No./P.O. No.: 4	511012880		Challan No./ F	.No. Da	te: 13-07-202	3				
Issued	M/s Tata St (Formerly T	ata Steel L	ong Products Li			1					
	Seraikela-K	harsawan,	dityapur Industr Jharkhand-8321	08							
	f Industry: Iron &			Customer Rep			water the second s				
	Drawn by: IEM	and the second se		Sampling Date: 08-12-2023 to 09-12-2023							
			/36/2012-13) & IS I	Method 5182 Se	ries	and service an over the black of the barrander					
			UILDING UNIT - 1	_	<u></u>			<u>.</u>			
Field N	leteorological Int	formation	A. Temp.(°C): 25	<b>R.H.</b> (%): 65	W.C.:	Cloudy	Cloudy W.D.: NW to SE				
Sample	e Receiving Date:	11-12-2023	Testing Sta	Testing Started: 11-12-2023 Testing End				ed: 13-12-2023			
			Те	st Results		Mar State					
SI. No.	Parame	ters	Test Metho	d	Unit	R	esult	Limits			
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )		IS 5182 Part 11	2006	µg/m <sup>3</sup>	BDL (N	BDL (MDL- 0.06)				
2.	Benzo (a) Pyren Particulate Phas		IS 5182 Part 12		ng/m <sup>3</sup>	BDL (N	MDL0.18)				
3.	Carbon Monoxid	e	IEM/SOP/Air-01	:2022	mg/m <sup>3</sup>	BDL(N	MDL 1.8)				
			Enc	d of Report		All and					
Env.Co	ondition of Lab.	Laborator testing are	y is maintaining Te ea as per IS 196:19	mperature 27± 1 66(C).	2°C and	Relative Hum	idity 65±5 %	b in all			
Abbrev	viation		mum Detection Lin		etection	n Limit		. La .			
Norms	** is Specified	National Am	bient Air Quality Stand	dards (NAAQS), 200	09.	1.5					
_											

Remark Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

N/A

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<ol> <li>For a nability of institute for Environmental Management will be initiated to involved amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal)
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Dy. Quality Manager
	Ranch



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#### Stack Emission Monitoring

SN	Unit	Stack Attached to	Month	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)	CO (mg/Nm3)	CO2 (%)	O2(%)
1	SBWM	Reheating Furnace	Oct-23	RN-230714001S17	27.10.2023	323	11.8	36429.2	28.9	61.7	82.6	324	16.4	9.3
2	SBWM	Reheating Furnace	Nov-23	RN-230714001S19	24.11.2023	332	12.9	39111.8	21.2	65.7	84.5	315	13.7	9.5
3	SBWM	Reheating Furnace	Dec-23	RN-230714001S16	29.12.2023	323	11.8	36426	23.1	64.2	80.4	310	13.2	10.7
4	SBWM	Reheating Furnace	Mar-24	RN-230714001S8	14.03.2024	330	11.2	34174.8	20.4	66.7	85.2	313	15.7	12.4



ULR No.:

С

Т

# **Institute for Environmental Management**

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## **Test Report**

ULK NO.			5 1 5	2	5 0	0			0 0 5
Disciplin	e: Chemical		Group: Atm	nosph	eric Pollut	ion	Sub-Group	: Stack	Emission
Report I	ssue Date: 02-0	1-2024			Test Report No.: RN-230714001S16				
Sample	D: 231230AP13	001			Sample Description: Stack Emission				
	No./P.O. No.: 45	And the property of the second s					No. Date: 13-0		
Issued t	and shared in the same state of the same state o								
	M/s Tata St	eel Limited							
			g Products Limi	ited)					
			yapur Industria		a.				
			arkhand-832108		,				
Type of	Industry: Iron &				Custom	er Rep	resentative: Sh	weta k	lumari
	Drawn by: IEM		10.2.2				and the second		m to 01:15 pm)
			3-14) & IS Method	1125		0		<u></u>	
	eteorological Inf	and the second	A. Temp.(°C): 26		(%): 82	WC	: Clear	WD	.: North to South
						vv.c.			and the system of the second state of the seco
Sample	Receiving Date:	30-12-2023	Testing Starte General Phy		the second s		Testing End	eu: 02-	01-2024
Stool: Id	entification	Single	General Phy			from G	iround Level (m	.)	34
						the second second second second			and the second
and the second second second	n Due to	Reheating F	urnace				m Ground Leve	el (m)	8.9
Plat For	m	Available		Inne	er Dimens	ion of	Stack (m)		1.5
Stack De	escription	SBWM ( Unit-	1)	Тур	e of Fuel l	Jsed			LDO
Shape o	f Stack	Circular		Qua	antity of F	uel			
Constru	ction Material	Metal		Production Capacity					
Samplin	g Port	Available		Pollution Control Device (if any)				None	
		1	Tes	t Resu					
	Dem		Test Math	- de		:.	Pocult		Norms**
SI. NO.		ameters	Test Metho		Un °C		Result		
1.	Flue Gas Temp		IS 11255 (Pa		m/		323 11.8	deprover of the second diversion of the second diversion of the second diversion of the second diversion of the	
2.	Flue Gas Veloci	and the second	and the second	IS 11255 (Part-3)		s /hr.	36426.0	<u>,</u>	
3.		netric Flow Rate		S 11255 (Part-3)		Nm <sup>3</sup>	23.1		
<b>4.</b> 5.	Particulates Ma Sulphur Dioxide	and the second		IS 11255 (Part-1) IS 11255 (Part-2)		1m <sup>3</sup>	64.2		
6.	Oxides of Nitro	and the second s	IS 11255 (Pa	and the state of the local data	mg/N		80.4		
7.	Carbon Dioxide	and the second	IS 13270:19		% v		13.2	ani ni pitar kita	
8.	Carbon Monox		IS 13270:19		pp		310		
9	Oxygen (O <sub>2</sub> )	100 (00)	IS 13270:19		% v		10.7		
			End			, • 			
Env. Co	ndition of Lab.		ntaining Temperature	27± 2°0	and Relativ	e Humid	ity 65±5 % in all te	sting are	a as per IS
Abbrevi		196:1966(C). MDL: Minimum [	Detection Limit, BDL:	Below	Detection L	imit			
	is specified								
Remark									
	By: Neema Kuma								
Sample	Drawn By: Arjun	Desia & leam							
	ractual Notes: - ratory accepts responsibi	lity for contont of this re	nort		Qu	ality Ch	necked by	Aut	norized Signatory
			written approval of the MD.				A Crimon	all	CDP
3. This repo	rt is intended for only gu	idance and not for legal	purpose or for advertisement	nt.	21	rupe	sont	3	2 PF
	Any complaint about this report should be communicated in Fotal liability of Institute for Environmental Management wi					A		10 A	ige -
6. In case o	f feedback/ complaints, p	gm.iemeco@gmail.com		(	Shreya	Sonal)	33 1	Dr. S. C. Jain)	
n the basis of	f Quality Checked and To	echnical data verified by	y the Authorized signatory, the	he report					
issued by the	· Director of the Organiz	A-8, Modi Heig	hts, OppAll India R	ladio S	tation, Ratu	Road,	Ranchi, Jharkhan	die 834	001
ssued by the	e Director of the Organiz	ation. 8, Modi Heig	y the Authorized signatory, the Authorized signatory, the <u>htts, OppAll India R</u> A-13, Saket Vihar, No	ladio S	tation, Ratu			cho 834	001

Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

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Annexure - 3



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by Jharkhand State Pollution Control Board, JSPCB National Accreditation Board for Testing Laboratory (NABL) vide TC-11515 ISO 9001:2015 (QMS) & ISO 45001:2018



**Test Report** 

ULR N	No.: T C 1	1	5 1	5 2	3 0	0	0 0	0	1	6	2	7
Discip	line: Chemical		Group	: Water			Sub-Gro	up: Grou	und Wa	ter		
Repor	t Issue Date: 30-11-2023			5	Test Rep	oort No	.: RN-2307	14001GW	/1			
Sampl	le ID: 231127WA01001 & 231	127RC010	001	4	Sample	Descrip	tion: Grou	nd Wate	r - Bore	e well		
Challa	n No./P.O. No.: 4511012880		1 - F	#	Challan	No./P.	No. Date: 1	3-07-202	3			
lssue	d to: M/s Tata Steel Limited (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	ong Pro dityapu	r Industria				te					
Гуре о	of Industry: Iron & Steel				Custom	er Repr	esentative:	Shweta	Kumar	i		
Sampl	e Drawn by: IEM Team			1000	Samplin	g Date:	23-11-202	3				11
Proto	col: CPCB Guideline& IS Meth	od 3025 P	art-01	Sand San		Ser.						
Sampl	ing Location: BAGANPDDA			the state							Service .	
Sampl	e Receiving date: 27-11-2023	}	Testing	Started: 27-3	11-2023		Testing E	nded: 30	)-11-20	23		
				Test Resu	lt				1	-		
SI.	Tested Parameters	Unit	Met	hod No.				orms**		Res	ults	
No.	resteur diameters			inou nor	Accep	table	Permiss	sible				أسابي
1.	PH Value			6 (Part - 11)	6.5 to	8.5	No Relax	ation			72	_
2.	Conductivity	µs/cm		(Part - 14)			3.09				37	
3.	Turbidity	NTU		6 (Part - 10)	1		5				.5	
4.	Colour	Hazen		6 (Part - 04)	5		15				5	
5.	Odour			6 (Part - 05)	Agree	able	Agreea	ble		Agree	eable	
6.	Total Dissolved Solids	mg/l		6 (Part - 16)	50	0	200	2		42	21	
7.	Calcium (as Ca)	mg/l	IS 3025	6 (Part - 40)	7.	5	200			48	3.9	
8.	Total Alkalinity (as CaCO3)	mg/l	IS 3025	(Part - 23)	20		600	1		18	36	34
9.	Total Hardness (as CaCO3)	mg/l	IS 3025	5 (Part -21)	20	0	600			16	54	
10.	Chloride (as Cl)	mg/l	IS 3025	(Part - 32)	25	0	100	) ו		25	.4	
11.	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025	(Part - 24)	20	0	400			42.	.67	
12.	Magnesium (as Mg)	mg/l	APHA 350	0 Mg B. 201	7 30	o	100			10	.21	
13.	Copper	mg/l	APHA 3	111 B.2017	0.0	)5	1.5		BD	L (MD	L - 0.0	)2)
14.	Chromium	mg/l	APHA 3	111 B.2017	0.0	)5	No Relax	ation	BD	L (MD	L - 0.0	)4)
15.	Lead	mg/l	APHA 3	111 B.2017	0.0	01	No Relax	ation	BD	L (MD	L - 0.0	)7)
16.	Zinc	mg/l	APHA 3	111 B.2017	5		15			1.	.4	
17.	Nickel	mg/l	APHA 3	111 B.2017	0.	3	No Relax	ation	BC	L (ME	DL- 0.0	3)
18.	Mercury	mg/l	APHA 3	112 C.2017	0.0	01	No Relax	ation	BDL	(MDL	- 0.00	08)
10.		mg/l	APHA 3	114 C.2017	0.0	01	No Relax	ation	BDI	(MDI	0.00	02)
19.	Arsenic	IIIg/I	AITIAJ	114 C.2017	0.0	-		acion	000	- 111101		

 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
 IS 10500 :2012

 Remark
 Sample Comply with prescribed specification.

 Tested By: Amisha Kumari
 Image: Amisha Kumari

Sample Drawn By: Arjun Besra & Team

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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

Jharkhand State Pollution Control Board, JSPCB

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T	00	 $\boldsymbol{\nu}$	0	n	0	-
-		-	C		J	

Discip	oline: Chemical		Group: Water	Port	Sub-Group: Ground \	Water		
Repo	rt Issue Date: 30-11-2023	3		Test Report No.:	RN-230714001GW1	477		
Samp	le ID: 231127WA01001 8	231127RC0	1001	Sample Description: Ground Water - Bore well				
Challa	an No./P.O. No.: 4511012	2880		Challan No./P.N	<b>Date:</b> 13-07-2023	2		
lssue	ed to: M/s Tata Steel Lin (Formerly Tata Ste Gamaharia Phase Seraikela-Kharsaw	eel Long Pr -V, Adityap	ur Industrial Area,					
Туре	of Industry: Iron & Steel		24	Customer Representative: Shweta Kumari				
Samp	le Drawn by: IEM Team			Sampling Date: 23-11-2023				
Proto	col: CPCB Guideline& IS N	Method 3025	Part-01		and the second second	÷		
Samp	ling Location: BAGANPDI	DA		and the second second				
Samp	le Receiving date: 27-11-	2023	Testing Started: 27-1	1-2023	Testing Ended: 30-11-	2023		
			Test Result					
SI.	Tested Parameter	Unit	Method No.		Norms**	Results		
No.	resteu Faranneter			Acceptable	Permissible	lisouno		
1.	Taste		IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable		

F	Candition of	Trata	END Report	and the second se		
4.	Iron	mg/l	APHA 3111 B.2017	1.0	No Relaxation	0.29
3.	Fluoride (as F)	mg/l	APHA 4500 F D. 2017	1.0	1.5	1.31
2.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)		<b></b>	BDL (MDL 0.1)
1.	Taste		IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable

Env. Condition of	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing
Lab.	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.

Tested By: Amisha Kumari

Sample Drawn By: Arjun Besra & Team

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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.	Dy. Quality Manager	13
Corporate office - A-8, Modi Heights, OppAll India Radio Stat	ion, Ratu Road, Ranchi, Jharkhand ~ 834001	Y



Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com







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## **Test Report**

ULR		1	5 1 5 2	3 0 0	0 0 0	1 6 2
Discip	line: Chemical	-	Group: Water		Sub-Group: Gro	und Water
Repo	rt Issue Date: 30-11-2023			Test Report No	.: RN-230714001GV	N2
Samp	le ID: 231127WA01002 & 231	127RC010	02	Sample Descrip	tion: Ground Wate	er - Bore well
Challa	an No./P.O. No.: 4511012880			Challan No./P.I	No. Date: 13-07-202	23
lssue	ed to: M/s Tata Steel Limited (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	ong Prod dityapur	Industrial Area,		te [	
Туре	of Industry: Iron & Steel		AND STORES	Customer Repr	esentative: Shweta	Kumari
Samp	le Drawn by: IEM Team			Sampling Date:	23-11-2023	
Proto	col: CPCB Guideline& IS Meth	od 3025 Pa	art-01			
Samp	ling Location: JHARGOVINDPL	JR			N	
Samp	le Receiving date: 27-11-2023		Testing Started: 27-2	1-2023	Testing Ended: 30	0-11-2023
			Test Resu			
SI.	Tested Parameters	Unit	Method No.		orms**	Results
No.				Acceptable	Permissible	
1.	PH Value	2	IS 3025 (Part - 11)	6.5 to 8.5	No Relaxation	6.51
2.	Conductivity	µs/cm	IS 3025 (Part – 14)			128
3.	Turbidity	NTU	IS 3025 (Part - 10)	1	5	1.1
4.	Colour	Hazen	IS 3025 (Part - 04)	5	15	5
5.	Odour		IS 3025 (Part - 05)	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids	mg/l	IS 3025 (Part - 16)	500	2000	46
7.	Calcium (as Ca)	mg/l	IS 3025 (Part - 40)	75	200	6.41
8.	Total Alkalinity (as CaCO3)	mg/l	IS 3025 (Part - 23)	200	600	48
9.	Total Hardness (as CaCO3)	mg/l	IS 3025 (Part -21)	200	600	26
10.	Chloride (as Cl)	mg/l	IS 3025 (Part - 32)	250	1000	1.2
11.	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part - 24)	200	400	1.82
12.	Magnesium (as Mg)	mg/l	APHA 3500 Mg B. 201	7 30	100	2.43
13.	Copper	mg/l	APHA 3111 B.2017	0.05	1.5	BDL (MDL – 0.02)
14.	Chromium	mg/l	APHA 3111 B.2017	0.05	No Relaxation	BDL (MDL – 0.04)
15.	Lead	mg/l	APHA 3111 B.2017	0.01	No Relaxation	BDL (MDL – 0.07)
16.	Zinc	mg/l	APHA 3111 B.2017	5	15	1.1
17.	Nickel	mg/l	APHA 3111 B.2017	0.3	No Relaxation	BDL (MDL- 0.03)
18.	Mercury	mg/l	APHA 3112 C.2017	0.001	No Relaxation	BDL (MDL - 0.0008
19.	Arsenic	mg/l	APHA 3114 C.2017	0.01	No Relaxation	BDL (MDL - 0.002)
20.	Manganese	mg/l	APHA 3111 B.2017	0.1	No Relaxation	BDL (MDL - 0.08)
		0, 1	End Repor	t		· · · · · · · · · · · · · · · · · · ·

 Env. Condition of Lab.
 Laboratory is maintaining Temperature 2/± 2°C and Relative Humidity 65±5% in all testing area as per IS

 Abbreviation
 MDL: Minimum Detection Limit, BDL: Below Detection Limit

 Norms\*\* is Specified
 IS 10500 :2012

 Remark
 Sample Comply with prescribed specification.

 Tested By: Amisha Kumari

Sample Drawn By: Arjun Besra & Team

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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

Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System) ISO 45001:2018 (Occupational Health & Safety Management System )

	-		1.07
	 Re	-	-
16			

Discipl	line: Chemical		Group: Water	cport	Sub-Group: Groun	d Water		
Report	t Issue Date: 30-11-2023	3	199	Test Report No.: RN-230714001GW2				
Sample	e ID: 231127WA01002 8	231127RC0	1002	Sample Des	scription: Ground Water	- Bore well		
Challa	n No./P.O. No.: 4511012	2880	1. S. A.	Challan No	/P.No. Date: 13-07-2023	and the second sec		
Issue	M/s Tata Steel Lin (Formerly Tata Ste	eel Long Pr -V, Adityap	ur Industrial Area,					
Type o	of Industry: Iron & Steel			Customer Representative: Shweta Kumari				
Sample	e Drawn by: IEM Team	1		Sampling D	ate: 23-11-2023			
Protoc	col: CPCB Guideline& IS N	Method 3025	Part-01					
Sampli	ing Location: JHARGOVI	NDPUR			and the second			
Sample	ample Receiving date: 27-11-2023 Testing Started: 2				27-11-2023 Testing Ended: 30-11-2023			
5	- 1 Mar 1		Test Res	ult		alline. A sea		
SI.	Tested Parameter	Unit	Method No.		Norms**	Results		

51.	Tested Parameter	Unit	Method No.	NO	orms**	Results	
No.	resteu Farameter	onic		Acceptable	Permissible	Results	
1.	Taste IS		IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable	
2.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)			BDL (MDL 0.1)	
3.	Fluoride (as F)	mg/l	APHA 4500 F D. 2017	1.0	1.5	1.22	
4.	Iron	mg/l	APHA 3111 B.2017	1.0	No Relaxation	0.22	
1			END Report	- 1. AND 1. AND 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	IS 10500 :2012					
Remark	Sample Comply with prescribed specification.					

Tested By: Amisha Kumari

Sample Drawn By: Arjun Besra & Team

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<ol><li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li></ol>	(Silleya Sofiar) / (DI. S. C. Jaili)
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## Test Report

ULR	No.: T C	1	1	5 1	5 2	3 0 0	0	0 0	1	6	2	9		
Discip	line: Chemical			Grou	p: Water		Sub-C	Group: Gro	und Wate	er				
Repo	t Issue Date: 30-11-20	023		selar -		Test Report No.: RN-230714001GW3								
Samp	le ID: 231127WA0100	3 & 23112	7RC010	003	1.1	Sample Descri	ption: Gr	ound Wate	r - Bore	vell				
Challa	n No./P.O. No.: 4511	012880			1	Challan No./P	No. Date	: 13-07-202	23					
Issue	ed to: M/s Tata Steel L (Formerly Tata Gamaharia Pha Seraikela-Khars	Steel Loi se-V, Ad	ityapu	r Industria			í e				5			
Гуре	of Industry: Iron & Ste	el		19 C 19		<b>Customer</b> Rep	resentati	ve: Shweta	Kumari					
Samp	le Drawn by: IEM Tea	m	- The			Sampling Date	: 23-11-2	023				1		
Proto	col: CPCB Guideline&	IS Method	3025 P	art-01			N			Sugar Sector	1			
Samp	ling Location: NEEMD	IH							(Trees, )		L			
Samp	le Receiving date: 27-	11-2023		Testing	Started: 27-11	-2023	Testin	g Ended: 30	0-11-202	3				
					Test Result									
SI.	Tested Paramet	ers	Unit	Me	thod No.	and the second s	- Provide and a second second	orms**		Resul	lts			
No.						Acceptable		nissible				_		
1.	PH Value				5 (Part - 11)	6.5 to 8.5	No Re	laxation		7.1				
2.	Conductivity		µs/cm	and the second se	5 (Part – 14)		1			665				
3.	Turbidity		NTU		5 (Part - 10)	1	10	5		1				
4.	Colour		Hazen		5 (Part - 04) 💋	5		15		5				
5.	Odour				5 (Part - 05)	Agreeable		eeable	l l	Agreea				
6.	<b>Total Dissolved Solid</b>	S	mg/l	IS 302	5 (Part - 16)	500	2	000	5	402	!			
7.	Calcium (as Ca)		mg/l	IS 302	5 (Part - 40)	75	1	200		52.1	L .			
8.	Total Alkalinity (as Ca	aCO3)	mg/l	IS 302	5 (Part - 23)	200	6	500		236	i de la compañía de la			
9.	Total Hardness (as C	aCO3)	mg/l	IS 302	5 (Part -21)	200	e	500	5E-	203	A.			
10.	Chloride (as Cl)		mg/l	IS 302	5 (Part - 32)	250	1	000		29.1	L			
11.	Sulphate (as SO <sub>4</sub> )		mg/l	IS 302	5 (Part - 24)	200	4	100		43.4	4			
12.	Magnesium (as Mg)		mg/l	APHA 35	00 Mg B. 2017	30		L00		17.7	4			
13.	Copper		mg/l	APHA 3	3111 B.2017	0.05		1.5	BDL	(MDL	- 0.02	2)		
14.	Chromium		mg/l	APHA 3	3111 B.2017	0.05	No Re	laxation	BDL (MDL – 0		BDL (MDL			
15.	Lead		mg/l	APHA 3	3111 B.2017	0.01	No Re	laxation	BDL (MDL -		And the second s	7)		
16.	Zinc		mg/l	APHA 3	3111 B.2017	5		15		1.21	L			
17.	Nickel		mg/l	APHA 3	3111 B.2017	0.3	No Re	laxation	BDL	(MDL	- 0.03	)		
18.	Mercury		mg/l	APHA 3	3112 C.2017	0.001	No Re	laxation	BDL (	MDL -	0.000	)8)		
10	Arsenic		mg/l	APHA 3	3114 C.2017	0.01	No Re	laxation	BDL	MDL -	- 0.00	2)		
19.							and the second se	laxation			- 0.08			

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	IS 10500 :2012
Remark	Sample Comply with prescribed specification.
Tested By: Amisha Kumari	

Sample Drawn By: Arjun Besra & Team

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

Ranchi-834002, Jharkhand, India

Jharkhand State Pollution Control Board, JSPCB

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		Test Re	port		in A		
Discipline: Chemical		Group: Water		Sub-Group: Ground	Water		
Report Issue Date: 30-11-2023	3		Test Report No.: F	N-230714001GW3			
Sample ID: 231127WA01003 8	231127RC0	1003	Sample Descriptio	n: Ground Water - B	ore well		
Challan No./P.O. No.: 4511012	2880		Challan No./P.No.	Date: 13-07-2023			
M/s Tata Steel Lin (Formerly Tata Steel Gamaharia Phase Seraikela-Kharsav Type of Industry: Iron & Steel	eel Long Pi -V, Adityap	our Industrial Area,	Customer Benrese	ntative: Shweta Kum	nari		
Sample Drawn by: IEM Team	and the second second		Sampling Date: 23-11-2023				
Protocol: CPCB Guideline& IS I	Method 3025	5 Part-01		Section 200			
Sampling Location: NEEMDIH			California California	1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -			
Sample Receiving date: 27-11-	2023	Testing Started: 27-1	7-11-2023 Testing Ended: 30-11-2023				
		Test Result					
SI. Tested Parameter	ested Parameter Unit		No	orms**	Results		
No.	onit	Method No.	Acceptable	Permissible			
		10 2025 (2 1 07)		A			

1.	Taste	48	IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable	
2.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)	1270 14S		BDL (MDL 0.1)	
3.	Fluoride (as F)	mg/l	APHA 4500 F D. 2017	1.0	1.5	1.48	
4.	Iron	mg/l	APHA 3111 B.2017	1.0	No Relaxation	0.25	
			END Report	-	1000	and the state	
Env	Condition of	Laboratory	is maintaining Temperature	27+ 2°C and Rola	tive Humidity 65+5	% in all testing	

Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
MDL: Minimum Detection Limit, BDL: Below Detection Limit
IS 10500 :2012
Sample Comply with prescribed specification.

Tested By: Amisha Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by online Authorized Signatory
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<ol> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal) (Dr. S. C. Jain)
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**Test Report** 



ULRI	No.: T C 1	1	5 1	5 2	3 0	0	0	0	0	1	6	3	C
	line: Chemical			up: Water	5 0		1	-	-			5	L
	rt Issue Date: 30-11-2023	Sub-Group: Ground Water											
	le ID: 231127WA01004 & 231	Test Report No.: RN-230714001GW4 Sample Description: Ground Water - Bore well											
	an No./P.O. No.: 4511010303	12/100	1004			No./P.					e wen		
	ed to: M/s Tata Steel Limited (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	ong Pro dityapu	r Industr			E.	Č,						
Type	of Industry: Iron & Steel		and the second		Custom	ner Repr	esentat	ive: Sh	weta	Kumai	ri		17
	le Drawn by: IEM Team				Sampli	ng Date:	23-11-2	2023					-
	col: CPCB Guideline& IS Meth	od 3025 P	art-01			and the second	1-	20,240			Siste		
	ling Location: JHARKHULI					An an per		1.5				ð.	
Samp	le Receiving date: 27-11-2023		Testin	g Started: 27-1	1-2023		Testir	ng End	<b>ed:</b> 30	-11-20	023	1	
			2.5	Test Result				<u>,</u>		7516			
SI.	Tested Parameters	Unit	Method No.	ethod No	No		orms**			Res	ults		
No.	resteu Farameters	Onit		ethod No.	Acce	ptable	Perr	nissib	e		nes	uits	Ġ.
1.	PH Value		the second data is not as the second data is the se	25 (Part - 11)	6.5 t	0 8.5	No R	elaxati	on		6	.8	1
2.	Conductivity	µs/cm	IS 302	25 (Part – 14)							26	54	
3.	Turbidity	NTU	IS 302	25 (Part - 10)		1		5				L	
4.	Colour	Hazen	IS 302	25 (Part - 04)		5	5	15				5	L.
5.	Odour		and the second se	25 (Part - 05)	Agre	eable		eeable	2		Agree	eable	
6.	Total Dissolved Solids	mg/l	and the second se	25 (Part - 16)		00	1 2	2000				8	
7.	Calcium (as Ca)	mg/l	IS 302	25 (Part - 40)	7	75		200	1.2.5		11	.22	
8.	Total Alkalinity (as CaCO3)	mg/l	IS 302	25 (Part - 23)	2	00		600		1	4	6	
9.	Total Hardness (as CaCO3)	mg/l	IS 30	25 (Part -21)	2	00		600			3	0	
10.	Chloride (as Cl)	mg/l	IS 302	25 (Part - 32)	2	50		1000		No.	5	.4	1
11.	Sulphate (as SO <sub>4</sub> )	mg/l	IS 302	25 (Part - 24)	2	00	1.5	400			10	).5	1
12.	Magnesium (as Mg)	mg/l	APHA 3	500 Mg B. 2017	3	30		100		B	DL (MI	DL - 1.0	))
13.	Copper	mg/l	APHA	3111 B.2017	0.	05		1.5		BC	L (MD	L - 0.0	2)
14.	Chromium	mg/l	APHA	3111 B.2017	0.	05	No Re	elaxati	on			L-0.0	-
15.	Lead	mg/l	APHA	3111 B.2017	0.	01	No Re	elaxati	on	BD	L (MD	L - 0.0	7)
16.	Zinc	mg/l	APHA	3111 B.2017		5		15			1.	5	
17.	Nickel	mg/l	APHA	3111 B.2017	0	.3	No Re	elaxati	on	BI		DL- 0.03	3)
18.	Mercury	mg/l	APHA	3112 C.2017	0.0	001	No Re	elaxati	on	BDL	(MDL	- 0.00	08)
19.	Arsenic	mg/l	APHA	3114 C.2017	0.	01	No Re	elaxati	on	BD	L (MDI	- 0.00	)2)
20.	Manganese	mg/l	APHA	3111 B.2017	0	.1	No Re	elaxati	on	BC	L (MD	L – 0.0	8)
				End Report		1000		315 S. 10	1997	200			-

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	IS 10500 : 2012
Remark	Sample Comply with prescribed specification.
Tested Bu Amisha Kumari	

Tested By: Amisha Kumari Sample Drawn By: Arjun Besra & Team

oumpie bruwn by: / njun boord a roa

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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

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Jharkhand State Pollution Control Board, JSPCB

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		-			-

			lest Ke	PORT		
Discip	oline: Chemical		Group: Water		Sub-Group: Ground	Water
Repo	rt Issue Date: 30-11-2023	3		Test Report No.:	RN-230714001GW4	12
Samp	le ID: 231127WA01004 8	231127RC	01004	Sample Description	on: Ground Water -	Bore well
Challa	an No./P.O. No.: 4511010	0303	1 S S	Challan No./ P.No	. Date: 04-07-2022	1997 - C. 1997 -
ISSUE	ed to: M/s Tata Steel Lin (Formerly Tata Ste Gamaharia Phase Seraikela-Kharsa	eel Long Pr -V, Adityap	ur Industrial Area,			
Гуре	of Industry: Iron & Steel			Customer Repres	entative: Shweta Ku	mari
Samp	le Drawn by: IEM Team	A STREET		Sampling Date: 23	3-11-2023	
Proto	col: CPCB Guideline& IS I	Method 3025	Part-01		and the second	
Samp	ling Location: JHARKHUL					·
Samp	le Receiving date: 27-11-	2023	Testing Started: 27-:	11-2023	Testing Ended: 30-1	1-2023
			Test Resu	it	S. 19	
SI.	Tested Parameter	Unit	Method No.	Norms**		Results
No.	restea rarameter	onit	mounda No.	Acceptable	Permissible	ricourto
1.	Taste		IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable
		11	10 0005 (0 . 0.4)		and the second s	

2.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)			BDL (MDL 0.1)	
3.	Fluoride (as F)	mg/l	APHA 4500 F D. 2017	1.0	1.5	0.92	
4.	Iron	mg/l	APHA 3111 B.2017	1.0	No Relaxation	0.23	
2.	1	A State of the second s	END Report	and the second second			
Env. Lab.	Condition of		is maintaining Temperature 2 IS 196:1966(C).	7± 2°C and Rel	ative Humidity 65±5	5 % in all testing	
Abbi	reviation	MDL: Minin	num Detection Limit, BDL: Belo	ow Detection L	imit	and the second	
Norn	ns** is Specified	IS 10500 :2	012				
Remark		Sample Comply with prescribed specification.					

Tested By: Amisha Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by Rithorized Signatory
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<ol> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal)
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A	mbient Noise Monitor	ing Report		
Month	SBWM Near QA Building			
Month	Day Time dB(A)	Night Time dB(A)		
Oct-23	64.8	61.8		
Nov-23	66.1	59.7		
Dec-23	61.9	56.7		
Jan-24	67.5	58.4		
Feb-24	70.3	56.1		
Mar-24	62.4	58.3		



ULR No.:

**Discipline:** Chemical

Т

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3

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Group: Atmospheric Pollution Sub-Group: Ambient Noise Levels (Excluding Vibration)

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## **Test Report**

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Discipline								
	sue Date: 13-1				port No.: RN-23			
Sample ID: 231211AP12005 Challan No./P.O. No.: 4511012880					Sample Description: Ambient Noise			
		511012880		Challan	No./ P.No. Dat	e: 13-07-2023		
Issued to	M/s Tata Ste (Formerly Ta Gamaharia F	ata Steel Long Phase-V, Aditya	Products Limite apur Industrial A					
Tune of la			rkhand-832108	Custom	ar Domrocontat	ive: Shweta Kur	mari	
	ndustry: Iron 8 Drawn by: IEM				with the second s	2023 to 09-12-2		
	and the second	ne & IS Method	0080.1081	Jampin	ig Date. 00-12-	2023 10 09-12-2	025	
	and the second sec	NEAR QA BUILD						
	teorological In		. Temp.(°C): 25	R.H. (%): 65	W.C.: Cloudy	W.D.:	NW to SE	
	Receiving Date			d: 11-12-2023	And the second sec	Ended: 13-12-2	the second state of the se	
oumpie n				st Result				
SI. No	Para	meter	Method	Unit	Day Time	Night Time	Norms**	
1.	Equivalent So	und Level (Leq)	IS 9989:1981	dB(A) d of Reports	61.9	56.7	Day - 75 Night - 70	
2. Night time 3. Mixed cate 4. dB(A) Leq o 5.A "decibel"	e shall mean from 10 egories of areas may denotes the time we	eighted average of th oise is measured. "A"	of the four above menti e level of sound in decil , in dB(A) Leq, denotes	b <mark>e</mark> ls on scale A which	is relatable to huma	an hearing.	esponds to frequence	
1. Day time sl 2. Night time 3. Mixed cate 4. dB(A) Leq o 5.A "decibel" response cha 6.Leq: It is an	e shall mean from 10 egories of areas may denotes the time w " is a unit in which n aracteristics of the h	0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of th oise is measured. "A" uman ear. e noise level, over a s Laboratory is r	of the four above menti e level of sound in decil , in dB(A) Leq, denotes pecified period. naintaining Tempe	bels on scale A which the frequency weigh	is relatable to huma ting in the measurem	n hearing. nent of noise and corr		
1. Day time sl 2. Night time 3. Mixed cate 4. dB(A) Leq o 5.A "decibel" response cha 6.Leq: It is an Env. Conc	e shall mean from 10 egories of areas may denotes the time we " is a unit in which me aracteristics of the h n energy mean of the dition of Lab.	0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of th oise is measured. "A" uman ear. e noise level, over a s Laboratory is r per IS 196:196	of the four above menti e level of sound in decil , in dB(A) Leq, denotes pecified period. maintaining Tempe 6(C).	bels on scale A which the frequency weigh rature 27± 2°C a	is relatable to huma ting in the measuren and Relative Hum	n hearing. nent of noise and corr		
1. Day time sl 2. Night time 3. Mixed cate 4. dB(A) Leq o 5.A "decibel" response cha 6.Leq: It is an Env. Cono Abbreviat Norms** i	e shall mean from 10 egories of areas may denotes the time we " is a unit in which me aracteristics of the h n energy mean of the dition of Lab.	0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of th oise is measured. "A" uman ear. e noise level, over a s Laboratory is r per IS 196:196 MDL: Minimum As per Noise P	of the four above menti e level of sound in decil , in dB(A) Leq, denotes pecified period. maintaining Tempe 6(C). 1 Detection Limit, F ollution (Regulatic	bels on scale A which the frequency weigh rature 27± 2°C a 3DL: Below Dete on and Control) 1	is relatable to huma ting in the measuren and Relative Hun ction Limit	n hearing. nent of noise and corr		
1. Day time sl 2. Night time 3. Mixed cate 4. dB(A) Leq o 5.A "decibel" response cha 6.Leq: It is an Env. Cono Abbreviat	e shall mean from 10 egories of areas may denotes the time w " is a unit in which m aracteristics of the h n energy mean of the dition of Lab. tion	0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of th oise is measured. "A" uman ear. e noise level, over a s Laboratory is r per IS 196:196 MDL: Minimum As per Noise P	of the four above menti e level of sound in decil , in dB(A) Leq, denotes pecified period. maintaining Tempe 6(C).	bels on scale A which the frequency weigh rature 27± 2°C a 3DL: Below Dete on and Control) 1	is relatable to huma ting in the measuren and Relative Hun ction Limit	n hearing. nent of noise and corr		
1. Day time sl 2. Night time 3. Mixed cate 4. dB(A) Leq o 5.A "decibel" response cha 6.Leq: It is an Env. Cono Abbreviat Norms** i Remark	e shall mean from 10 egories of areas may denotes the time w " is a unit in which m aracteristics of the h n energy mean of the dition of Lab. tion	0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of th oise is measured. "A" uman ear. e noise level, over a s Laboratory is r per IS 196:196 MDL: Minimum As per Noise Pr Sample Comply	of the four above menti e level of sound in decil , in dB(A) Leq, denotes pecified period. maintaining Tempe 6(C). 1 Detection Limit, F ollution (Regulatic	bels on scale A which the frequency weigh rature 27± 2°C a 3DL: Below Dete on and Control) 1	is relatable to huma ting in the measuren and Relative Hun ction Limit	n hearing. nent of noise and corr		
1. Day time sl 2. Night time 3. Mixed cate 4. dB(A) Leq o 5.A "decibel" response cha 6.Leq: It is an Env. Cono Abbreviat Norms** i Remark	e shall mean from 10 egories of areas may denotes the time we " is a unit in which me aracteristics of the h n energy mean of the dition of Lab. tion is specified Neema Kumari	0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of th oise is measured. "A" uman ear. e noise level, over a s Laboratory is r per IS 196:196 MDL: Minimum As per Noise Pr Sample Comply	of the four above menti e level of sound in decil , in dB(A) Leq, denotes pecified period. maintaining Tempe 6(C). 1 Detection Limit, F ollution (Regulatic	bels on scale A which the frequency weigh rature 27± 2°C a 3DL: Below Dete on and Control) 1	is relatable to huma ting in the measuren and Relative Hun ction Limit	n hearing. nent of noise and corr		
1. Day time sl 2. Night time 3. Mixed cate 4. dB(A) Leq of 5.A "decibel" response cha 6.Leq: It is an Env. Cono Abbreviat Norms** i Remark rested By: ample Dra	e shall mean from 10 egories of areas may denotes the time we " is a unit in which ne aracteristics of the h n energy mean of the dition of Lab. tion is specified Neema Kumari awn By: Arjun B	0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of th oise is measured. "A" uman ear. e noise level, over a s Laboratory is r per IS 196:196 MDL: Minimum As per Noise Pr Sample Comply esra & Team	of the four above menti e level of sound in decil , in dB(A) Leq, denotes pecified period. maintaining Tempe 6(C). n Detection Limit, F ollution (Regulation with Prescribed S	bels on scale A which the frequency weigh erature 27± 2°C a 3DL: Below Dete on and Control) 1 Specification.	is relatable to huma ting in the measuren and Relative Hun ction Limit	n hearing. nent of noise and corr nidity 65±5 % in		
<ol> <li>Day time sl         <ol> <li>Night time</li> <li>Night time</li> <li>Mixed cate</li> <li>dB(A) Leq of</li> <li>Tesponse cha</li> <li>Leq: It is an</li> </ol> </li> <li>Env. Conconstruction</li> <li>Abbreviat</li> <li>Norms** in</li> <li>Remark</li> <li>Remark</li> <li>Sample Drational properties in the laboratory</li> <li>This report sha</li> <li>Any complaint</li> <li>Total liability o In case of feed</li> </ol>	e shall mean from 10 egories of areas may denotes the time we " is a unit in which means aracteristics of the henergy mean of the dition of Lab. tion is specified Neema Kumari awn By: Arjun B ual Notes: - y accepts responsibilit intended for only guida t about this report shor of Institute for Environr adback/ complaints, ple	0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of th oise is measured. "A" uman ear. e noise level, over a s Laboratory is r per IS 196:196 MDL: Minimum As per Noise Pr Sample Comply esra & Team y for content of this repor except in full, without we ance and not for legal pu uld be communicated in mental Management will ase send an email at gr	of the four above menti e level of sound in decil , in dB(A) Leq, denotes pecified period. maintaining Tempe 6(C). n Detection Limit, H ollution (Regulation y with Prescribed S with Prescribed S ort. ritten approval of the MD. urpose or for advertisemer writing within 7 days of its l be limited to invoiced amon n.iemeco@gmail.com	erature 27± 2°C a BDL: Below Deteon and Control) I Specification.	is relatable to huma ting in the measuren and Relative Hum ction Limit Rules - 2000	n hearing. hent of noise and corr hidity 65±5 % in by Autho	all testing area	
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