



Ref No. TSLMD/ENV/24-11/44

Date: 26/11/2024

To  
IGF& Incharge,  
GOI, MOEF&CC, Integrated Regional Office,  
Kolkata, 1B-198, Salt Lake City,  
Sector III, Kolkata- 700106

**Sub: Six monthly Compliance Report of Expansion of Steel Plant (Hot Metal Production from 0.5 to 0.75 MTPA, DI Pipe production from 0.3 to 0.5 MTPA and production of 0.1 MTPA casting & fittings) located at village Maheshpur, PO-Samraipur, PS. Kharagpur Local, Dist: Paschim Medinipur, West Bengal by M/s Tata Steel Limited, Metaliks Division (Formerly Tata Metaliks Limited)**

**Ref:** 1. EC vide MoEF&CC letter no. F.No. J-11011/377/2013-IA- II (I) dated: 28.01.2019 and further amendment dated. 27.01.2021.  
2. Transfer of EC granted by MoEF&CC vide F.No J-11011/377/2013-IA-II(I) dated 21.11.2024 (EC Identification No. EC24A1001WB5644452T) from Tata Metaliks Limited to Tata Steel Limited, Metaliks Division

Dear Sir,

Please find enclosed the Six Monthly Compliance report (April'24 to September'24) for Environmental clearance no:- F.No. J-11011/377/2013-IA.-II(I) dated 28.01.2019 and further amendment dtd. 27.01.2021 for the condition stipulated in Environment Clearance to the Tata Steel Limited, Metaliks Division (Formerly Tata Metaliks Limited) at Mahespur, Kharagpur.

The copy of the compliance report is sent to you as soft copy through e-mail (iro.kolkata-mefcc@gov.in) and same also will be uploaded in the Tata Steel Ltd. website for your kind perusal.

Thanking you

Yours sincerely,  
**For Tata Steel Limited, Metaliks Division**

Sakti Sankar Bandopadhyay  
Chief (PI-Operation & Maintenance)

Enclosure – As above

CC:

Member Secretary West Bengal Pollution Control Board, Paribesh Bhawan, 10 A, Block-LA, Sector-III, Salt Lake City, Kolkata – 700 098	Environmental Engineer & I/c, West Bengal Pollution Control Board, Regional Office, Haldia, West Bengal	CPCB, Zonal Office Kolkata
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**TATA STEEL LIMITED**

**Half Yearly EC Compliance Report of Expansion of Hot Metal from 0.5 to 0.75 MTPA, DI Pipe from 0.3 to 0.5 MTPA and 0.1 MTPA casting & fittings by M/s Tata Steel Limited, Metaliks Division (Formerly M/s Tata Metaliks Limited) at village Maheshpur, Paschim Medinipur District, West Bengal vide letter no. F.No. J-11011/377/2013-IA.II(I) dated 28.01.2019 & further amendment dated 27.01.2021 for the period Apr'24 to Sep'24**

**I. Statutory compliance**

S.N.	Conditions	Compliance status
i.	The project proponent shall obtain Consent to Establish/ Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the State Pollution Control Board.	Consent to Establish/ Operate has been obtained under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the State Pollution Control Board.
ii.	The project proponent shall obtain 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.	Permission from SWID (State Water Investigation Directorate) as per implementation of CGWA revised guidelines for ground water withdrawal has been obtained.
iii.	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	Authorization under Hazardous and other Waste Management Rules, 2016 has already been obtained.

**II. Air quality monitoring and preservation:**

S.N.	Conditions	Compliance status
i.	The project proponent shall install 24 x 7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414(E) dated 30 <sup>th</sup> May 2008 as amended from time to time; S.O. 3305 (E) dated 7 <sup>th</sup> 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.	All the process stacks are provided with 24 x 7 continuous emission monitoring system. Connectivity with SPCB & CPCB is being done and calibration of the same are being done on regular basis by OEM involving labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
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 emissions in the plant premises have been carried out quarterly through NABL accredited laboratories. Fugitive emission monitoring report is enclosed herewith as <b>Annexure - I</b> .

**Half Yearly EC Compliance Report of Expansion of Hot Metal from 0.5 to 0.75 MTPA, DI Pipe from 0.3 to 0.5 MTPA and 0.1 MTPA casting & fittings by M/s Tata Steel Limited, Metaliks Division (Formerly M/s Tata Metaliks Limited) at village Maheshpur, Paschim Medinipur District, West Bengal vide letter no. F.No. J-11011/377/2013-IA.II(I) dated 28.01.2019 & further amendment dated 27.01.2021 for the period Apr'24 to Sep'24**

iii.	The project proponent shall install Continuous Ambient Air Quality monitoring for monitoring of common/ criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120°each), covering upwind and downwind directions.	Four continuous Ambient Air Quality monitoring station (CAAQMS) has already been installed within and outside the plant area. In addition to this, manual monitoring of ambient air quality through portable air samplers are being carried out through MoEF&CC and NABL accredited agency.
iv.	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring along with results of manual stack monitoring and manual monitoring of air quality/ fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.	Monthly summary report of continuous stack emission (CEMS) & CAAQMS is enclosed herewith as <b>Annexure - II (a &amp; b)</b> . Manual monitoring report of both stack & ambient air quality is enclosed herewith as <b>Annexure - III (a &amp; b)</b> .
v.	Appropriate Air Pollution Control (APC) systems shall be provided at all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Fume Extraction System, ESPs & bag filters have been provided in MBF, Raw Material Handling System, Sinter Plant & ductile iron pipe plant to control point source emission. To control fugitive emission apart from bag filter, dry fog dust suppression system, high pressure fog system & water sprinkling system has been installed in ground hoppers, transfer house at Raw Material Handling Systems (RMHS). Fume extraction with de-dusting system has been installed for LRS (Ladle Repairing Shop & MBF#2 cast house.
vi.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better operation of baghouse.	Purging facility is already provided with existing bag filters for bag cleaning. Leakage is detected through differential pressure measurement across the filter assembly.
vii.	Provide pollution control system in the sponge iron plant as per the CREP Guidelines of CPCB.	Not applicable
viii.	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	Three mobile road sweeping machines (two small sized and one large sized) have been deployed for cleaning of plant roads.
ix.	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.	The iron ore fines and coke fines are stored in demarcated places & used in the Sinter plant within the premises. Dust collected from ESPs and bag filters is used in Sinter plant for agglomeration (sinter making) process.

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x.	The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.	Raw material transportation through trucks & railway (rake) are done which are covered with tarpaulin. Within plant covered conveying system is installed to avoid spillage.
xi.	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	Wind shelter fence have been provided at the periphery of the screening plant area, air separation unit, iron ore yard. Similar installation has been planned for other stockpile area. Water sprinkling system has been provided for the screening plant area for dust suppression. Mobile Fog canon has been deployed in yards for dust suppression. Apart from the above tarpaulin cover is provided for stockpiles. Covered shed has been constructed for coal storage, to avoid fugitive emission.

### III. Water quality monitoring and preservation:

S.N.	Conditions	Compliance status
i.	The project proponent shall install 24 x 7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414(E) dated 30 <sup>th</sup> May 2008; S.O. 3305 (E) as amended from time to time; S.O. 3305 (E) dated 7 <sup>th</sup> 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 plant is Zero Effluent Discharge unit and not discharging any process effluent into the nearby main course. All the waste water is being treated & utilized as process make up, dust suppression & washing purpose.
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.	Yearly twice ground water sampling & analysis is being carried out by WBPCB laboratory. Piezometer has already been installed outside plant at nearby village area. It is proposed to install the same inside plant in near future.
iii.	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of groundwater quality to Regional Office of	Analysis reports of recycled effluent & ground water are enclosed herewith as <b>Annexure- IV (a &amp; b)</b> .

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	MoEF&CC, Zonal office of CPCB and Regional Office of SPCB alongwith six- monthly monitoring report.	
iv.	Adhere to 'Zero Liquid Discharge'.	Zero Effluent Discharge is being maintained. All the wastewater is being treated & utilized through ETP as process make up, dust suppression & washing purpose
v.	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Domestic wastewater generated from the plant toilets are treated through septic tank & soak pit.
vi.	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.	Peripheral drains connected with catch pits have been constructed in some stockpiles. The same will be extended for new stockpile areas.
vii.	The project proponent shall practice rainwater harvesting to maximum possible extent.	A pond has been made available to store rain water. Capacity enhancement of this pond is in progress. Another new pond is made. Although ground water table recharging is not allowed by WBPCB, still rainwater harvesting system for usage in toilets & dust suppression has been installed. A study for construction of additional roof top rainwater harvesting structures has been carried out. Potentials have been measured & action plan made for implementation. Water sustainability projects at nearby village area under the ambit of CSR. Under this, rainwater harvesting (storage & recharge) structures have been constructed.
viii.	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.	Water from MBFs, Sinter plant, CPPs, Ductile Iron Pipe plant is treated in separate ETPs as per quality of wastewater generated & usage requirement. The treated water is being recycled for different processes in the plant viz., Pig quenching, slag granulation, cement lining and dust suppression purpose. Entire wastewater is treated and is recycled back for different processes. Additional effluent treatment plant of 450 m <sup>3</sup> /day capacity is in operation & treated water is being used at cooling tower of CPP#2.

**IV. Noise monitoring and prevention:**

S.N.	Conditions	Compliance status
i.	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of this Ministry as a part of six-monthly compliance report.	Work zone & ambient noise level is monitored on quarterly basis. Same is enclosed as <b>Annexure - V.</b>

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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.	The Ambient noise level in and around the plant area is well within the standards. Noise monitoring result at different locations enclosed as <b>Annexure -V</b> .
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**V. Energy Conservation measures:**

S.N.	Conditions	Compliance status
i.	The project proponent shall provide waste heat recovery system on the DRI Kilns.	Not applicable because Tata Steel Metaliks Division is not having DRI Kilns operation.
ii.	The dolochar generated shall be used for power generation.	Not Applicable because Tata Steel Metaliks Division is not having DRI Kilns & Dolochar.
iii.	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, streetlights, parking around project area and maintain the same regularly.	1 MWp roof top solar power plant at DIP-1, 1.8 MWp roof top solar power plant at DIP-2 unit and two other solar power systems of 10 KWp & 17.8 KWp capacity have been installed and under operation. Solar streetlights have been installed for internal road. A solar water heater of 1000 litre per day capacity has been installed at canteen roof top. All the solar systems are being maintained on regular basis.
iv.	Provide LED lights in their offices and residential areas.	LED lights have been provided in most of the offices & plant site and will be installed in all newly build offices in future.

**VI. Waste Management:**

S.N.	Conditions	Compliance status
i.	Used refractories shall be recycled as far as possible.	Used refractories are used for paving purpose at MBF area.
ii.	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's Regional Office.	Not applicable because of no Fly Ash generation in the plant.
iii.	The waste oil, grease and other hazardous waste shall be disposed of as per Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.	Used oil & other hazardous waste is stored and disposed of through authorized agency as per regulatory requirement i.e. Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
iv.	Kitchen waste shall be composted or converted to biogas for further use.	Bio gas plant of 150 Kg/d capacity is in operation by treating the kitchen waste. The gas is used for cooking purpose at plant canteen.

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**VII. Green Belt:**

S.N.	Conditions	Compliance status
i.	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.	Green belt in an area equal to 33% is being developed inside the plant premises. We have planted 4080 nos. saplings inside the plant & 1846 nos. of saplings at nearby community from Apr'24 to Sep'24. Every year plantation is done in available space.  The different species planted are Polyalthia longifolia, Casuarina aquisetifolia, Alstonia scholaris, Tecoma stans, Azadirachta indica, Dalbergia sisoo, Mimosa elengi, Cassia fistula, etc.
ii.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	GHG emission inventory has been prepared & verified by accredited agency. Inventorisation is being carried out on monthly basis and annualized figures are computed. Program for carbon footprint reduction is also in place. <b>Annexure - VI (a)</b>

**VIII. Public hearing and Human health issues:**

S.N.	Conditions	Compliance status
i.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Onsite Emergency plan for the existing unit is already in place. HIRA has been prepared & is reviewed from time to time.
ii.	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protective Equipment (PPE) as per the norms of Factory Act.	Work zone heat stress monitoring is being carried out on regular basis. Required PPEs are being provided for the workmen deployed in hot zone area. Man-cooler, fog canon and mist system has been provided to reduce the work zone temperature.
iii.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, 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.	Labour housing with associated amenities was not required to be constructed within plant, as the workforce had been deployed from nearby locality. However, for the workmen during project activity - canteen, drinking water & medical facility has been made available during their work.
iv.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Regular health surveillance of all the workers is being conducted. Record of pre-employment health checkup is enclosed as <b>Annexure -VI (b)</b> .

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**IX. Corporate Environment Responsibility:**

S.N.	Conditions	Compliance status
i.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1 <sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.	Compliance w.r.t Corporate Environment Responsibility is enclosed as <b>Annexure - VII</b> .
ii.	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe 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/ conditions and/ or shareholders/ stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six- monthly report.	Tata Steel's Central Environmental Policy is followed by Metaliks division. Copy is enclosed as <b>Annexure-VIII</b>
iii.	A separate Environmental Cell both at the project and company head level, with qualified personnel shall be set up under the control of senior Executive, who will report directly to the head of the organization.	<p>A separate Environment Management Cell has already been set up for with a permanent qualified employee to execute environment protection measures related activities under the control of Executive In-Charge of the unit.</p> <p>The Corporate Environment Management Cell of Tata Steel, Jamshedpur works, headed by Chief - Environment and respective Heads - Environment also monitors and supervises the environmental activities of the Metaliks division at a regular basis.</p>
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.	Year wise action plan for implementing EMP and environmental conditions with responsibility matrix has been prepared and reviewed from time to time. Funds have been earmarked towards capital as well as recurring cost for environment protection measures to implement the conditions stipulated by MoEF&CC. The capital investment & action plan on environment protection is enclosed as <b>Annexure - IX</b> . Funds so provided are not diverted for any other purpose.

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v.	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Self- environmental audit is conducted as a part of the surveillance audit & internal audit as per Environment Management System requirement. Audit as per the requirement of ISO 14001:2015 is being carried out. Third party environmental audit has been carried out through accredited agency.
vi.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Sponge Iron Plants shall be implemented.	Not applicable.

**X. Miscellaneous:**

S.N.	Conditions	Compliance status
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 in at least 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.	Had been complied.
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.	A copy of the environmental clearance had been submitted to the head of local bodies in addition to the relevant offices .
iii.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Compliance condition status of Environment clearance has been uploaded along with monitoring data on company website on half yearly basis.
iv.	The project proponent shall monitor the criteria pollutants level namely; PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> (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.	Complied at regular interval. Display of ambient & stack emission reports have been displayed at plant main gate. The same is being uploaded as a part of six- monthly compliance report.

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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 Environment, Forest & Climate Change at environment clearance portal.	Six-monthly reports on the status of the compliance of the stipulated environmental conditions have been uploaded on the website of MoEFCC portal.
vi.	The project proponent shall submit the environmental 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.	Environment statement has been submitted to the concerned State Pollution control Board in FORM-V vide letter no. TSLMD/ENV/24-09/35 dated: 27.09.2024 and same has been uploaded on the company website.
vii.	The project proponent shall inform the Regional as well as the Ministry, 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.	Has been complied.
viii.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Agreed for the same
ix.	The project 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 Expert Appraisal Committee.	Is being complied. The same is also a part of the Corporate Environment Responsibility enclosed as <b>Annexure - VII</b> .
x.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests & Climate Change (MoEF&CC).	Noted for compliance.
xi.	Concealing factual data or submission of false/ fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted for compliance.
xii.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted for compliance.

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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 for compliance.
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 for compliance.
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 alongwith their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/ High Courts and any other Court of Law relating to the subject matter.	Noted for compliance.
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 for compliance.



## Test Report



TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.001  
 ULR No : TC704724100002147F  
 Report Control No : KER0000223597

Issue Date : 31/07/2024  
 JOE No : KE24-001356

### Customer Provided Information

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
 Customer Name : TATA STEEL LIMITED  
 Customer Address : METALIKS DIVISION KHARAGPUR  
 : SAMRAIPUR, GOKULPUR  
 City : PASCHIM MEDINIPUR  
 Postal Code : 721301  
 Country : INDIA  
 Sampling Date : 16/07/2024  
 Sampling Location : NEAR PIG IRON YARD  
 Sampling Method : SO-IN-MUL-TE-176  
 Sample Description : WORKZONE AIR QUALITY MONITORING

### Lab Provided Information

Sample Type : WORKZONE  
 Received : 25/07/2024  
 Test Start/End Date : 25/07/2024 - 30/07/2024

### NABL Accredited Tests

				Requirement/Limit FACTORY ACT 1948	
Analysis		Method	Result	Unit	
					MinMax
NABL Group :	Atmospheric Pollution	Work Environment and Indoor Air Quality			
DISCIPLINE:	CHEMICAL				
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	200.54	ug/m3	5000	
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	42.5	ug/m3	5000	
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	58.1	ug/m3	6000	

Per pro SGS India Private Ltd

SATYA CHARAN MANNA

Authorized Signatory

\*\*\*\*End of Report\*\*\*\*

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.001-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 16/07/2024  
Sampling Location : NEAR PIG IRON YARD  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	370.97	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.002  
 ULR No : TC704724100002148F  
 Report Control No : KER0000223597

Issue Date : 31/07/2024  
 JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
 Customer Name : TATA STEEL LIMITED  
 Customer Address : METALIKS DIVISION KHARAGPUR  
 : SAMRAIPUR, GOKULPUR  
 City : PASCHIM MEDINIPUR  
 Postal Code : 721301  
 Country : INDIA  
 Sampling Date : 16/07/2024  
 Sampling Location : BETWEEN SPCM 1 & 2 AREA  
 Sampling Method : SO-IN-MUL-TE-176  
 Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
 Received : 25/07/2024  
 Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis				Requirement/Limit	
				FACTORY ACT 1948	
Method		Result		Unit	
				Min	Max
NABL Group :	Atmospheric Pollution	Work Environment and Indoor Air Quality			
DISCIPLINE:	CHEMICAL				
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	429.01	ug/m3	5000	
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	45.6	ug/m3	5000	
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	73.6	ug/m3	6000	

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.002-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 16/07/2024  
Sampling Location : BETWEEN SPCM 1 & 2 AREA  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	2118.22	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.003  
 ULR No : TC704724100002149F  
 Report Control No : KER0000223597

Issue Date : 31/07/2024  
 JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
 Customer Name : TATA STEEL LIMITED  
 Customer Address : METALIKS DIVISION KHARAGPUR  
 : SAMRAIPUR, GOKULPUR  
 City : PASCHIM MEDINIPUR  
 Postal Code : 721301  
 Country : INDIA  
 Sampling Date : 16/07/2024  
 Sampling Location : NEAR NEW OXYGEN PLANT(ELLENBARRIE)  
 Sampling Method : SO-IN-MUL-TE-176  
 Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
 Received : 25/07/2024  
 Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	127.11	ug/m3		5000
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	38.0	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	37.0	ug/m3		6000

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Report No : KE24-001356.003-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 16/07/2024  
Sampling Location : NEAR NEW OXYGEN PLANT(ELLENBARRIE)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	874.99	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.004  
ULR No : TC704724100002150F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 17/07/2024  
Sampling Location : FS-5 DISCHARGE POINT(RMHS-2)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group :	Atmospheric Pollution	Work Environment and Indoor Air Quality			
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	28.5	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	79.2	ug/m3		6000

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Report No : KE24-001356.004-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 17/07/2024  
Sampling Location : FS-5 DISCHARGE POINT(RMHS-2)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	1249.93	ug/m3		5000
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	6009.28	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.008  
ULR No : TC704724100002154F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 17/07/2024  
Sampling Location : F5 & 4 DISCHARGE POINT (RMHS-1)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	595.76	ug/m3		5000
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	34.3	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	53.4	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.008-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 17/07/2024  
Sampling Location : F5 & 4 DISCHARGE POINT (RMHS-1)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	3996.34	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.010  
ULR No : TC704724100002156F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024  
Sampling Location : NEAR TAIL ESP  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group :	Atmospheric Pollution	Work Environment and Indoor Air Quality			
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	27.6	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	55.1	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.010-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024  
Sampling Location : NEAR TAIL ESP  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	1749.71	ug/m3		5000
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	8664.79	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.011  
ULR No : TC704724100002157F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024  
Sampling Location : NEAR CAST HOUSE-1  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group :	Atmospheric Pollution	Work Environment and Indoor Air Quality			
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	38.4	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	57.7	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.011-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024  
Sampling Location : NEAR CAST HOUSE-1  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	1932.61	ug/m3		5000
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	8532.24	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.012  
ULR No : TC704724100002158F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024  
Sampling Location : NEAR COAL YARD  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group :	Atmospheric Pollution	Work Environment and Indoor Air Quality			
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	40.7	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	78.3	ug/m3		6000

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Report No : KE24-001356.012-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024  
Sampling Location : NEAR COAL YARD  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	1235.07	ug/m3		5000
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	6659.91	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.013  
ULR No : TC704724100002159F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024  
Sampling Location : NEAR HEAD ESP  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group :	Atmospheric Pollution	Work Environment and Indoor Air Quality			
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	46.5	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	81.7	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.013-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024  
Sampling Location : NEAR HEAD ESP  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	1731.34	ug/m3		5000
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	3700.73	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.014  
ULR No : TC704724100002160F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024  
Sampling Location : NEAR CAST HOUSE -2  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group :	Atmospheric Pollution	Work Environment and Indoor Air Quality			
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	52.4	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	83.9	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.014-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024  
Sampling Location : NEAR CAST HOUSE -2  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	1218.10	ug/m3		5000
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	4275.40	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.015  
ULR No : TC704724100002161F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR INDUCTION FURNACE & MAHNESIUM CONVERTER AREA (DIP-1)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group :	Atmospheric Pollution	Work Environment and Indoor Air Quality			
DISCIPLINE:	CHEMICAL				
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	311.70	ug/m3		5000
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	59.2	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	74.9	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.015-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED

Customer Address : METALIKS DIVISION KHARAGPUR

: SAMRAIPUR, GOKULPUR

City : PASCHIM MEDINIPUR

Postal Code : 721301

Country : INDIA

Sampling Date : 19/07/2024

Sampling Location : NEAR INDUCTION FURNACE &amp; MAHNESIUM CONVERTER AREA (DIP-1)

Sampling Method : SO-IN-MUL-TE-176

Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE

Received : 25/07/2024

Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	3629.99	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.016  
ULR No : TC704724100002162F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR ZINC COATING FL-1  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	457.97	ug/m3	5000	
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	42.5	ug/m3	5000	
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	71.9	ug/m3	6000	

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.016-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR ZINC COATING FL-1  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	2678.28	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.017  
ULR No : TC704724100002163F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR BITUMEN COATING FL-1  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	106.70	ug/m3	5000	
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	49.7	ug/m3	5000	
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	74.4	ug/m3	6000	

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Report No : KE24-001356.017-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR BITUMEN COATING FL-1  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	672.66	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.018  
ULR No : TC704724100002164F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR LADDLE PRE HEATING AREA  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	291.19	ug/m3	5000	
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	38.9	ug/m3	5000	
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	69.7	ug/m3	6000	

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.018-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR LADDLE PRE HEATING AREA  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	1382.38	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.019  
ULR No : TC704724100002165F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR EXTERNAL COATING FL-3  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	211.78	ug/m3	5000	
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	30.3	ug/m3	5000	
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	68.0	ug/m3	6000	

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.019-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR EXTERNAL COATING FL-3  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	494.31	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.020  
ULR No : TC704724100002166F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR ZINC COATING FL-3  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	295.33	ug/m3	5000	
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	29.4	ug/m3	5000	
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	64.1	ug/m3	6000	

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.020-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR ZINC COATING FL-3  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	1862.90	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.021  
ULR No : TC704724100002167F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 20/07/2024  
Sampling Location : DI PLANT DISPATCH YARD  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	346.57	ug/m3		5000
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	41.6	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	69.7	ug/m3		6000

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Report No : KE24-001356.021-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 20/07/2024  
Sampling Location : DI PLANT DISPATCH YARD  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	1577.24	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.022  
ULR No : TC704724100002168F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 20/07/2024  
Sampling Location : NEAR BITUMEN EXTERNAL COATING FL-4(DIP-1)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	160.91	ug/m3		5000
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	25.8	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	56.8	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.022-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 20/07/2024  
Sampling Location : NEAR BITUMEN EXTERNAL COATING FL-4(DIP-1)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	1030.29	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.023  
ULR No : TC704724100002169F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 20/07/2024  
Sampling Location : NEAR CORE SHOP (DIP-1)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group :	Atmospheric Pollution	Work Environment and Indoor Air Quality			
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	31.2	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	62.8	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.023-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 20/07/2024  
Sampling Location : NEAR CORE SHOP (DIP-1)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	1149.69	ug/m3		5000
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	4048.92	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.024  
ULR No : TC704724100002170F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 20/07/2024  
Sampling Location : NEAR BITUMEN EXTERNAL COATING FL-4 & FL-5(DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis				Requirement/Limit FACTORY ACT 1948	
Method	Result	Unit			
NABL Group : Atmospheric Pollution	Work Environment and Indoor Air Quality				
DISCIPLINE: CHEMICAL					
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	110.98	ug/m3	5000	
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	29.4	ug/m3	5000	
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	54.6	ug/m3	6000	

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.024-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED

Customer Address : METALIKS DIVISION KHARAGPUR

: SAMRAIPUR, GOKULPUR

City : PASCHIM MEDINIPUR

Postal Code : 721301

Country : INDIA

Sampling Date : 20/07/2024

Sampling Location : NEAR BITUMEN EXTERNAL COATING FL-4 &amp; FL-5(DIP-2)

Sampling Method : SO-IN-MUL-TE-176

Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE

Received : 25/07/2024

Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	681.21	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.025  
 ULR No : TC704724100002171F  
 Report Control No : KER0000223597

Issue Date : 31/07/2024  
 JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
 Customer Name : TATA STEEL LIMITED  
 Customer Address : METALIKS DIVISION KHARAGPUR  
 : SAMRAIPUR, GOKULPUR  
 City : PASCHIM MEDINIPUR  
 Postal Code : 721301  
 Country : INDIA  
 Sampling Date : 20/07/2024  
 Sampling Location : NEAR CCM AREA(DIP-1)  
 Sampling Method : SO-IN-MUL-TE-176  
 Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
 Received : 25/07/2024  
 Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis				Requirement/Limit FACTORY ACT 1948	
Method	Result	Unit			
NABL Group : Atmospheric Pollution	Work Environment and Indoor Air Quality				
DISCIPLINE: CHEMICAL					
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	478.62	ug/m3	5000	
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	42.0	ug/m3	5000	
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	72.7	ug/m3	6000	

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.025-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 20/07/2024  
Sampling Location : NEAR CCM AREA(DIP-1)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	2681.05	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.026  
ULR No : TC704724100002172F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 20/07/2024  
Sampling Location : NEAR SINTER BUILDING  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	260.44	ug/m3		5000
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	38.4	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	66.3	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.026-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 20/07/2024  
Sampling Location : NEAR SINTER BUILDING  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	3770.49	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.027  
ULR No : TC704724100002173F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024  
Sampling Location : NEAR CCM AREA DIP-2  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	300.91	ug/m3		5000
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	41.1	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	75.7	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.027-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024  
Sampling Location : NEAR CCM AREA DIP-2  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	765.85	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.028  
ULR No : TC704724100002174F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024  
Sampling Location : NEAR CORE SHOP DIP-2  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group :	Atmospheric Pollution	Work Environment and Indoor Air Quality			
DISCIPLINE:	CHEMICAL				
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	383.75	ug/m3		5000
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	32.5	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	68.8	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.028-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024  
Sampling Location : NEAR CORE SHOP DIP-2  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	1186.41	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.029  
ULR No : TC704724100002175F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024  
Sampling Location : NEAR ZINC COATING FL-4(DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

				Requirement/Limit FACTORY ACT 1948	
Analysis	Method	Result	Unit	Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	181.69	ug/m3		5000
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	28.9	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	56.4	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.029-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024  
Sampling Location : NEAR ZINC COATING FL-4(DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	1098.04	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.030  
ULR No : TC704724100002176F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024  
Sampling Location : NEAR MAGNESIUM CONVERTOR AREA(DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	153.67	ug/m3	5000	
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	55.6	ug/m3	5000	
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	74.4	ug/m3	6000	

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.030-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED

Customer Address : METALIKS DIVISION KHARAGPUR

: SAMRAIPUR, GOKULPUR

City : PASCHIM MEDINIPUR

Postal Code : 721301

Country : INDIA

Sampling Date : 22/07/2024

Sampling Location : NEAR MAGNESIUM CONVERTOR AREA(DIP-2)

Sampling Method : SO-IN-MUL-TE-176

Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE

Received : 25/07/2024

Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	640.67	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.031  
ULR No : TC704724100002177F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024  
Sampling Location : NEAR ZINC COATING FL-5(DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	114.28	ug/m3	5000	
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	34.3	ug/m3	5000	
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	58.1	ug/m3	6000	

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.031-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024  
Sampling Location : NEAR ZINC COATING FL-5(DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	510.70	ug/m3		10000

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.032  
ULR No : TC704724100002178F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 23/07/2024  
Sampling Location : NEAR SCRAP YARD  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group :	Atmospheric Pollution	Work Environment and Indoor Air Quality			
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	44.3	ug/m3		5000
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	77.4	ug/m3		6000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.032-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 23/07/2024  
Sampling Location : NEAR SCRAP YARD  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	1022.08	ug/m3		5000
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	2478.31	ug/m3		10000

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.033  
ULR No : TC704724100002179F  
Report Control No : KER0000223597

Issue Date : 31/07/2024  
JOE No : KE24-001356

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 23/07/2024  
Sampling Location : NEAR CPP-4  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
NABL Group : DISCIPLINE:	Atmospheric Pollution CHEMICAL	Work Environment and Indoor Air Quality			
Respirable Suspended Particulate Matter (RSPM)	IS:5182 (Part-23):2006	126.86	ug/m3	5000	
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	29.4	ug/m3	5000	
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	74.0	ug/m3	6000	

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001356.033-B

Issue Date : 31/07/2024

JOE No : KE24-001356

Report Control No : KER0000223597

**Customer Provided Information**

Sample Described by Customer as : WORKZONE AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 23/07/2024  
Sampling Location : NEAR CPP-4  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : WORKZONE AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : WORKZONE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit FACTORY ACT 1948	
				Min	Max
Suspended Particulate Matter (SPM)	IS:5182 (Part-4):Reaff 2005	628.43	ug/m3		10000

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**MONTHLY SUMMARY REPORT OF CONTINUOUS AMBIENT AIR QUALITY  
MONITORING STATION (CAAQMS)**

Month	Apr'24	May'24	Jun'24	Jul'24	Aug'24	Sep'24	Limit
<b>PM<sub>10</sub></b> <b>(µg/m<sup>3</sup>)</b>	90.3	41.9	42.5	49.1	65.3	58.9	<b>100</b>
<b>PM<sub>2.5</sub></b> <b>(µg/m<sup>3</sup>)</b>	51.4	23.3	23.3	27.2	33.4	30.4	<b>60</b>
<b>SO<sub>2</sub></b> <b>(µg/m<sup>3</sup>)</b>	8.5	17.7	21.5	10.7	10.9	11.6	<b>80</b>
<b>NO<sub>2</sub></b> <b>(µg/m<sup>3</sup>)</b>	10.3	11.7	11.8	17.4	9.4	15.9	<b>80</b>
<b>CO</b> <b>(mg/m<sup>3</sup>)</b>	0.58	0.59	0.43	0.86	1.05	1.04	<b>2</b>
<b>O<sub>3</sub></b> <b>(µg/m<sup>3</sup>)</b>	55.4	33.9	34.9	21.2	30.9	30.3	<b>180</b>

## Stack Emission (CEMS) Monthly Average Report

Pig Iron Division						Parameter-Particulate Matter (PM)				
Month	MBF-1 Stove (mg/Nm <sup>3</sup> )	MBF-2 Stove (mg/Nm <sup>3</sup> )	MBF-1 Cast house FES (mg/Nm <sup>3</sup> )	MBF-2 Sinter Daybin- RMHS#2 (mg/Nm <sup>3</sup> )	RMHS-1 Dedusting system (mg/Nm <sup>3</sup> )	RFP Sinter Plant bag filter (mg/Nm <sup>3</sup> )	Head ESP Sinter (mg/Nm <sup>3</sup> )	Tail ESP Sinter (mg/Nm <sup>3</sup> )	Flux Crusher (mg/Nm <sup>3</sup> )	CPP#2 Boiler (mg/Nm <sup>3</sup> )
Apr-24	5.30	2.00	16.20	7.20	19.20	8.30	53.20	14.60	5.40	11.00
May-24	7.80	4.80	16.06	4.58	18.41	2.57	48.16	16.18	2.14	8.67
Jun-24	7.34	15.61	7.46	3.18	15.93	16.26	43.19	8.77	2.36	11.64
Jul-24	19.02	5.06	13.43	6.09	42.40	25.76	42.12	6.08	1.50	7.37
Aug-24	7.10	3.09	2.62	9.91	2.02	13.83	42.42	2.15	1.00	10.49
Sep-24	1.61	2.53	2.10	8.93	1.00	1.48	34.71	1.80	1.00	18.24

Ductile Iron Pipe Division				Parameter- Particulate Matter (PM)					
Month	Magnesium Converter (mg/Nm <sup>3</sup> )	Zinc Coating FL-1 (DN- 80-400) (mg/Nm <sup>3</sup> )	Barrel and Socket grinders FL-1 (mg/Nm <sup>3</sup> )	Zinc Coating FL-2 (DN-400-800) (mg/Nm <sup>3</sup> )	Core Shop/sand cleaning (mg/Nm <sup>3</sup> )	Annealing Furnace (mg/Nm <sup>3</sup> )	WHRB - 8 TPH (mg/Nm <sup>3</sup> )	Zinc Coating FL#3 (mg/Nm <sup>3</sup> )	Tri Grinding FL#3 (mg/Nm <sup>3</sup> )
Apr-24	8.90	1.70	2.40	..	1.80	6.63	2.00	7.70	11.19
May-24	7.51	1.84	1.89	..	2.50	4.32	2.17	1.17	8.77
Jun-24	8.71	1.54	1.39	1.15	1.36	5.59	2.91	1.00	5.36
Jul-24	4.06	2.01	1.25	8.08	1.58	4.26	2.09	1.89	1.00
Aug-24	4.46	1.68	1.00	12.24	1.47	4.35	1.00	1.00	1.00
Sep-24	3.98	1.58	1.00	28.92	1.37	4.32	3.10	1.52	1.00



## Test Report



TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.001  
 ULR No : TC704724100002180F  
 Report Control No : KER0000223525

Issue Date : 31/07/2024  
 JOE No : KE24-001363

### Customer Provided Information

Sample Described by Customer as : FLUE GAS  
 Customer Name : TATA STEEL LIMITED  
 Customer Address : METALIKS DIVISION KHARAGPUR  
 : SAMRAIPUR, GOKULPUR  
 City : PASCHIM MEDINIPUR  
 Postal Code : 721301  
 Country : INDIA  
 Sampling Date : 16/07/2024 14:40 - 15:20HRS  
 Sampling Location : CPP-2 STACK  
 Sampling Method : SO-IN-MUL-TE-176  
 Stack Connected to : BOILER NO 2  
 Emission Due to : COMBUSTION OF BFG  
 Capacity : 22TPH  
 Running Load : 2350KW  
 Fuel Used : BFG(BLAST FURNACE GAS)  
 Fuel Consumption : 22000 NM3/HR (BFG)  
 Height of Stack from : 40 M  
 Ground Level :  
 Port Hole Available : 01  
 Diameter of Stack : 2.6 M  
 Construction : MS  
 Material of Stack :  
 Type of Stack : Circular  
 Height of Sampling : 36. M  
 Point from GL :  
 Platform & Ladder at : Yes  
 Stack :

### Lab Provided Information

Sample Type : FLUE GAS  
 Received : 25/07/2024  
 Test Start/End Date : 25/07/2024 - 30/07/2024

### NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	25.2	%		

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.001  
ULR No : TC704724100002180F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
DISCIPLINE: CHEMICAL					
Moisture	IS 11255 Part 3:1985	3.53	%		
Temperature	IS 11255 Part 3:1985	120	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	4.83	m/s		
Flow rate	IS 11255 Part 3:1985	66409	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	5.4	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	28.00	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	20.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	5.64	mg/Nm3		100

Remark : All parameters are done at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.002  
ULR No : TC704724100002181F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 17/07/2024 11:00 - 11:40HRS  
Sampling Location : MBF -1 STOVE STACK  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : MBF -1 STOVE  
Emission Due to : COMBUSTION OF BFG  
Height of Stack from : 45M  
Ground Level  
Port Hole Available : 02  
Pollution Control : NIL  
Device  
Diameter of Stack : 2.0 M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 36.2.0M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Fuel Used : BAG BLAST FURNACE GAS  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	27.5	%		

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.002  
ULR No : TC704724100002181F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
DISCIPLINE: CHEMICAL					
Moisture	IS 11255 Part 3:1985	3.44	%		
Temperature	IS 11255 Part 3:1985	148	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	12.73	m/s		
Flow rate	IS 11255 Part 3:1985	96832	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	5.6	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	12.00	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	40.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	19.02	mg/Nm3		100

Remark : All parameters are done at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.003  
ULR No : TC704724100002182F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 17/07/2024 14:50 - 15:30HR  
Sampling Location : MBF-2 STOVE STACK  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : MBF-2 STOVE  
Emission Due to : COMBUSTION OF BFG  
Height of Stack from : 45M  
Ground Level  
Port Hole Available : 02  
Diameter of Stack : 2.0 M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 36.2 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Fuel Used : BFG (BLAST FURNACE GAS)  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	28.4	%		
DISCIPLINE:	CHEMICAL				

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.003  
ULR No : TC704724100002182F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	3.48	%		
Temperature	IS 11255 Part 3:1985	164	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	11.86	m/s		
Flow rate	IS 11255 Part 3:1985	86907	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	3.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	45.00	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	19.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	0.6	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	5.06	mg/Nm3		100

Remark : All parameters are done at site except PM.

Per pro SGS India Private Ltd

SATYA CHARAN MANNA

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.004  
ULR No : TC704724100002183F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024 10:50 - 11:30HRS  
Sampling Location : MAGNESIUM CONVERTOR & INDUCTION FURNACE COMMON STACK (DIP 1)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : MAGNESIUM CONVERTOR & INDUCTION FURNACE BAG FILTER  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from : 30 M  
Ground Level  
Port Hole Available : 2  
Pollution Control : BAG FILTER  
Device  
Diameter of Stack : 0.7M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 20.0 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.004  
 ULR No : TC704724100002183F  
 Report Control No : KER0000223525

Issue Date : 31/07/2024  
 JOE No : KE24-001363

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	1.8	%		
Temperature	IS 11255 Part 3:1985	40	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	6.28	m/s		
Flow rate	IS 11255 Part 3:1985	7829	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	34.55	mg/Nm3		100

Remark : All parameters are done at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.005  
ULR No : TC704724100002184F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024 12:00 - 12:40HRS  
Sampling Location : BARREL & SOCKET GRINDING FL 1 STACK  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : BARREL & SOCKET GRINDING FL 1  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from : 30 M  
Ground Level  
Port Hole Available : 02  
Pollution Control : BAG FILTER  
Device  
Diameter of Stack : 0.9M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 22 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.005  
ULR No : TC704724100002184F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	1.98	%		
Temperature	IS 11255 Part 3:1985	38	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	8.28	m/s		
Flow rate	IS 11255 Part 3:1985	17536	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	5.98	mg/Nm3		100

Remark : All parameters are done at site except PM.

Per pro SGS India Private Ltd

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.006  
ULR No : TC704724100002185F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024 16:50 -17:20HRS  
Sampling Location : TRI GRINDING FL-3 STACK  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : TRI GRINDING FL-3 BAG FILTER  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from : 30.0 M  
Ground Level  
Port Hole Available : 02  
Pollution Control : BAG FILTER  
Device  
Diameter of Stack : 0.6 M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 22 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.006  
ULR No : TC704724100002185F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	1.8	%		
Temperature	IS 11255 Part 3:1985	44	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	7.22	m/s		
Flow rate	IS 11255 Part 3:1985	6678	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.9	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	4.92	mg/Nm3		100

Remark : All parameters are done at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.007  
ULR No : TC704724100002186F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024 12:55 -13:35HRS  
Sampling Location : ZINC COATING M/C FL-1 STACK  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : ZINC COATING M/C FL-1  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from : 30.0 M  
Ground Level  
Port Hole Available : 01  
Pollution Control : BAG FILTER  
Device  
Diameter of Stack : 0.9 M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 24.0 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.007  
ULR No : TC704724100002186F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	1.98	%		
Temperature	IS 11255 Part 3:1985	44	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	6.68	m/s		
Flow rate	IS 11255 Part 3:1985	13886	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	5.09	mg/Nm3		100

Remark : All parameters are done at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.008  
ULR No : TC704724100002187F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024 09:55 -10:35HRS  
Sampling Location : ZINC COATING M/C FL-2 STACK  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : ZINC COATING M/C FL-2  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from : 30M  
Ground Level  
Port Hole Available : 02  
Diameter of Stack : 1.2M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 22 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS  
Pollution Control : BAG FILTER & CYCLONE SEPERATOR  
Device

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.008  
ULR No : TC704724100002187F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	1.79	%		
Temperature	IS 11255 Part 3:1985	41	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	5.39	m/s		
Flow rate	IS 11255 Part 3:1985	20128	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	5.04	mg/Nm3		100

Remark : All parameters are done at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.009  
ULR No : TC704724100002188F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024 10:45 - 11:25HRS  
Sampling Location : TRI GRINDING FL-2 STACK  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : TRI GRINDING FL-2  
Emission Due to : DESUSTING PROCESS  
Height of Stack from : 30.0 M  
Ground Level  
Port Hole Available : 02  
Diameter of Stack : 1.2 M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 22.0 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS  
Pollution Control : BAG FILTER  
Device

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.009  
ULR No : TC704724100002188F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	1.8	%		
Temperature	IS 11255 Part 3:1985	42	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	5.11	m/s		
Flow rate	IS 11255 Part 3:1985	19025	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	4.43	mg/Nm3		100

Remark : All parameters are done at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.010  
ULR No : TC704724100002189F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024 12:00 - 12:40HRS  
Sampling Location : WHR BOILER STACK (DIP-1)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : WHR BOILER  
Emission Due to : ANNEALING FURNACE WASTE HEAT  
Height of Stack from : 30.0 M  
Ground Level  
Port Hole Available : 02  
Pollution Control : NIL  
Device  
Diameter of Stack : 1.1M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 20 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	14.5	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.010  
ULR No : TC704724100002189F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	2.48	%		
Temperature	IS 11255 Part 3:1985	192	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	7.96	m/s		
Flow rate	IS 11255 Part 3:1985	16743	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	8.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	24.00	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	14.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	4.20	mg/Nm3		100

Remark : All parameters are done at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.011  
ULR No : TC704724100002190F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024 12:00 - 12:40HRS  
Sampling Location : ANNEALING FURNACE STACK  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : ANNEALING FURNACE  
Emission Due to : COMBUSTION OF BFG  
Height of Stack from : 30.0 M  
Ground Level  
Port Hole Available : 02  
Pollution Control : NIL  
Device  
Diameter of Stack : 1.2M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 20 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	15.3	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.011  
ULR No : TC704724100002190F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	2.13	%		
Temperature	IS 11255 Part 3:1985	82	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	7.71	m/s		
Flow rate	IS 11255 Part 3:1985	25375	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	7.9	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	20.00	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	12.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	3.40	mg/Nm3		100

Remark : All parameters are done at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.012  
ULR No : TC704724100002191F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 22/07/2024 12:00 - 12:40HRS  
Sampling Location : SAND CLEANING SYSTEM STACK (CORE SHOP)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : SAND CLEANING SYSTEM BAG FILTER  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from : 30.0 M  
Ground Level  
Port Hole Available : 02  
Pollution Control : BAG FILTER  
Device  
Diameter of Stack : 0.6M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 22 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001363.012  
ULR No : TC704724100002191F  
Report Control No : KER0000223525

Issue Date : 31/07/2024  
JOE No : KE24-001363

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	1.87	%		
Temperature	IS 11255 Part 3:1985	43	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	5.69	m/s		
Flow rate	IS 11255 Part 3:1985	5279	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.9	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	5.09	mg/Nm3		100

Remark : All parameters are done at site except PM.

Per pro SGS India Private Ltd

SATYA CHARAN MANNA

Authorized Signatory

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.001  
ULR No : TC704724100002124F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 17/07/2024 13:00 -13:40hrs  
Sampling Location : MBF-1 CAST HOUSE FES STACK  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : MBF-1 CAST HOUSE FES STACK  
Emission Due to : EXTRACTION OF CAST HOUSE (MBF# 1) FUMES  
Height of Stack from : 43.6 M  
Ground Level  
Port Hole Available : 02  
Pollution Control : BAG FILTER  
Device  
Diameter of Stack : 2.0 M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 38.5M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

Page 1 of 2

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.001  
ULR No : TC704724100002124F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	2	%		
Temperature	IS 11255 Part 3:1985	40	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	11.31	m/s		
Flow rate	IS 11255 Part 3:1985	114504	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.7	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	4.00	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	8.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		
Particulate Matter (PM)	IS:11255 (Part-1):1985	50.63	mg/Nm3		100

Remark : All parameters are done at site except PM

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.002  
ULR No : TC704724100002125F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 17/07/2024 12:05 - 12:45HRS  
Sampling Location : SINTER STORAGE BIN STACK (RMHS #1)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : SINTER STORAGE BIN (RMHS#1)  
Emission Due to : PROCESS ACTIVITY  
Height of Stack from : 40.0 M  
Ground Level  
Port Hole Available : 02  
Pollution Control : BAG FILTER  
Device  
Diameter of Stack : 2.3M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 25.0M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.002  
ULR No : TC704724100002125F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	2.03	%		
Temperature	IS 11255 Part 3:1985	40	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	10.92	m/s		
Flow rate	IS 11255 Part 3:1985	149879	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	6.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		
Particulate Matter (PM)	IS:11255 (Part-1):1985	32.01	mg/Nm3		100

Remark : All parameters are done at site except PM

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.003  
ULR No : TC704724100002126F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 17/07/2024 16:00 - 16:40HRS  
Sampling Location : SINTER STORAGE BIN ( RMHS#2 )  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : SINTER STORAGE BIN ( RMHS#2 )  
Emission Due to : PROCESS ACTIVITY  
Height of Stack from : 30M  
Ground Level  
Port Hole Available : 02  
Pollution Control : BAG FILTER  
Device  
Diameter of Stack : 1.1M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 25M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.003  
 ULR No : TC704724100002126F  
 Report Control No : KER0000223431

Issue Date : 30/07/2024  
 JOE No : KE24-001364

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	2.02	%		
Temperature	IS 11255 Part 3:1985	45	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	11.09	m/s		
Flow rate	IS 11255 Part 3:1985	34286	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.7	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	4.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		
Particulate Matter (PM)	IS:11255 (Part-1):1985	5.23	mg/Nm3		100

Remark : All parameters are done at site except PM

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.004  
ULR No : TC704724100002127F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024 10:40 - 11:20HRS  
Sampling Location : HEAD ESP STACK(SINTER PLANT)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : HEAD ESP  
Emission Due to : COMBUSTION OF BFG (SINTER PRODUCTION)  
Height of Stack from : 45 M  
Ground Level  
Port Hole Available : 4  
Pollution Control : ESP  
Device  
Diameter of Stack : 2.3 M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 40.0 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	6.4	%		
DISCIPLINE: CHEMICAL					

Page 1 of 2

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.004  
ULR No : TC704724100002127F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	2.38	%		
Temperature	IS 11255 Part 3:1985	127	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	18.43	m/s		
Flow rate	IS 11255 Part 3:1985	197259	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	13.2	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	115.00	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	221.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	0.7	%		
Particulate Matter (PM)	IS:11255 (Part-1):1985	56.30	mg/Nm3		100

Remark : All parameters are done at site except PM

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.005  
ULR No : TC704724100002128F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024 11:40 - 12:20HRS  
Sampling Location : TAIL ESP STACK (SINTER PLANT)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : TAIL ESP  
Emission Due to : DESTUSTING PROCESS  
Height of Stack from : 40 M  
Ground Level  
Port Hole Available : 04  
Pollution Control : ESP  
Device  
Diameter of Stack : 2.32M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 36 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

Page 1 of 2

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.005  
ULR No : TC704724100002128F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	2	%		
Temperature	IS 11255 Part 3:1985	120	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	13.61	m/s		
Flow rate	IS 11255 Part 3:1985	151406	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	6.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		
Particulate Matter (PM)	IS:11255 (Part-1):1985	20.94	mg/Nm3		100

Remark : All parameters are done at site except PM

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.006  
ULR No : TC704724100002129F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024 12:50 - 13:30HRS  
Sampling Location : FLUX STACK (SINTER PLANT)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : FLUX BAG FILTER  
Emission Due to : PROCESS ACTIVITY(LIME STONE, DOLOMITE PYROXINITE CRUSHING)  
Height of Stack from : 30.0 M  
Ground Level  
Port Hole Available : 01  
Pollution Control : BAG FILTER  
Device  
Diameter of Stack : 1.1M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 17.0 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

Page 1 of 2

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.006  
ULR No : TC704724100002129F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	2	%		
Temperature	IS 11255 Part 3:1985	39	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	11.46	m/s		
Flow rate	IS 11255 Part 3:1985	36107	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.9	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		
Particulate Matter (PM)	IS:11255 (Part-1):1985	5.74	mg/Nm3		100

Remark : All parameters are done at site except PM

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.007  
ULR No : TC704724100002130F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024 14:30 - 15:10HRS  
Sampling Location : RFP BAG FILTER STACK(SINTER PLANT)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : RFP BAG FILTER  
Emission Due to : PROCESS ACTIVITY (RAW MATERIAL PROCESS)  
Height of Stack from : 30.0 M  
Ground Level  
Port Hole Available : 01  
Pollution Control : BAG FILTER  
Device  
Diameter of Stack : 1.4 M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 17.5 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.007  
ULR No : TC704724100002130F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	2.04	%		
Temperature	IS 11255 Part 3:1985	42	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	12.07	m/s		
Flow rate	IS 11255 Part 3:1985	61058	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		
Particulate Matter (PM)	IS:11255 (Part-1):1985	92.98	mg/Nm3		100

Remark : All parameters are done at site except PM

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.008  
ULR No : TC704724100002131F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024 16:50 - 17:30HRS  
Sampling Location : MBF-2 CAST HOUSE FES STACK  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : MBF-2 CAST HOUSE  
Emission Due to : EXTRACTION OF CAST HOUSE (MBF-2) FUMES  
Height of Stack from : 32.0 M  
Ground Level  
Port Hole Available : 01  
Pollution Control : BAG FILTER  
Device  
Diameter of Stack : 2.3M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Height of Sampling : 19 M  
Point from GL  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group : Atmospheric Pollution	Stack emission				
Carbon Dioxide (CO <sub>2</sub> )	USEPA METHOD 3A	<0.2	%		
DISCIPLINE: CHEMICAL					

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001364.008  
ULR No : TC704724100002131F  
Report Control No : KER0000223431

Issue Date : 30/07/2024  
JOE No : KE24-001364

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	2	%		
Temperature	IS 11255 Part 3:1985	40	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	8.03	m/s		
Flow rate	IS 11255 Part 3:1985	110314	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	5.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.1	%		
Particulate Matter (PM)	IS:11255 (Part-1):1985	5.22	mg/Nm3		100

Remark : All parameters are done at site except PM

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SATYA CHARAN MANNA

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\*\*\*\*End of Report\*\*\*\*

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001365.001  
ULR No : TC704724100002120F  
Report Control No : KER0000223388

Issue Date : 30/07/2024  
JOE No : KE24-001365

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 16/07/2024 15:35 to 16:10hrs  
Sampling Location : DG SET NO. 1 ( 1250 KVA)  
Stack Connected to : DG SET NO. 1 ( 1250 KVA)  
Emission Due to : BURNING OF HSD  
Running Load : 670KVA  
Capacity : 1250KVA  
Fuel Used : HSD  
Fuel Consumption : 120 LTR/HR  
Height of Stack from : 19.5 M  
Ground Level :  
Port Hole Available : ONE  
Diameter of Stack : 0.2M  
Construction : MS  
Material of Stack :  
Type of Stack : Circular  
Height of Sampling : 12.5M  
Point from GL :  
Platform & Ladder at : Yes  
Stack :  
Sampling Method : SO IN MUL TE 176  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
DISCIPLINE:	CHEMICAL				

Page 1 of 2

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001365.001  
ULR No : TC704724100002120F  
Report Control No : KER0000223388

Issue Date : 30/07/2024  
JOE No : KE24-001365

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	1.51	%		
Temperature	IS 11255 Part 3:1985	352	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	20.220	m/s		
Flow rate	IS 11255 Part 3:1985	1058	Nm3/Hrs		
Carbon Dioxide (CO2)	USEPA METHOD 3A	7.9	%		
Oxygen (O2)	USEPA ( Method 3A)	11.6	%		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.20	%		1
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	8.00	mg/Nm3		
Particulate Matter (PM)	IS:11255 (Part-1&3):1985	19.53	mg/Nm3		150
Nitrogen Oxides	USEPA METHOD (7E)	368.0	mg/Nm3		

Remark : All parameters Analysed at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001365.002  
ULR No : TC704724100002121F  
Report Control No : KER0000223388

Issue Date : 30/07/2024  
JOE No : KE24-001365

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 16/07/2024 16:15 to 16:50hrs  
Sampling Location : DG SET NO. 2( 1250 KVA)  
Stack Connected to : DG SET NO. 2( 1250 KVA)  
Emission Due to : BURNING OF HSD  
Capacity : 1250KVA  
Running Load : 700KVA  
Fuel Used : HSD  
Fuel Consumption : 120LTR/HR  
Height of Stack from : 19.5 M  
Ground Level :  
Port Hole Available : ONE  
Diameter of Stack : 0.2M  
Construction : MS  
Material of Stack :  
Type of Stack : Circular  
Height of Sampling : 12.0M  
Point from GL :  
Platform & Ladder at : Yes  
Stack :  
Sampling Method : SO IN MUL TE 176  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
DISCIPLINE:	CHEMICAL				

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001365.002  
ULR No : TC704724100002121F  
Report Control No : KER0000223388

Issue Date : 30/07/2024  
JOE No : KE24-001365

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	1.51	%		
Temperature	IS 11255 Part 3:1985	365	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	21.440	m/s		
Flow rate	IS 11255 Part 3:1985	1099	Nm3/Hrs		
Carbon Dioxide (CO2)	USEPA METHOD 3A	8.1	%		
Oxygen (O2)	USEPA ( Method 3A)	11.4	%		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.20	%		1
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	11.00	mg/Nm3		
Particulate Matter (PM)	IS:11255 (Part-1&3):1985	15.78	mg/Nm3		150
Nitrogen Oxides	USEPA METHOD (7E)	379.0	mg/Nm3		

Remark : All parameters Analysed at site except PM.

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001365.003  
ULR No : TC704724100002122F  
Report Control No : KER0000223388

Issue Date : 30/07/2024  
JOE No : KE24-001365

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 19/07/2024 14:50 to 15:30hrs  
Sampling Location : DG SET ( 600 KVA)  
Stack Connected to : DG SET ( 600 KVA)  
Emission Due to : BURNING OF HSD  
Running Load : 400KVA  
Capacity : 600KVA  
Fuel Used : HSD  
Fuel Consumption : 40-50 LTR/HR  
Height of Stack from : 9.0M  
Ground Level :  
Port Hole Available : ONE  
Diameter of Stack : 0.15M  
Construction : MS  
Material of Stack :  
Type of Stack : Circular  
Height of Sampling : 5.0M  
Point from GL :  
Platform & Ladder at : Yes  
Stack :  
Sampling Method : SO IN MUL TE 176  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
DISCIPLINE:	CHEMICAL				

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001365.003  
ULR No : TC704724100002122F  
Report Control No : KER0000223388

Issue Date : 30/07/2024  
JOE No : KE24-001365

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	1.50	%		
Temperature	IS 11255 Part 3:1985	291	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	19.650	m/s		
Flow rate	IS 11255 Part 3:1985	641	Nm3/Hrs		
Carbon Dioxide (CO2)	USEPA METHOD 3A	6.8	%		
Oxygen (O2)	USEPA ( Method 3A)	12.7	%		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.20	%		1
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	7.00	mg/Nm3		
Particulate Matter (PM)	IS:11255 (Part-1&3):1985	28.00	mg/Nm3		150
Nitrogen Oxides	USEPA METHOD (7E)	247.0	mg/Nm3		

Remark : All parameters Analysed at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001365.004  
ULR No : TC704724100002123F  
Report Control No : KER0000223388

Issue Date : 30/07/2024  
JOE No : KE24-001365

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 23/07/2024 16:30 to 17:10hrs  
Sampling Location : CPP4 STACK  
Stack Connected to : CPP-4 STACK  
Emission Due to : COKE OVEN WASTE HEAT & BFG  
Running Load : 11.2MW  
Capacity : 15MW  
Fuel Used : BFG  
Fuel Consumption : BFG 20000 NM3/M  
Height of Stack from : 40.0M  
Ground Level :  
Port Hole Available : 2  
Diameter of Stack : 2.15M  
Construction : MS  
Material of Stack :  
Type of Stack : Circular  
Height of Sampling : 30M  
Point from GL :  
Platform & Ladder at : Yes  
Stack :  
Sampling Method : SO IN MUL TE 176  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
DISCIPLINE:	CHEMICAL				

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001365.004  
ULR No : TC704724100002123F  
Report Control No : KER0000223388

Issue Date : 30/07/2024  
JOE No : KE24-001365

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Moisture	IS 11255 Part 3:1985	2.96	%		
Temperature	IS 11255 Part 3:1985	159	°C		
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	12.120	m/s		
Flow rate	IS 11255 Part 3:1985	104296	Nm3/Hrs		
Carbon Dioxide (CO2)	USEPA METHOD 3A	5.8	%		
Oxygen (O2)	USEPA ( Method 3A)	13.8	%		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.20	%		1
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	149.00	mg/Nm3		
Particulate Matter (PM)	IS:11255 (Part-1&3):1985	42.83	mg/Nm3		150
Nitrogen Oxides	USEPA METHOD (7E)	78.0	mg/Nm3		

Remark : All parameters Analysed at site except PM.

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.001  
ULR No : TC704724100002060F  
Report Control No : KER0000223433

Issue Date : 30/07/2024  
JOE No : KE24-001358

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 23/07/2024 11:15 -11:55HRS  
Sampling Location : MAGNESIUM TREATMENT CONVERTER STACK (DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : MAGNESIUM TREATMENT CONVERTER BAG FILTER  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from Ground Level : 36 M  
Height of Sampling Point from GL : 24 M  
Port Hole Available : 02  
Pollution Control : BAG FILTER AND CYCLONE SEPERATOR  
Device :  
Diameter of Stack : 1.1 M  
Construction : MS  
Material of Stack :  
Type of Stack : Circular  
Platform & Ladder at : Yes  
Stack :  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE:	CHEMICAL				
Moisture	IS 11255 Part 3:1985	2.02	%		
Temperature	IS 11255 Part 3:1985	50	°C		

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.001  
ULR No : TC704724100002060F  
Report Control No : KER0000223433

Issue Date : 30/07/2024  
JOE No : KE24-001358

## NABL Accredited Tests

				Requirement/Limit WBPCB	
Analysis	Method	Result	Unit	Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	9.96	m/s		
Flow rate	IS 11255 Part 3:1985	30328	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.20	%		
Particulate matter (PM)	IS 11255 (Part 01&3) : 1985 & By Calculation	5.0	mg/Nm3		50

Remark : All parameters analyzed at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.002  
ULR No : TC704724100002061F  
Report Control No : KER0000223433

Issue Date : 30/07/2024  
JOE No : KE24-001358

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 23/07/2024 12:20 -13:00HRS  
Sampling Location : ZINC COATING M/C FL-5 STACK (DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : ZINC COATING M/C FL-5  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from : 36M  
Ground Level  
Height of Sampling : 26M  
Point from GL  
Port Hole Available : 02  
Pollution Control : BAG FILTER & CYCLONE SEPERATOR  
Device  
Diameter of Stack : 1.3 M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE:	CHEMICAL				
Moisture	IS 11255 Part 3:1985	2.06	%		
Temperature	IS 11255 Part 3:1985	42	°C		

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.002  
ULR No : TC704724100002061F  
Report Control No : KER0000223433

Issue Date : 30/07/2024  
JOE No : KE24-001358

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	5.76	m/s		
Flow rate	IS 11255 Part 3:1985	25198	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.9	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.20	%		
Particulate matter (PM)	IS 11255 (Part 01&3) : 1985 & By Calculation	5.8	mg/Nm3		50

Remark : All parameters analyzed at site except PM.

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\*\*\*\*End of Report\*\*\*\*

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.003  
ULR No : TC704724100002062F  
Report Control No : KER0000223433

Issue Date : 30/07/2024  
JOE No : KE24-001358

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sample Description : FLUE GAS  
Sampling Date : 23/07/2024 13:05 -13:45HRS  
Sampling Location : TRI GRINDING FL-5 STACK (DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : TRI GRINDING FL-5  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from Ground Level : 36.0 M  
Height of Sampling Point from GL : 26 M  
Port Hole Available : 02  
Pollution Control : BAG FILTER  
Device :  
Diameter of Stack : 0.9 M  
Construction : MS  
Material of Stack :  
Type of Stack : Circular  
Platform & Ladder at Stack : Yes

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE:	CHEMICAL				
Moisture	IS 11255 Part 3:1985	1.8	%		
Temperature	IS 11255 Part 3:1985	39	°C		

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.003  
 ULR No : TC704724100002062F  
 Report Control No : KER0000223433

Issue Date : 30/07/2024  
 JOE No : KE24-001358

## NABL Accredited Tests

				Requirement/Limit WBPCB	
Analysis	Method	Result	Unit	Min	Max
NABL Group : Atmospheric Pollution		Stack emission			
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	7.88	m/s		
Flow rate	IS 11255 Part 3:1985	16659	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.20	%		
Particulate matter (PM)	IS 11255 (Part 01&3) : 1985 & By Calculation	4.4	mg/Nm3		50

Remark : All parameters analyzed at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.004  
ULR No : TC704724100002063F  
Report Control No : KER0000223433

Issue Date : 30/07/2024  
JOE No : KE24-001358

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 23/07/2024 14:30 - 15:10HRS  
Sampling Location : ZINC COATING M/C FL-4 STACK (DIP-3)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : ZINC COATING M/C FL-4  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from Ground Level : 36.0 M  
Height of Sampling Point from GL : 26 M  
Port Hole Available : 02  
Pollution Control : BAG FILTER  
Device :  
Diameter of Stack : 1.65M  
Construction : MS  
Material of Stack :  
Type of Stack : Circular  
Platform & Ladder at Stack : Yes  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE:	CHEMICAL				
Moisture	IS 11255 Part 3:1985	2.13	%		
Temperature	IS 11255 Part 3:1985	43	°C		

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.004  
ULR No : TC704724100002063F  
Report Control No : KER0000223433

Issue Date : 30/07/2024  
JOE No : KE24-001358

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	5.79	m/s		
Flow rate	IS 11255 Part 3:1985	40506	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.9	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.20	%		
Particulate matter (PM)	IS 11255 (Part 01&3) : 1985 & By Calculation	13.8	mg/Nm3		50

Remark : All parameters analyzed at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.005  
ULR No : TC704724100002064F  
Report Control No : KER0000223433

Issue Date : 30/07/2024  
JOE No : KE24-001358

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 23/07/2024 15:20 - 16:00HRS  
Sampling Location : TRI GRINDING FL-4 STACK (DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : TRI GRINDING FL-4 STACK (DIP-2)  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from : 36.0 M  
Ground Level  
Height of Sampling : 28 M  
Point from GL  
Port Hole Available : 02  
Pollution Control : BAG FILTER  
Device  
Diameter of Stack : 0.9M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE:	CHEMICAL				
Moisture	IS 11255 Part 3:1985	1.61	%		
Temperature	IS 11255 Part 3:1985	40	°C		

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.005  
ULR No : TC704724100002064F  
Report Control No : KER0000223433

Issue Date : 30/07/2024  
JOE No : KE24-001358

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	10.12	m/s		
Flow rate	IS 11255 Part 3:1985	21381	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.9	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.20	%		
Particulate matter (PM)	IS 11255 (Part 01&3) : 1985 & By Calculation	4.4	mg/Nm3		50

Remark : All parameters analyzed at site except PM.

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## Page 2 of 2

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.006  
ULR No : TC704724100002065F  
Report Control No : KER0000223433

Issue Date : 30/07/2024  
JOE No : KE24-001358

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 24/07/2024 12:00 - 12:40HRS  
Sampling Location : CORE SHOP STACK (DIP -2 )  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : CORE SHOP BAG FILTER  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from Ground Level : 36.0 M  
Height of Sampling Point from GL : 26 M  
Port Hole Available : 02  
Pollution Control : BAG FILTER & CYCLONE SEPERATOR  
Device :  
Diameter of Stack : 0.9 M  
Construction : MS  
Material of Stack :  
Type of Stack : Circular  
Platform & Ladder at Stack : Yes  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE:	CHEMICAL				
Moisture	IS 11255 Part 3:1985	2	%		
Temperature	IS 11255 Part 3:1985	39	°C		

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.006  
ULR No : TC704724100002065F  
Report Control No : KER0000223433

Issue Date : 30/07/2024  
JOE No : KE24-001358

## NABL Accredited Tests

				Requirement/Limit WBPCB	
Analysis	Method	Result	Unit	Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	5.75	m/s		
Flow rate	IS 11255 Part 3:1985	12142	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.20	%		
Particulate matter (PM)	IS 11255 (Part 01&3) : 1985 & By Calculation	3.8	mg/Nm3		50

Remark : All parameters analyzed at site except PM.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.007  
ULR No : TC704724100002066F  
Report Control No : KER0000223433

Issue Date : 30/07/2024  
JOE No : KE24-001358

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 24/07/2024 11:00 - 11:40HRS  
Sampling Location : MOULD SHOP STACK (DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : MOULD SHOP  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from Ground Level : 36.0 M  
Height of Sampling Point from GL : 26 M  
Port Hole Available : 02  
Pollution Control : BAG FILTER & CYCLONE SEPERATOR  
Device :  
Diameter of Stack : 0.9M  
Construction : MS  
Material of Stack :  
Type of Stack : Circular  
Platform & Ladder at Stack : Yes  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE:	CHEMICAL				
Moisture	IS 11255 Part 3:1985	1.87	%		
Temperature	IS 11255 Part 3:1985	40	°C		

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001358.007  
 ULR No : TC704724100002066F  
 Report Control No : KER0000223433

Issue Date : 30/07/2024  
 JOE No : KE24-001358

## NABL Accredited Tests

				Requirement/Limit WBPCB	
Analysis	Method	Result	Unit	Min	Max
<b>NABL Group :</b>	<b>Atmospheric Pollution</b>	Stack emission			
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	5.67	m/s		
Flow rate	IS 11255 Part 3:1985	11935	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.20	%		
Particulate matter (PM)	IS 11255 (Part 01&3) : 1985 & By Calculation	4.1	mg/Nm3		50

Remark : All parameters analyzed at site except PM.

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## Page 2 of 2

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001357.001  
ULR No : TC704724100002057F  
Report Control No : KER0000223382

Issue Date : 30/07/2024  
JOE No : KE24-001357

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 19/07/2024 15:50 -16:30HRS  
Sampling Location : ZINC COATING M/C FL -3 STACK  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : ZINC COATING M/C FL -3 STACK  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from : 30 M  
Ground Level  
Height of Sampling : 24 M  
Point from GL  
Port Hole Available : 02  
Pollution Control : BAG FILTER & CYCLONE SEPARATOR  
Device  
Diameter of Stack : 1.1M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 26/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE:	CHEMICAL				
Moisture	IS 11255 Part 3:1985	2.04	%		
Temperature	IS 11255 Part 3:1985	45	°C		

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001357.001  
ULR No : TC704724100002057F  
Report Control No : KER0000223382

Issue Date : 30/07/2024  
JOE No : KE24-001357

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :    Atmospheric Pollution		Stack emission			
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	6.78	m/s		
Flow rate	IS 11255 Part 3:1985	6236	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.2	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	4.00	mg/Nm3		50

Remark : All parameters are done at site except PM

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001357.002  
ULR No : TC704724100002058F  
Report Control No : KER0000223382

Issue Date : 30/07/2024  
JOE No : KE24-001357

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 23/07/2024 10:20 -11:00HRS  
Sampling Location : INDUCTION FURNACE STACK (DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : INDUCTION FURNACE BAG FILTER  
Emission Due to : DEDUSTING PROCESS  
Height of Stack from : 36M  
Ground Level  
Height of Sampling : 24M  
Point from GL  
Port Hole Available : 02  
Pollution Control : BAG FILTER & CYCLONE SEPERATOR  
Device  
Diameter of Stack : 1.1M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 26/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	<0.2	%		
DISCIPLINE:	CHEMICAL				
Moisture	IS 11255 Part 3:1985	2	%		
Temperature	IS 11255 Part 3:1985	55	°C		

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001357.002  
ULR No : TC704724100002058F  
Report Control No : KER0000223382

Issue Date : 30/07/2024  
JOE No : KE24-001357

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	6.72	m/s		
Flow rate	IS 11255 Part 3:1985	20144	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	20.8	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	<2.60	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	<1.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.2	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	5.14	mg/Nm3		50

Remark : All parameters are done at site except PM

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001357.003  
ULR No : TC704724100002059F  
Report Control No : KER0000223382

Issue Date : 30/07/2024  
JOE No : KE24-001357

**Customer Provided Information**

Sample Described by Customer as : FLUE GAS  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 24/07/2024 12:50 -13:30HRS  
Sampling Location : ANNEALING FURNACE -2 AIR CHIMNEY (DIP-2)  
Sampling Method : SO-IN-MUL-TE-176  
Stack Connected to : ANNEALING FURNACE -2 AIR CHIMNEY (DIP-2)  
Emission Due to : COMBUSTION OF BFG  
Height of Stack from : 36M  
Ground Level  
Height of Sampling : 30M  
Point from GL  
Port Hole Available : 02  
Pollution Control : NIL  
Device  
Diameter of Stack : 1.3M  
Construction : MS  
Material of Stack  
Type of Stack : Circular  
Platform & Ladder at : Yes  
Stack  
Sample Description : FLUE GAS

**Lab Provided Information**

Sample Type : FLUE GAS  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 26/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Carbon Dioxide (CO2)	USEPA METHOD 3A	11.3	%		
DISCIPLINE:	CHEMICAL				
Moisture	IS 11255 Part 3:1985	2.52	%		
Temperature	IS 11255 Part 3:1985	94	°C		

Page 1 of 2

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001357.003  
ULR No : TC704724100002059F  
Report Control No : KER0000223382

Issue Date : 30/07/2024  
JOE No : KE24-001357

## NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit WBPCB	
				Min	Max
NABL Group :	Atmospheric Pollution	Stack emission			
Barometric Pressure	IS 11255 Part 3:1985	748	mm Hg		
Velocity	IS 11255 Part 3:1985	8.17	m/s		
Flow rate	IS 11255 Part 3:1985	30397	Nm3/Hrs		
Oxygen (O2)	USEPA ( Method 3A)	8.9	%		
Sulphur Dioxide (SO2)	USEPA METHOD 6 C	26.00	mg/Nm3		
Nitrogen Oxides	USEPA METHOD (7E)	16.0	mg/Nm3		
Carbon Monoxide (CO)	USEPA 1994 10B	<0.2	%		1
Particulate Matter (PM)	IS:11255 (Part-1):1985	4.28	mg/Nm3		50

Remark : All parameters are done at site except PM

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.001-A  
ULR No : TC704724100002202F  
Report Control No : KER0000223530

Issue Date : 31/07/2024  
JOE No : KE24-001355

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 15/07/2024 to 16/07/2024  
Sampling Location : GOKULPUR VILLAGE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
NABL Group :	Atmospheric Pollution	Ambient air			
Benzene	SO-IN-EHS-TE-164	<2.00	ug/m3		05(Annual)
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	BDL(DL:4)	ug/m3		80
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	8.1	ug/m3		80
Particulate Matter (PM10)	IS 5182 (Part 23) : 2006	87.3	ug/m3		100
Lead (as Pb)	IS:5182 (Part-22):2004	0.01	ug/m3		1.0
Carbon Monoxide (CO)	EPA 600/P-99/001F	BDL(DL:1.0)	mg/m3		02
Ammonia (NH3)	SO-IN-MUL-TE-075	BDL(DL:20)	ug/m3		400
Benzo (a) Pyrene	USEPA 8270 C TO - 13A	<0.20	ng/m³		01 (Annual)
Nickel as Ni	SO-IN-MUL-TE-075	9.8	ng/m³		20(Annual)

Remark : BDL = Below Detection Limit , DL = Detection Limit

**Page 1 of 2**

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.001-B

Issue Date : 31/07/2024

JOE No : KE24-001355

Report Control No : KER0000223530

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 15/07/2024 to 16/07/2024  
Sampling Location : GOKULPUR VILLAGE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
Ozone (O3)	SO-IN-MUL-TE-075	BDL(DL:5)	ug/m3		100
Arsenic as As	SO-IN-MUL-TE-075	<2.0	ng/m <sup>3</sup>		06(Annual)
Particulate Matter (PM2.5)	SO-IN-MUL-TE-068	21.5	ug/m3		60(24 hrs)

Remark : BDL = Below Detection Limit , DL = Detection Limit

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.002-A  
ULR No : TC704724100002203F  
Report Control No : KER0000223530

Issue Date : 31/07/2024  
JOE No : KE24-001355

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 15/07/2024 to 16/07/2024  
Sampling Location : MAHESHPUR VILLAGE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
NABL Group : Atmospheric Pollution	Ambient air				
Benzene	SO-IN-EHS-TE-164	<2.00	ug/m3		05(Annual)
DISCIPLINE: CHEMICAL					
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	BDL(DL:4)	ug/m3		80
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	8.9	ug/m3		80
Particulate Matter (PM10)	IS 5182 (Part 23) : 2006	45.1	ug/m3		100
Lead (as Pb)	IS:5182 (Part-22):2004	<0.01	ug/m3		1.0
Carbon Monoxide (CO)	EPA 600/P-99/001F	BDL(DL:1.0)	mg/m3		02
Ammonia (NH3)	SO-IN-MUL-TE-075	BDL(DL:20)	ug/m3		400
Benzo (a) Pyrene	USEPA 8270 C TO - 13A	<0.20	ng/m³		01 (Annual)
Nickel as Ni	SO-IN-MUL-TE-075	3.5	ng/m³		20(Annual)

Remark : BDL = Below Detection Limit , DL = Detection Limit

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.002-B

Issue Date : 31/07/2024

JOE No : KE24-001355

Report Control No : KER0000223530

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 15/07/2024 to 16/07/2024  
Sampling Location : MAHESHPUR VILLAGE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
Ozone (O3)	SO-IN-MUL-TE-075	BDL(DL:5)	ug/m3		100
Arsenic as As	SO-IN-MUL-TE-075	<2.0	ng/m <sup>3</sup>		06(Annual)
Particulate Matter (PM2.5)	SO-IN-MUL-TE-068	23.8	ug/m3		60(24 hrs)

Remark : BDL = Below Detection Limit , DL = Detection Limit

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.003-A  
ULR No : TC704724100002204F  
Report Control No : KER0000223530

Issue Date : 31/07/2024  
JOE No : KE24-001355

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 16/07/2024 to 17/07/2024  
Sampling Location : NEAR GUEST HOUSE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
NABL Group :	Atmospheric Pollution	Ambient air			
Benzene	SO-IN-EHS-TE-164	<2.00	ug/m3		05(Annual)
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	BDL(DL:4)	ug/m3		80
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	9.1	ug/m3		80
Particulate Matter (PM10)	IS 5182 (Part 23) : 2006	86.8	ug/m3		100
Lead (as Pb)	IS:5182 (Part-22):2004	0.13	ug/m3		1.0
Carbon Monoxide (CO)	EPA 600/P-99/001F	BDL(DL:1.0)	mg/m3		02
Ammonia (NH3)	SO-IN-MUL-TE-075	BDL(DL:20)	ug/m3		400
Benzo (a) Pyrene	USEPA 8270 C TO - 13A	<0.20	ng/m³		01 (Annual)
Nickel as Ni	SO-IN-MUL-TE-075	6.1	ng/m³		20(Annual)

Remark : BDL = Below Detection Limit , DL = Detection Limit

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.003-B

Issue Date : 31/07/2024

JOE No : KE24-001355

Report Control No : KER0000223530

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 16/07/2024 to 17/07/2024  
Sampling Location : NEAR GUEST HOUSE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
Ozone (O3)	SO-IN-MUL-TE-075	BDL(DL:5)	ug/m3		100
Arsenic as As	SO-IN-MUL-TE-075	2.7	ng/m <sup>3</sup>		06(Annual)
Particulate Matter (PM2.5)	SO-IN-MUL-TE-068	50.4	ug/m3		60(24 hrs)

Remark : BDL = Below Detection Limit , DL = Detection Limit

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.004-A  
ULR No : TC704724100002205F  
Report Control No : KER0000223530

Issue Date : 31/07/2024  
JOE No : KE24-001355

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 16/07/2024 to 17/07/2024  
Sampling Location : NEAR DUCTURA HOUSE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
NABL Group :	Atmospheric Pollution	Ambient air			
Benzene	SO-IN-EHS-TE-164	<2.00	ug/m3		05(Annual)
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	BDL(DL:4)	ug/m3		80
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	9.0	ug/m3		80
Particulate Matter (PM10)	IS 5182 (Part 23) : 2006	59.4	ug/m3		100
Lead (as Pb)	IS:5182 (Part-22):2004	0.02	ug/m3		1.0
Carbon Monoxide (CO)	EPA 600/P-99/001F	BDL(DL:1.0)	mg/m3		02
Ammonia (NH3)	SO-IN-MUL-TE-075	BDL(DL:20)	ug/m3		400
Benzo (a) Pyrene	USEPA 8270 C TO - 13A	<0.20	ng/m³		01 (Annual)
Nickel as Ni	SO-IN-MUL-TE-075	3.8	ng/m³		20(Annual)

Remark : BDL = Below Detection Limit , DL = Detection Limit

**Page 1 of 2**

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.004-B

Issue Date : 31/07/2024

JOE No : KE24-001355

Report Control No : KER0000223530

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 16/07/2024 to 17/07/2024  
Sampling Location : NEAR DUCTURA HOUSE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
Ozone (O3)	SO-IN-MUL-TE-075	BDL(DL:5)	ug/m3		100
Arsenic as As	SO-IN-MUL-TE-075	<2.0	ng/m <sup>3</sup>		06(Annual)
Particulate Matter (PM2.5)	SO-IN-MUL-TE-068	15.5	ug/m3		60(24 hrs)

Remark : BDL = Below Detection Limit , DL = Detection Limit

Per pro SGS India Private Ltd



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\*\*\*\*End of Report\*\*\*\*

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.005-A  
ULR No : TC704724100002206F  
Report Control No : KER0000223530

Issue Date : 31/07/2024  
JOE No : KE24-001355

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 17/07/2024 to 18/07/2024  
Sampling Location : NEAR CPP-3  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
NABL Group :	Atmospheric Pollution	Ambient air			
Benzene	SO-IN-EHS-TE-164	<2.00	ug/m3		05(Annual)
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	BDL(DL:4)	ug/m3		80
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	8.0	ug/m3		80
Particulate Matter (PM10)	IS 5182 (Part 23) : 2006	58.6	ug/m3		100
Lead (as Pb)	IS:5182 (Part-22):2004	0.05	ug/m3		1.0
Carbon Monoxide (CO)	EPA 600/P-99/001F	BDL(DL:1.0)	mg/m3		02
Ammonia (NH3)	SO-IN-MUL-TE-075	BDL(DL:20)	ug/m3		400
Benzo (a) Pyrene	USEPA 8270 C TO - 13A	<0.20	ng/m³		01 (Annual)
Nickel as Ni	SO-IN-MUL-TE-075	4.7	ng/m³		20(Annual)

Remark : BDL = Below Detection Limit , DL = Detection Limit

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## SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.005-B

Issue Date : 31/07/2024

JOE No : KE24-001355

Report Control No : KER0000223530

Customer Provided Information

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 17/07/2024 to 18/07/2024  
Sampling Location : NEAR CPP-3  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT AIR QUALITY MONITORING

Lab Provided Information

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

## Non-Accredited tests

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
Ozone (O3)	SO-IN-MUL-TE-075	BDL(DL:5)	ug/m3		100
Arsenic as As	SO-IN-MUL-TE-075	<2.0	ng/m <sup>3</sup>		06(Annual)
Particulate Matter (PM2.5)	SO-IN-MUL-TE-068	23.8	ug/m3		60(24 hrs)

Remark : BDL = Below Detection Limit , DL = Detection Limit

Per pro SGS India Private Ltd



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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.006-A  
ULR No : TC704724100002207F  
Report Control No : KER0000223530

Issue Date : 31/07/2024  
JOE No : KE24-001355

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024 to 19/07/2024  
Sampling Location : NEAR RAILWAY SIDING  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
NABL Group :	Atmospheric Pollution	Ambient air			
Benzene	SO-IN-EHS-TE-164	<2.00	ug/m3		05(Annual)
DISCIPLINE:	CHEMICAL				
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	BDL(DL:4)	ug/m3		80
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	7.6	ug/m3		80
Particulate Matter (PM10)	IS 5182 (Part 23) : 2006	43.0	ug/m3		100
Lead (as Pb)	IS:5182 (Part-22):2004	0.03	ug/m3		1.0
Carbon Monoxide (CO)	EPA 600/P-99/001F	BDL(DL:1.0)	mg/m3		02
Ammonia (NH3)	SO-IN-MUL-TE-075	BDL(DL:20)	ug/m3		400
Benzo (a) Pyrene	USEPA 8270 C TO - 13A	<0.20	ng/m³		01 (Annual)
Nickel as Ni	SO-IN-MUL-TE-075	2.9	ng/m³		20(Annual)

Remark : BDL = Below Detection Limit , DL = Detection Limit

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.006-B

Issue Date : 31/07/2024

JOE No : KE24-001355

Report Control No : KER0000223530

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024 to 19/07/2024  
Sampling Location : NEAR RAILWAY SIDING  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT AIR QUALITY MONITORING

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
Ozone (O3)	SO-IN-MUL-TE-075	BDL(DL:5)	ug/m3		100
Arsenic as As	SO-IN-MUL-TE-075	<2.0	ng/m <sup>3</sup>		06(Annual)
Particulate Matter (PM2.5)	SO-IN-MUL-TE-068	19.6	ug/m3		60(24 hrs)

Remark : BDL = Below Detection Limit , DL = Detection Limit

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.007-A  
ULR No : TC704724100002208F  
Report Control No : KER0000223530

Issue Date : 31/07/2024  
JOE No : KE24-001355

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sample Description : AMBIENT AIR QUALITY MONITORING  
Sampling Date : 18/07/2024 to 19/07/2024  
Sampling Location : NEAR DIP MATERIAL GATE  
Sampling Method : SO-IN-MUL-TE-176

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
NABL Group : Atmospheric Pollution	Ambient air				
Benzene	SO-IN-EHS-TE-164	<2.00	ug/m3		05(Annual)
DISCIPLINE: CHEMICAL					
Sulphur Dioxide (SO2)	IS 5182 (Part 02) : 2006	BDL(DL:4)	ug/m3		80
Nitrogen Dioxide (NO2)	IS 5182 (Part 06) : 2006	8.3	ug/m3		80
Particulate Matter (PM10)	IS 5182 (Part 23) : 2006	54.4	ug/m3		100
Lead (as Pb)	IS:5182 (Part-22):2004	0.05	ug/m3		1.0
Carbon Monoxide (CO)	EPA 600/P-99/001F	BDL(DL:1.0)	mg/m3		02
Ammonia (NH3)	SO-IN-MUL-TE-075	BDL(DL:20)	ug/m3		400
Benzo (a) Pyrene	USEPA 8270 C TO - 13A	<0.20	ng/m³		01 (Annual)
Nickel as Ni	SO-IN-MUL-TE-075	4.7	ng/m³		20(Annual)

Remark : BDL = Below Detection Limit , DL = Detection Limit

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001355.007-B

Issue Date : 31/07/2024

JOE No : KE24-001355

Report Control No : KER0000223530

**Customer Provided Information**

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING

Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sample Description : AMBIENT AIR QUALITY MONITORING  
Sampling Date : 18/07/2024 to 19/07/2024  
Sampling Location : NEAR DIP MATERIAL GATE  
Sampling Method : SO-IN-MUL-TE-176

**Lab Provided Information**

Sample Type : AMBIENT\_AIR  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**Non-Accredited tests**

Analysis	Method	Result	Unit	Requirement/Limit NAAQMS	
				Min	Max
Ozone (O3)	SO-IN-MUL-TE-075	BDL(DL:5)	ug/m3		100
Arsenic as As	SO-IN-MUL-TE-075	<2.0	ng/m³		06(Annual)
Particulate Matter (PM2.5)	SO-IN-MUL-TE-068	33.0	ug/m3		60(24 hrs)

Remark : BDL = Below Detection Limit , DL = Detection Limit

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## Test Report



TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001354.001  
 ULR No : TC704724100002141F  
 Report Control No : KER0000223504

Issue Date : 31/07/2024  
 JOE No : KE24-001354

### Customer Provided Information

Sample Described by Customer as : EFFLUENT  
 Customer Name : TATA STEEL LIMITED  
 Customer Address : METALIKS DIVISION KHARAGPUR  
 : SAMRAIPUR, GOKULPUR  
 City : PASCHIM MEDINIPUR  
 Postal Code : 721301  
 Country : INDIA  
 Sampling Date : 23/07/2024  
 Sampling Location : CPP-3 RESERVOIR TREATED WATER  
 Sampling Method : APHA 1060B  
 Sample Qty. Recd. : 3.5L APPROX.  
 Sample Description : EFFLUENT

### Lab Provided Information

Sample Type : EFFLUENT  
 Received : 25/07/2024  
 Test Start/End Date : 25/07/2024 - 30/07/2024

### NABL Accredited Tests

Analysis	Method	Result	Unit	Requirement/Limit	
				CPCB DIS. INLAND	SURFACE WATER
				Min	Max
NABL Group :	Pollution & Environment	Waste Water (Effluents/Sewage)			
DISCIPLINE:	CHEMICAL				
Total Suspended Solids	APHA 23RD EDN 2540 D	4.38	mg/L		100
pH	APHA 23RD EDN 4500 B	7.78	--		5.5-9.0
Oil & Grease	APHA 23RD EDN 5520 B	<2.0	mg/L		10
BOD at 27 °C for 3 days	IS 3025 (Part 44) : 1993	4.0	mg/L		30
COD	APHA 24th EDN: 5220 B	40.8	mg/L		250
Total Dissolved Solids	APHA 23 RD EDN 2540 C	593.0	mg/L		

Remark : pH Analysed at site

### Page 1 of 2

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001354.001  
ULR No : TC704724100002141F  
Report Control No : KER0000223504

Issue Date : 31/07/2024  
JOE No : KE24-001354

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001354.005  
ULR No : TC704724100002145F  
Report Control No : KER0000223504

Issue Date : 31/07/2024  
JOE No : KE24-001354

**Customer Provided Information**

Sample Described by Customer as : EFFLUENT  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 23/07/2024  
Sampling Location : ETP OUTLET(DI)  
Sampling Method : APHA 1060B  
Sample Qty. Recd. : 3.5L APPROX.  
Sample Description : EFFLUENT

**Lab Provided Information**

Sample Type : EFFLUENT  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit CPCB DIS. INLAND SURFACE WATER Min Max
NABL Group : Pollution & Environment		Waste Water (Effluents/Sewage)		
DISCIPLINE: CHEMICAL				
Total Suspended Solids	APHA 23RD EDN 2540 D	<2.00	mg/L	100
pH	APHA 23RD EDN 4500 B	8.82	--	5.5-9.0
Oil & Grease	APHA 23RD EDN 5520 B	<2.0	mg/L	10
BOD at 27 °C for 3 days	IS 3025 (Part 44) : 1993	2.9	mg/L	30
COD	APHA 24th EDN: 5220 B	30.6	mg/L	250
Total Dissolved Solids	APHA 23 RD EDN 2540 C	1709.0	mg/L	

Remark : pH Analysed at site

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001354.005  
ULR No : TC704724100002145F  
Report Control No : KER0000223504

Issue Date : 31/07/2024  
JOE No : KE24-001354

Per pro SGS India Private Ltd

SATYA CHARAN MANNA

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001354.006  
ULR No : TC704724100002146F  
Report Control No : KER0000223504

Issue Date : 31/07/2024  
JOE No : KE24-001354

**Customer Provided Information**

Sample Described by Customer as : EFFLUENT  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
: SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 23/07/2024  
Sampling Location : ETP OUTLET 450 KLD TREATED  
Sampling Method : APHA 1060B  
Sample Qty. Recd. : 3.5L APPROX.  
Sample Description : EFFLUENT

**Lab Provided Information**

Sample Type : EFFLUENT  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 30/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit CPCB DIS. INLAND SURFACE WATER Min Max
NABL Group : Pollution & Environment Waste Water (Effluents/Sewage)				
DISCIPLINE: CHEMICAL				
Total Suspended Solids	APHA 23RD EDN 2540 D	<2.00	mg/L	100
pH	APHA 23RD EDN 4500 B	6.02	--	5.5-9.0
Oil & Grease	APHA 23RD EDN 5520 B	<2.0	mg/L	10
BOD at 27 °C for 3 days	IS 3025 (Part 44) : 1993	<2.0	mg/L	30
COD	APHA 24th EDN: 5220 B	20.4	mg/L	250
Total Dissolved Solids	APHA 23 RD EDN 2540 C	78.0	mg/L	

Remark : pH Analysed at site

**Page 1 of 2**

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

**Report No** : KE24-001354.006  
**ULR No** : TC704724100002146F  
**Report Control No** : KER0000223504

**Issue Date** : 31/07/2024  
**JOE No** : KE24-001354

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## West Bengal Pollution Control Board

## Haldia Laboratory

**Block-05 at 40 Flats Complex, Adjacent to Priyambada Housing Complex, Basudevpur, P.O. Khanjanchak, Haldia, Purba Medinipore - 721602**

<b>Station:</b> INSIDE TATA METALIKS, KHARAGPUR	<b>River Basin:</b> Kasai_Haldi	<b>CPCB Station Code:</b> 1943
<b>Sample Date:</b> 03/04/2024	<b>Sample Time:</b> 13:30	
<b>Human Activities:</b> Drinking	<b>Weather:</b> Clear	<b>Water Body:</b> Ground Water at TATA Metaliks Kharagpur
<b>Frequency Of Monitoring:</b> Halfyearly	<b>Use Based Class:</b> A	<b>Approximate Depth(Bottom/Table):</b> 300.00 m
<b>Color &amp; Intensity:</b> Clear	<b>Odour:</b> None	<b>Visible effluent discharge:</b> None

Water Quality		
Parameter	Test Result	Unit
BOD	0.55	mg/l
Conductivity	570.8	µs/cm
Fecal Coliform	Nil	MPN/100ml
Nitrate-N	BDL	mg/l
pH	7.30	Unit
Temperature(Water)	31	°C
Total Coliform	Nil	MPN/100ml
Boron	BDL	mg/l
Calcium	89.44	mg/l
Chloride	19.14	mg/l
COD	3.09	mg/l
Fluoride	0.18	mg/l
Magnesium	10.45	mg/l
Phenolphthalein Alkanity	Nil	mg/l
Phosphate-P	BDL	mg/l
Potassium	4.7	mg/l
Sodium	29.0	mg/l
Sulphate	17.69	mg/l
Total Alkalinity	300.00	mg/l
Total Dissolved Solids(TDS)	268.00	mg/l
Total Fixed Solids(TFS)	240.00	mg/l
Total Hardness as CaCo3	266.60	mg/l
Total Suspended Solids(TSS)	6.00	mg/l
Turbidity	2.50	NTU
Arsenic	BDL	mg/l
Cadmium	BDL	mg/l
Chromium Total	BDL	mg/l
Copper	BDL	mg/l
Iron	0.63	mg/l
Lead	BDL	mg/l
Mercury	BDL	mg/l
Nickel	BDL	mg/l
Zinc	0.23	mg/l
a-BHC	NT	ppb
a-Endosulphan	NT	ppb
Aldrin	NT	ppb
Anilophos	NT	ppb
b-Endosulphan	NT	ppb
Chlorpyrifos	NT	ppb
Dieldrin	BDL	ppb
g-BHC	NT	ppb
Malathion	BDL	ppb
Methyl Parathion	BDL	ppb
o,p-DDT	NT	ppb
p,p-DDT	BDL	ppb
Ammonia-N	BDL	mg/l



TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001367.001  
ULR No : TC704724100002069F  
Report Control No : KER0000223258

Issue Date : 27/07/2024  
JOE No : KE24-001367

**Customer Provided Information**

Sample Described by Customer as : AMBIENT NOISE  
Customer Name : TATA STEEL LIMITED  
Customer Address : Vill-Mahespur, P.O.Kharagpur-Samraipur  
Dist-Paschim Midnapore  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 17/07/2024  
Sampling Location : NEAR GUEST HOUSE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT NOISE

**Lab Provided Information**

Sample Type : AMBIENT NOISE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 26/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit CPCB INDUSTRIAL AREA	
				Min	Max
NABL Group :	Atmospheric Pollution	Ambient Noise Levels (Excluding vibration)			
DISCIPLINE:	CHEMICAL				
Noise (Day Time)	SO-IN-MUL-TE-049	57.20	dB(A) Leq		75
Noise (Night Time)	SO-IN-MUL-TE-049	42.20	dB(A) Leq		70

Remark : ANALYSED AT SITE.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001367.002  
ULR No : TC704724100002070F  
Report Control No : KER0000223258

Issue Date : 27/07/2024  
JOE No : KE24-001367

**Customer Provided Information**

Sample Described by Customer as : AMBIENT NOISE  
Customer Name : TATA STEEL LIMITED  
Customer Address : Vill-Mahespur, P.O.Kharagpur-Samraipur  
Dist-Paschim Midnapore  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 16/07/2024  
Sampling Location : NEAR DUCTURA HOUSE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT NOISE

**Lab Provided Information**

Sample Type : AMBIENT NOISE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 26/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit CPCB INDUSTRIAL AREA	
				Min	Max
NABL Group :	Atmospheric Pollution	Ambient Noise Levels (Excluding vibration)			
DISCIPLINE:	CHEMICAL				
Noise (Day Time)	SO-IN-MUL-TE-049	65.80	dB(A) Leq		75
Noise (Night Time)	SO-IN-MUL-TE-049	43.90	dB(A) Leq		70

Remark : ANALYSED AT SITE.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001367.003  
ULR No : TC704724100002071F  
Report Control No : KER0000223258

Issue Date : 27/07/2024  
JOE No : KE24-001367

**Customer Provided Information**

Sample Described by Customer as : AMBIENT NOISE  
Customer Name : TATA STEEL LIMITED  
Customer Address : Vill-Mahespur, P.O.Kharagpur-Samraipur  
Dist-Paschim Midnapore  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 18/07/2024  
Sampling Location : NEAR CPP-3  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT NOISE

**Lab Provided Information**

Sample Type : AMBIENT NOISE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 26/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit CPCB INDUSTRIAL AREA	
				Min	Max
NABL Group :	Atmospheric Pollution	Ambient Noise Levels (Excluding vibration)			
DISCIPLINE:	CHEMICAL				
Noise (Day Time)	SO-IN-MUL-TE-049	61.40	dB(A) Leq		75
Noise (Night Time)	SO-IN-MUL-TE-049	44.80	dB(A) Leq		70

Remark : ANALYSED AT SITE.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001367.004  
ULR No : TC704724100002072F  
Report Control No : KER0000223258

Issue Date : 27/07/2024  
JOE No : KE24-001367

**Customer Provided Information**

Sample Described by Customer as : AMBIENT NOISE  
Customer Name : TATA STEEL LIMITED  
Customer Address : Vill-Mahespur, P.O.Kharagpur-Samraipur  
Dist-Paschim Midnapore  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR RAILWAY SIDING  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT NOISE

**Lab Provided Information**

Sample Type : AMBIENT NOISE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 26/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit CPCB INDUSTRIAL AREA	
				Min	Max
NABL Group :	Atmospheric Pollution	Ambient Noise Levels (Excluding vibration)			
DISCIPLINE:	CHEMICAL				
Noise (Day Time)	SO-IN-MUL-TE-049	57.30	dB(A) Leq		75
Noise (Night Time)	SO-IN-MUL-TE-049	39.20	dB(A) Leq		70

Remark : ANALYSED AT SITE.

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SATYA CHARAN MANNA

Authorized Signatory

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001367.005  
ULR No : TC704724100002073F  
Report Control No : KER0000223258

Issue Date : 27/07/2024  
JOE No : KE24-001367

**Customer Provided Information**

Sample Described by Customer as : AMBIENT NOISE  
Customer Name : TATA STEEL LIMITED  
Customer Address : Vill-Mahespur, P.O.Kharagpur-Samraipur  
Dist-Paschim Midnapore  
Postal Code : 721301  
Country : INDIA  
Sampling Date : 19/07/2024  
Sampling Location : NEAR DIP MATERIAL GATE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT NOISE

**Lab Provided Information**

Sample Type : AMBIENT NOISE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 26/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit CPCB INDUSTRIAL AREA	
				Min	Max
NABL Group :	Atmospheric Pollution	Ambient Noise Levels (Excluding vibration)			
DISCIPLINE:	CHEMICAL				
Noise (Day Time)	SO-IN-MUL-TE-049	73.40	dB(A) Leq		75
Noise (Night Time)	SO-IN-MUL-TE-049	45.20	dB(A) Leq		70

Remark : ANALYSED AT SITE.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001366.001  
ULR No : TC704724100002067F  
Report Control No : KER0000223269

Issue Date : 27/07/2024  
JOE No : KE24-001366

**Customer Provided Information**

Sample Described by Customer as : AMBIENT NOISE  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 15/07/2024  
Sampling Location : GOKULPUR VILLAGE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT NOISE

**Lab Provided Information**

Sample Type : AMBIENT NOISE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 26/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit CPCB RESIDENTIAL AREA	
				Min	Max
NABL Group :	Atmospheric Pollution	Ambient Noise Levels (Excluding vibration)			
DISCIPLINE:	CHEMICAL				
Noise (Day Time)	SO-IN-MUL-TE-049	52.90	dB(A) Leq		55
Noise (Night Time)	SO-IN-MUL-TE-049	35.80	dB(A) Leq		45

Remark : ANALYSED AT SITE.

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TC-7047

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Report No : KE24-001366.002  
ULR No : TC704724100002068F  
Report Control No : KER0000223269

Issue Date : 27/07/2024  
JOE No : KE24-001366

**Customer Provided Information**

Sample Described by Customer as : AMBIENT NOISE  
Customer Name : TATA STEEL LIMITED  
Customer Address : METALIKS DIVISION KHARAGPUR  
City : SAMRAIPUR, GOKULPUR  
City : PASCHIM MEDINIPUR  
Sampling Date : 15/07/2024  
Sampling Location : MAHESHPUR VILLAGE  
Sampling Method : SO-IN-MUL-TE-176  
Sample Description : AMBIENT NOISE

**Lab Provided Information**

Sample Type : AMBIENT NOISE  
Received : 25/07/2024  
Test Start/End Date : 25/07/2024 - 26/07/2024

**NABL Accredited Tests**

Analysis	Method	Result	Unit	Requirement/Limit CPCB RESIDENTIAL AREA	
				Min	Max
NABL Group :	Atmospheric Pollution	Ambient Noise Levels (Excluding vibration)			
DISCIPLINE:	CHEMICAL				
Noise (Day Time)	SO-IN-MUL-TE-049	50.30	dB(A) Leq		55
Noise (Night Time)	SO-IN-MUL-TE-049	35.30	dB(A) Leq		45

Remark : ANALYSED AT SITE.

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### **Carbon Footprint Reduction initiatives for FY'25**

Detailed Energy Audit was carried out through Bureau of Energy Efficiency (BEE) for the Pig Iron Division for framing the energy conservation initiatives which will have an impact on reducing Carbon Footprint.

#### **Electrical Energy conservation initiatives**

- DIP2-180 KW Cold well pump energy saving by installing VFD. (2 running, 1 stand-by).
- Speed Optimization in DIP (LDP) de-dusting system
- Reduce energy consumption and improving power factor by installing Harmonic Filters in DIP-1 LTPCC
- Zero Flaring in MBF by installation of Root Blowers
- Cooling Fan speed optimization - Sinter Plant
- Steam transfer to DIP-2 for Pipe Curing, thereby increasing Power Generation at CPP4.
- Power Generation through Micro-turbine with PRDS unit in CPP-2
- Installation of fan less zero drift loss cooling tower for MBF1 and DIP-1 (Power saving 120 KW)
- PCI specific power consumption reduction by running only 1 Air Compressor
- Pressure Optimization of air compressor (3 No.s) at MBF-2 (7.5 kg/cm<sup>2</sup> to 5 kg/cm<sup>2</sup>)
- Energy Saving in Hammer crusher motors and flux screen route at Sinter Plant by installing VFD & eliminating idle running hours.
- Pressure Optimization of air compressors at DIP-1&2 by separating domestic line & Idle Running hours reduction by DIP-1&2 airline interlinking
- Induction Furnace Power optimization through efficient operational controls

#### **Renewable, Waste Heat Recovery based systems & others**

- Install Hot Exhaust Air Based Boiler at Cooler Zone and Generate Steam to Use in New DI Plant (9TPH, 10 kg/cm<sup>2</sup> pressure and 185 Deg C temperature).
- BFG preheating at DIP 1 by using exhaust flue gas to save BFG for additional power generation @ CPP 4. (APH to be installed)
- Installation of Coke Drying unit (25 TPH) to reduce coke moisture using hot exhaust air from sinter cooler zone 3&4, thereby reducing MBF-2 Coke Rate.
- CBM injection trial in MBF-1
- Use of Carbon black generated from waste tyres through pyrolysis process for partial replacement of PCI in MBF.
- Use of Bio Fuel based syn gas plant to replace BFG and increase captive power generation at CPP 4.

#### **Solid Fuel Saving initiatives**

- Nut Coke consumption with lime & ESP dust coating to improve RI (Reducibility index) for fuel rate reduction.
- Increase PCI Rate in MBF by modification of Coal Injection setpoint matrix.
- Skid upgradation & Pipeline modification in O<sub>2</sub> Plant to maintain 6% O<sub>2</sub> enrichment in both furnace after MBF-2 start-up
- Flux Rate Optimization - Sinter Plant
- Increase Sinter Burden in MBF-1 by changing Sinter Plant screen size from 5 mm to 4 mm.
- Furnace top camera in MBF-1 for continuous gas flow monitoring inside furnace for improving Fuel rate by stable F/C operation.
- BF Grade Pellet (MgO upto 1.5%) consumption @ MBF.

#### **Liquid Fuel Saving initiatives**

- Tower Crane installation is in progress in weigh bridge to reduce excavator engagement time & HSD consumption
- Steam transfer to DIP-2 for Pipe Curing, thereby increasing Power Generation at CPP4.

**Annexure - VI (b)**

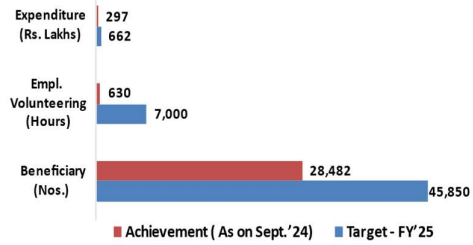
**PRE- EMPLOYMENT AND PERIODICAL OCCUPATIONAL HEALTH CHECK-UP REPORTS**  
**(April -2024 to September-2024)**

Time Period	IME Employees & CL	Periodical Occupational Health Check-Up of Employees		Periodical Occupational Health Check-Up of Service Provider's Employees		Remarks
		PI+SF+project	SDP	LDP	PROJECT	
April'24 to Sept'24	2155 ( Emp=1, Regular CL= 2154 )	NIL	NIL	NIL	Nil	Total IME= 2155 and POHC= Nil

**CER (Corporate Environment Responsibility) project status**  
**(As per amended EC dtd. 27th January 2021)**

Year	Fund Allocated (Lakh)	Job Details	Project Budget (Lakh)	Status
2019	186.04	Maheshpur (Muslimpara)- Drinking Water & Sanitation Project, Road & Drainage system	95	Completed
		Tentuliya ( Kenduapal)- Drinking Water & Sanitation Project, Drainage system	56.04	Completed
		Maheshpur (Raipara)- Training Centre	35	Completed
2020	50	Mollachak- Drinking Water & Sanitation Project, Drainage system	50	Completed
2021	160	Samraipur- Solar Powered Drinking Water Project, Construction of internal road, toilets, Drain & Waste water management system, renovation of Pond and School	100	Completed
		Risha - Solar powered drinking water project, Toilet blocks, bathroom and drainage work	60	Completed
2022	158.96	Renovation of schools in nearby village(Chunpara)	5	Completed
		Kenduapal- Revival of Drinking Water Project, Sanitation Project & Drainage system	70	Completed
		Keshpal- Sanitation Project	12	Completed
		Uttar Narayanpur- Drinking Water & Sanitation Project, Drainage system	71.96	Completed
<b>Total</b>	<b>555</b>		<b>555</b>	

## Major Highlights – Sept.'24



Under the Pond Based Livelihood Project supported by NABARD, 2 trainings organised on Scientific Fishery & Duckery where 72 and 35 farmers participated, respectively.



Mr. Soumen Das, BDO Kharagpur Block graced the Foundational Learning & Numeracy (FLN) training program and motivated the volunteers



Mini Job Fair hosted at MSC Midnapore, on 13<sup>th</sup> September. 18 employers from varied domains participated and 132 learners interviewed from the alumni and current batches. More than 80 learners from different domains got selected.



TSMD employees volunteering for sapling distribution and plantation in the village



Adolescents' awareness sessions under DIYA Project

## Stories across locations...KGP



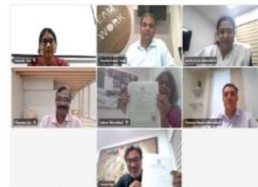
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TSMD employees volunteering for sapling distribution and plantation in the village



Mini Job Fair hosted at MSC Midnapore, on 13<sup>th</sup> September. Total 18 employers from varied domains participated and 132 learners interviewed from the alumni and current batch. More than 80 learners from different domains got selected.



MoU signing of TSF and YIF for Education and Digital Literacy Project



Adolescents' awareness sessions under DIYA Project





Employee Volunteering at Girls RBC Centre



Rural Tribal Food Festival



Digital payment support by employee



Medical, Security and Safety Team took a session for truck drivers and helpers on road safety, first aid, health.

**TATA STEEL FOUNDATION**



Medical team taking a session on health awareness for adolescent girls in High School



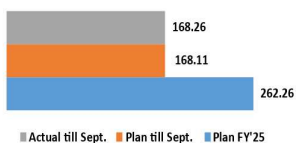
Employees and family members visiting Old Age Home

## Strategy 1.2: Universalizing secondary education through a revitalized public education system.

KPI	FoM	UoM	FY25 Plan	Plan till Sept - 24	Actual till Sept - 24	Progress%	Remarks	Plan till Oct-24
Lives impacted	M	No. lives	20,512	20,512	20,512	100%		20,512
Children covered	M	No. of children	20,411	20,411	20,411	100%		20,411
Percentage of Girls covered			-	-	-	0%		
Children out of school	M	No. of children	-	-	83	0%		-
Out of school children brought back to school	M	No. of children	67	67	150	224%	Additional children identified during drive and brought back to schools.	67
Children transitioning between level (PrePrimary to Primary, Primary to Middle, Middle to Secondary) completing secondary education	Q	% of children transitioned out of total enrolled	100%	100%	100%	100%		100%
Gram panchayats declaring themselves CLFZ	Q	No. of gram panchayats	4	-	-	0%		-
External funds leveraged for schools	H	Rs. (Lakhs)	-	-	-	0%		
Blocks being saturated	H	No. of Blocks	1	1	1	100%		1
Blocks declared CLFZ	A	No. of Blocks	-	-	-	0%		
Local governance bodies driving the schools education successfully as per performance matrix	A	No. of SMC	40	-	-	0%		-
Improvement in the learning (Baseline Vs Endline)								

FoM: Frequency of measurement, UoM: Unit of Measurement # M: Monthly, Q: Quarterly, H: Half yearly, A: Annually

### Spend till month in Rs Lakhs



### Highlights

1. Mr. Soumen Das, BDO Kharagpur Block graced the Foundational Learning & Numeracy (FLN) training program and motivated the volunteers



**TATA STEEL FOUNDATION**

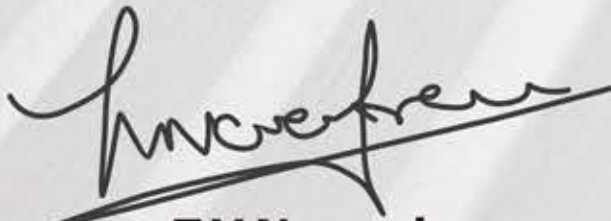
Not ok (<90%) Ok (90%) Details

## ENVIRONMENTAL POLICY

Tata Steel's environmental responsibilities are driven by our commitment to preserve the environment and are integral to the way we do business.

1. We are committed to deal proactively with Climate Change issue by efficient use of natural resources & energy; reducing and preventing pollution; promoting waste avoidance and recycling measures; and product stewardship.
  - We shall identify, assess and manage our environment impact.
  - We shall regularly monitor, review and report publicly our environmental performance.
  - We shall develop & rehabilitate abandoned sites through afforestation and landscaping and shall protect and preserve the biodiversity in the areas of our operations.
  - We shall enhance awareness, skill and competence of our employees and contractors so as to enable them to demonstrate their involvement, responsibility and accountability for sound environmental performance.
2. We are committed to continual improvement in our environmental performance.
  - We shall set objective-targets, develop, implement and maintain management standards and systems, and go beyond compliance of the relevant industry standards, legal and other requirements.
3. We will truly succeed when we sustain our environmental achievement and are valued by the communities in which we work.

**Date :** November 1, 2017

  
**T V Narendran**  
CEO & Managing Director

**Environment protection measures in FY'25**

S.N.	Description of environment protection measure executed/ in advanced stage of completion in FY'25	Investment Amount (₹ in lakh) (order placed/ expenditure made)
1.	MBF#2 Fume extraction system & stack installation for Cast House	445.0
2.	Installing 25 TPH coke drying unit at RMHS#2 bunkers	900.0
3.	Installation of Syn gas plant for use in Sinter making process in place of Blast Furnace Gas	350.0
4.	Hiring of truck mounted fog canon system to control fugitive dust for Raw material Stock	16.06
5.	Cyclone separator assembly for the de-dusting unit at Ductile Iron Pipe plant	25.0
6.	CMC of CAAQMS	31.8
7.	CMC & Calibration of CEMS	80.0
8.	Installation of grid connected battery less 1.8 MW solar power system at DIP-2 unit	700.0
9.	Installation of Sonic Soot Blowing technology for increasing the collecting efficiency in Head ESP at Sinter Plant	4.4
10.	Enhancing Bag Filter Performance of RFP by Installation of Sonic Soot Blowing Technology	1.9
11.	Tail ESP upgradation by HFTR installation for performance enhancement and emission control	78.0
12.	Construction of ZLD (Zero Liquid discharge) network	200.0
13.	Installation of Tri-grinding FL-2 de-dusting system	44.0
14.	Environmental monitoring through accredited agency	10.8
15.	Electrical Energy Conservation initiatives through power generation through microturbine with PRDS unit in CPP-2	180.0
16.	Install sinter cooler WHRB (9TPH) 10.5 Kg/cm <sup>2</sup> to generate & supply steam for DIP -2 curing therefore save BFG & generate 1.6 MW power- Under construction	700.0
17.	Hiring of Water tanker for water spraying on main road from Gokulpur village to Maheshpur Vill and inside plant premises to mitigate air pollution and dust control.	7.0
18.	Green belt augmentation (4080 nos. of saplings) inside plant & for plantation at nearby community (1846 nos. of saplings)	6.0
19.	Wind shelter fencing is constructed near Iron ore yard & horizontal deployment	5.0
20.	Installation of Fanless & finless cooling tower (under construction)	150.0
21.	Installation of 4 Nos. dust monitor for Pig Iron division Stack.	22.2
22.	Acoustic enclosure installed for Pinning Machine to reduce Sound level	9.2
23.	RO plant (Cap-30m <sup>3</sup> /Hr) installation will be done for Ductile Iron Pipe unit	38.0
24.	IoT Based Smart Ultrasonic Water Flow Meters Installation	26.0
25.	Installation of micro turbine with pressure reducing system	210.0
26.	Upgradation of Induced Draft (ID) fan at tail side of Electrostatic Precipitator (ESP) in Sinter Plant	74.0