



To  
The Deputy Director General of Forests (C),  
Ministry of Environment, Forest & Climate Change,  
Integrated Regional Office, Kolkata IB – 198,  
Sector – II, Salt Lake City, Kolkata-700106

HMC/HC/ENV-MoEF/2024/ 16  
28<sup>th</sup> Nov 2024

**Sub: Six Monthly report from Apr '24 to Sep'24 for Environment clearance in respect of Tata Steel Hooghly Met Coke Division, Haldia**

**Reference:**

1. MoEF & CC Letter no. F. No. J11011/284/07-IA II dated 29<sup>th</sup> January' 2008 of Tata Steel Ltd, Hooghly Met coke Division, Haldia.
2. MoEF & CC EC Letter no. J-11011/284/2007- IA II (I) dated 23<sup>rd</sup> February' 2017 of Tata Steel Limited, Hooghly Met Coke Division, Haldia.

Dear Sir,

With reference to the above cited subject, kindly find enclosed Six monthly compliance report for the period from April'24 to Sep'24 for the condition stipulated in Environmental clearance granted to Tata Steel Limited, Hooghly Met coke Division, Haldia for your kind consideration.

We trust the information furnished is in line with your requirement

Thanking you,  
Yours faithfully

Mantu Patra  
General Manager  
Tata Steel Ltd, Hooghly Met coke Division, Haldia

**cc to**

1. The Zonal Officer, CPCB, South end Conclave, Block – 502, 5<sup>th</sup> & 6<sup>th</sup> Floor, 1582, Razidanaa, Main Road , Kolkata, 700107
2. The Member Secretary, West Bengal Pollution control board , Paribesh Bhavan, 10 A, Broadway Road, LA Block, Sector III,, Bidhan Nagar Kolkata, West Bengal-700106
3. Regional Officer , West Bengal Pollution Control Board (WBPCB),Haldia Regional Office, Raghunathchak, PO- Barghasipur, PS – Bhabanipur, Dist – Purba Medinipur, Pin- 721657

**TATA STEEL LIMITED**

Hooghly Met Coke Division Patikhali P O Haldia OIL Refinery Purba Medinipur Haldia 721606  
R O Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India  
CIN L27100MH1907PLC000260 TEL +91 7477795610 Email : gm.hmc@tatasteel.com

ONLINE SUBMISSION CONFIRMATION OF  
EC COMPLIANCE REPORT IN PARIVESH  
2.0 PORTAL

Your (Half Yearly Compliance Report) has been Submitted with following details	
Proposal No	HMC/ENV/246
Compliance ID	113144626
Compliance Number(For Tracking)	EC/M/COMPLIANCE/113144626/2024
Reporting Year	2024
Reporting Period	01 Dec(01 Apr - 30 Sep)
Submission Date	30-11-2024
RO/SRO Name	ARTATRANA MISHRA
RO/SRO Email	jhk109@ifs.nic.in
State	WEST BENGAL
RO/SRO Office Address	Integrated Regional Offices, Kolkata
<b>Note:-</b> SMS and E-Mail has been sent to ARTATRANA MISHRA, WEST BENGAL with Notification to Project Proponent.	

Your (Half Yearly Compliance Report) has been Submitted with following details	
Proposal No	IA/WB/IND/30491/2014
Compliance ID	113162186
Compliance Number(For Tracking)	EC/M/COMPLIANCE/113162186/2024
Reporting Year	2024
Reporting Period	01 Dec(01 Apr - 30 Sep)
Submission Date	30-11-2024
RO/SRO Name	ARTATRANA MISHRA
RO/SRO Email	jhk109@ifs.nic.in
State	WEST BENGAL
RO/SRO Office Address	Integrated Regional Offices, Kolkata
<b>Note:-</b> SMS and E-Mail has been sent to ARTATRANA MISHRA, WEST BENGAL with Notification to Project Proponent.	

# **ENVIRONMENTAL CLEARANCE COMPLIANCE STATUS REPORT**

**April 2024 to September 2024**

**Tata Steel Limited,  
Hooghly Met Coke Division**

**Six Monthly Compliance Status report  
of  
Environmental Clearance of Coke Oven Plant (1.6 MTPA) & WHRB based  
power plant (120 MW) at Haldia  
&  
Environment Clearance of Expansion of Coke Oven Plant 1.6 to 2.2 MTPA at  
Haldia**

**ENVIRONMENTAL MANAGEMENT DEPARTMENT**



**Compliance to conditions stipulated in the Environmental Clearance Order for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi vide letter No. F. No. J-11011/284/07- IA II (I) dated 29<sup>th</sup> January 2008**

S. N	Condition	Compliance Status
<b>A. Specific Conditions:</b>		
(i)	Proper and full utilization of coke oven gases in power plant using heat recovery steam generators (WHRB) shall be ensured and no flue gas shall be discharged into the air.	The coke oven gas is utilized in power plant using heat recovery steam generators (WHRB) and no flue gas is discharged into the air.
(ii)	The prescribed emission standards for coke oven plants as notified vide notification no. GSR-46(E) dated 3rd February 2006 shall be complied with.	The prescribed emission standards for coke oven plants as notified vide notification no. GSR-46(E) dated 3rd February 2006 are complied.
(iii)	Continuous stack monitoring facilities for all the major stacks and adequate air pollution control systems shall be provided to control air emissions within 100 mg/Nm <sup>3</sup> and reports submitted to the Ministry's Regional Office at the Bhubaneswar, WBPCB & CPCB.	Continuous stack monitoring facilities for all the major stacks has been provided along with adequate air pollution control systems to control air emissions within 100 mg/Nm <sup>3</sup> . The Stack emission (avg.) report for last six month (Apr'24 -Sep'24) is enclosed as <b>Annexure-1</b> .
(iv)	Fugitive emissions from coal handling plant shall be controlled by sprinkling water. Dry fogging system shall be installed at all the transfer points. In-plant control measures like bag filters, dedusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources including material handling areas and material transfer points.	Dust Suppression System with Dry fog system (DFS) are in operation at all the coal transfer points, in Wagon Tippler and Coal crusher unit. Rain Gun Water Sprinklers have been installed in the coal yard. Road inside the material handling area (Coal / Coke / Tippler area) has been paved to reduce dust generation. The entire coal yard and coke yard have been concreted to prevent dust generation. Mobile Water sprinkling is done on roads within factory and in the periphery area. Mechanised Mobile Vacuum Cleaning system is used regularly for collecting the secondary fugitive emission from internal roads. Stationary vacuum cleaning machine has been provided at Wagon Tippler to prevent fugitive dusts/ spillage. Bag filters has been installed at coal & coke transfer points.
(v)	Secondary fugitive emissions shall be controlled within the prescribed limits, regularly monitored and records maintained. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed	Secondary fugitive emissions are negligible in the existing non recovery coke making technology because the ovens work under the negative pressure. CPCB guidelines for non-recovery coke oven plant is followed. Proper sealing arrangements has been provided in the oven doors and flue gas pipes/valves so that fugitive emission from battery can be restricted.
vi)	Total requirement of the water from Haldia Development Authority for coke oven and WHRB shall not exceed 5,300 m <sup>3</sup> /day and 13,750 m <sup>3</sup> /day respectively. The effluent shall be treated in the effluent treatment plant and all the treated wastewaters shall be recycled and reused either in the process or for dust suppression or green belt development. No wastewater shall be discharged outside the factory	The average water taken from HDA as make-up water was 1,318.67 m <sup>3</sup> /day for coke oven (Tata Steel, Hooghly Met coke) and 7,115.52 m <sup>3</sup> /day for WHRB (Tata Power). The processed water is recycled and used for coke quenching and green belt development within the plant. Zero Effluent Discharge is maintained, and the following initiatives are taken for the same:

**Compliance to conditions stipulated in the Environmental Clearance for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi vide letter No. F. No. J-11011/284/07- IA II (I) dated 29<sup>th</sup> January 2008**

S. N	Condition	Compliance Status
<b>A. Specific Conditions:</b>		
	premises and 'Zero' discharge shall be adopted. Domestic effluent shall be treated in sewage treatment plant (STP) and disposed off as per norms laid down by Haldia Municipal Corporation.	<ul style="list-style-type: none"> <li>A Storm water pond of having water holding capacity of 6,500 m<sup>3</sup> has been developed to collect wastewater for reuse inside plant.</li> <li>Pipeline has been laid in all 4 rows for use the same water for coke Quenching purpose.</li> <li>Pump has been installed at the end of Row#4 drain final outlet to re-circulate the water in the quenching pond.</li> <li>The domestic effluent generated from the canteen and office buildings is recycled through STP and the outlet water is being used for gardening.</li> </ul>
(vii)	Permission for the drawl of water from Haldia Development Authority shall be obtained and recommendations implemented.	Permission for the drawl of water from Haldia Development Authority has been obtained by Tata Power and we are taking water from tata power for our operations with due payment of consumed water.
(viii)	Coal and coke fines shall be recycled and reused in the process. All the other solid waste including broken refractory mass shall be properly disposed of in environment-friendly manner. The waste oil shall be properly disposed of as per the Hazardous Waste (Management & Handling) Rules, 1989 and subsequent amendments.	Coal fines are recycled in the coke making process and coke fines are re-used at out integrated steel plant at Tata Steel Jamshedpur. Refractory wastes are reused in internal road and parapet wall making in side plant premises. Wastes like ceramic blankets, empty oil drums, Oil contaminated wastes are disposed through the authorized CHWTSDF. Used oil generated from the process are sent to authorized re-processor.
(ix)	All the environment management measures given in the EIA/EMP shall be implemented and complied with.	The environmental management measures given in the REIA are implemented and being complied with.
(x)	As proposed, green belt shall be developed in 27% area as per the CPCB guidelines in consultation with DFO.	27% green cover is developed within the plant premises.

S. N	Condition	Compliance status
<b>B. GENERAL CONDITIONS:</b>		
(i)	The project authority shall adhere to the stipulations made by West Bengal Pollution Control Board (WBPCB) and State Government.	We are adhering to the conditions made by West Bengal Pollution Control Board (WBPCB) and State Government.
(ii)	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.	Expansion of Coke Oven Plant from 1.6 MTPA to 2.2 MTPA has been carried out with prior approval of MoEF&CC vide F. No. J-11011/284/2007- IA II (I) dated: 23 February 2017.

**Compliance to conditions stipulated in the Environmental Clearance Order for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi vide letter No. F. No. J-11011/284/07- IA II (I) dated 29<sup>th</sup> January 2008**

S. N	Condition	Compliance status
<b>B. GENERAL CONDITIONS:</b>		
(iii)	The gaseous emissions from various process units shall conform to the load/mass-based standards notified by this Ministry on 19th May 1993 and standards prescribed from time to time. The West Bengal Pollution Control Board (WBPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	Complying all the conditions stipulated by WBPCB. e.g., the stack emission standard prescribed by WBPCB is 50 mg/Nm <sup>3</sup> which is being maintained in last six months.
(iv)	Ambient air quality monitoring stations shall be set up as per statutory requirement in consultation with the WBPCB. Ambient air quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the State authorities. Monitoring of ambient air quality and shall be carried out regularly in consultation with WBPCB and data submitted to the Ministry's Regional Office at the Bhubaneswar, WBPCB & CPCB regularly. The instruments used for ambient air quality monitoring shall be calibrated time to time	Ambient Air Quality Monitoring Stations have been installed, which is submitted to WBPCB on monthly basis. Regular Ambient Noise Monitoring is conducted through 3rd party. The instruments used for ambient air quality monitoring by NABL accredited laboratory is being calibrated time to time. AAQ & Noise monitoring reports are attached as <b>Annexure-1</b> .
(v)	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night-time).	Adequate Noise Control measures such as silencers, enclosures, hoods, rubber pads, have been provided at the appropriate places in the existing plant. Workers working at work areas where noise levels are high, are provided earplugs and earmuffs to reduce the noise exposure. Regular Noise Monitoring is conducted, and the noise level is found within prescribed limits. Noise monitoring reports are attached as <b>Annexure-1</b> .
(vi)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act	PME (Periodical Medical Examination) has been done for all company employees has been done and records are being maintained at our occupational Health Centre. Health check-up for contractors' persons is conducted regularly during the time of the renewal of the respective gate pass.
(vii)	All the recommendations mentioned in the Corporate Responsibility for Environmental Protection (CREP) of CPCB issued	Recommendations mentioned in the Corporate Responsibility for Environmental Protection (CREP) of CPCB issued for the steel plants are implemented.

**Compliance to conditions stipulated in the Environmental Clearance Order for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi vide letter No. F. No. J-11011//284/07- IA II (I) dated 29<sup>th</sup> January 2008**

S. N	Condition	Compliance status
<b>B. GENERAL CONDITIONS:</b>		
	for the steel plants shall be implemented	Implementation status is attached as <b>Annexure-2.</b>
(viii)	The company shall undertake ecodevelopment measures including community welfare measures in the project area.	The local people nearly 256 people as permanent employee and over 850 as contractual employees are being employed by the company. Three projects on Infrastructure development in school & hospital has been executed during FY' 24 & identified 6 drinking water projects in schools for FY'25. Apart from this Employees are engaged in Black board painting of peripheral schools, awareness sessions to school students through volunteering wings for CSR
(ix)	The company shall develop rainwater harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table.	A Rainwater Harvesting Pond (storm water pond) of capacity ~ 6,500 m <sup>3</sup> has been developed. Roof water from all building (ADM building / Store / Laboratory / pump house) are collected in the storm water pond through common storm water drain. The collected water is utilized in coke quenching and other purposes like gardening, water sprinkling on roads, etc.
(x)	Proper housekeeping and adequate occupational health programmes shall be taken up.	To maintain proper housekeeping inside plant, the following actions are taken: <ul style="list-style-type: none"> <li>• Dedicated team has been appointed for removal of scarps and maintaining proper housekeeping within the plant.</li> <li>• "Colour Coded Bins have been provided at various location for waste segregation at source.</li> <li>• Hazardous wastes are stored under covered shed above concrete flooring.</li> <li>• Mobile vacuum cleaning machine are operated for evacuating the dust particles.</li> <li>• Regular Housekeeping Audit is being conducted to improve the housekeeping in the plant.</li> <li>• Biomedical wastes are sent to Ramky for proper disposal.</li> <li>• Periodic medical check-ups are conducted in OHC.</li> </ul>
(xi)	A separate environmental management cell to carry out various management and monitoring functions shall be set up under the control of Senior Executive.	Environmental Management Section with a qualified designated employee reports directly to the General Manager of the unit vis-a -vis functionally report to Head Environment Compliances & Clearances, TSJ. The Corporate Environment Management Cell of Tata Steel, Jamshedpur headed by Chief – Environment and respective Heads – Environment also monitors and supervises the environmental activities of the HMC division at a regular basis.

**Compliance to conditions stipulated in the Environmental Clearance Order for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi vide letter No. F. No. J-11011/284/07- IA II (I) dated 29<sup>th</sup> January 2008**

S. N	Condition	Compliance status
<b>B. GENERAL CONDITIONS:</b>		
(xii)	Adequate funds shall be allocated towards the capital cost and recurring cost/annum environmental pollution control measures and utilized judiciously to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.	Adequate funds has been allocated and utilized judiciously for environment management activities like dust suppression by water spraying & sprinkling system, mobile vacuum cleaning system for controlling dust in work area, installation & regular maintenance of DF system to control fugitive emission, installation and maintenance of Online ambient air quality monitoring system, monitoring the environment parameters by third party regularly, Green Belt development.
(xiii)	The Regional Office of this Ministry at Bhubaneswar / CPCB / WBPCB shall monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Six monthly compliance report along with the monitoring data is submitted regularly to MOEF, Regional Office, Bhubaneswar/ Regional Office Haldia/ WBPCB/ CPCB. Last six-monthly compliance report was submitted on vide letter no. HMC/HC/ENV-MoEF/2024 dated: 27.05.2024.
(xiv)	The Project Authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	It has been complied as the project has already been completed and Consent to Operate has been issued by West Bengal State Pollution Control Board.
(xv)	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the W. B. Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This should be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office at Bhubaneswar.	Public notice regarding grant of environment clearance has been advertised in two Local newspapers viz. Financial Express – (English Adv.) / Aajkal – (Bengali Adv.) dated 8.03.2008. The compliance of the same was informed to MoEF (Regional Office, Bhubaneswar) vide letter dated: 11.03.2008 by post.



**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven plant (1.6 MTPA to 2.2 MTPA) of Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011/284/2007- IA. II (I) dated 23 February 2017**

S. N	Condition	Compliance status
B.	Specific conditions	
i.	The project proponent should install 24X7 air and water monitoring devices to monitor air emission and effluent discharge, as provided by CPCB and submit report to Ministry and its Regional Office.	Continuous stack monitoring facilities provided in process stacks & reports are being submitted to ministry & its regional office. The unit maintains the Zero Effluent Discharge.
ii.	The ETP for coke oven by-product should be designed to meet EPA notified standards especially the cyanide and phenol.	The unit operates under Non recovery coke making technology. There is no by-product section.
iii.	Coke oven plant should meet visible emission standards notified by the MoEF&CC.	The unit is meeting the visible emission standard.
iv.	All the effluents shall be treated and used for dust suppression and green belt development. No effluent shall be discharged outside the premises via drains and 'Zero' discharge shall be adopted. Domestic wastewater will be treated in the Sewage Treatment plant.	The processed water is recycled and used for coke quenching, road sprinkling and green belt development within the plant. Zero Effluent Discharge is maintained. Domestic wastewater is being treated in sewage treatment plant (STP) and used in garden.
v.	Coal and coke fines shall be recycled and reused in the process. The breeze coke and dust from the air pollution control system shall be reused in sinter plant. The waste oil shall be properly disposed of as per the Hazardous waste (Management, Handling, Handling and Transboundary Movement) Rules, 2016.	Coal and coke fines are reused and recycled in the process. Swamp breeze is sold to briquette manufacture. Used Oil and other hazardous wastes are being disposed to the CHWTSDF, Haldia.
vi.	On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. shall be provided to keep the emission levels below 50mg/Nm <sup>3</sup> by installing energy efficient technology	On-line Ambient Air Quality Monitoring Station (CAAQMS) and Continuous stack monitoring facilities has been installed along with adequate air pollution control systems to control air emissions within 50 mg/Nm <sup>3</sup> .
vii	In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emission from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points. Bag filters shall be provided to hoods and dust collectors. Water sprinkling system shall be provided to control secondary fugitive dust emission generated during screening, loading, unloading, handling and storage of raw materials etc.	Bag filters has been installed at coal & coke transfer points. Dust Suppression System with Dry fog system (DFS) are in operation at all the coal transfer points, in Wagon Tippler and Coal crusher unit. Rain Gun Water Sprinklers have been installed in the coal yard. Mobile Water sprinkling is done on roads within factory and in the periphery area. Mechanised Mobile Vacuum Cleaning system is used regularly for collecting the secondary fugitive emission from internal roads. Stationary vacuum cleaning machine has been provided at Wagon Tippler to prevent fugitive dusts/ spillage.

**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven plant (1.6 MTPA to 2.2 MTPA) of Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011/284/2007- IA. II (I) dated 23 February 2017**

S. N	Condition	Compliance status
B.	Specific conditions	
viii	The standards issued by the ministry vide G.S.R.277(E) dated 31st march, 2012 shall be strictly adhered to and the standards prescribed for the coke oven plant shall be monitored and the report should be submitted along with the six-monthly compliance report.	The standards issued by the ministry vide G.S.R.277(E) dated 31st march, 2012 is for the Coke Oven (by-product type) and HMC coke oven batteries are operated under Non – recovery type technology. However, we are strictly adhering to the standards prescribed in our consent to operated issued by WBPCB.
ix	Multistage scrubber, cyclone and bag filters etc. to control particulate emissions within the prescribed limits from coke oven shall be provided. Carbon mono-oxide (CO) shall also be monitored along with other parameters and standard notified under environment (Protection) Act shall be followed. The reports shall be submitted to the ministry Regional Office, CPCB and SPCB.	Bag filters have been provided in transfer points of coal & coke circuits to control fugitive emission. Carbon monoxide (CO) is being monitored regularly. Stack monitoring report of last six months are attached as <b>Annexure-1</b> .
x	Efforts shall further be made to use maximum water from the rainwater harvesting sources. If need, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources. Use of air-cooled condensers shall be explored, and closed-circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly	A Storm water pond of capacity 6,500 Cum (approx.) has been developed. Pipeline has been laid in all 4 rows for use the same water for coke Quenching purpose pump has been installed at the end of Row#4 drain final outlet to re- circulate the water in the quenching pond. Use of air-cooled condensers will be explored
xi	existing plant operations, the amount of carbon sequestered annually by the existing green belt and the quantum of equivalent CO <sub>2</sub> that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the ministry and the regional office of the ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year	Noted and shall be complied.
xii	For the employees working in high temperature zones falling in the plant operations areas, the total shift duration would be 4hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously, such employee would be invariably provided	As the unit coke oven batteries are working under negative pressure the working temperature never exceed 40°C. Workers generally works there for cleaning purpose only. It ensures that they never work continuously in that area. Employees are being provided with proper PPEs like safety helmet, FR jacket, Safety shoe, Safety goggles, Nose mask, hand gloves etc. and sufficient drinking water facilities are being provided inside the premises.

**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven plant (1.6 MTPA to 2.2 MTPA) of Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011//284/2007- IA. II (I) dated 23 February 2017**

S. N	Condition	Compliance status
B.	Specific conditions	
	with proper protective equipment's, garments, and gears such as head gear, clothing gloves, eye protection etc. there should also be an arrangement for sufficient drinking water at site to prevent dehydration etc.	
xiii	Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the state pollution control board / described under the E(P)Act. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional office, SPCB and CPCB.	Regular wastewater and process water testing is being carried out by registered 3rd party. Analysis report is attached as <b>Annexure-1.</b>
xiv	Risk assessment and disaster management plan for the project focusing on Disaster prevention shall be prepared and implemented in conjunction with district Disaster Management plan	Onsite Emergency Plan of HMC is prepared and implemented at site.
xv	A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal	Utilisation and disposal of solid waste (Swamp breeze) various ideas are under study like separation of BF coke from swamp breeze etc. Wastes like ceramic blankets, empty oil drums, Oil contaminated wastes are disposed through the authorized TSDF. Used oil generated from the process are sent to authorized re-processor.
xvi	All the recommendation made in the charter on corporate responsibility for environment protection (CREP) for the steel plants and coke oven plants shall be implemented.	Recommendations mentioned in the Corporate Responsibility for Environmental Protection (CREP) of CPCB issued for the steel plants are implemented. Implementation status is attached as <b>Annexure-2.</b>
xvii	Green belt shall be developed in 33% of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO	27% green cover is developed within the plant premises and further measures are being taken to increase the green cover area.
xviii	At least 2.5% of the total cost of the project shall be earmarked towards the enterprise social commitment based on public hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the ministry's regional office. Implementation of such program shall be ensured by constituting a committee comprising of the	Noted & Will be complied accordingly.



**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven plant (1.6 MTPA to 2.2 MTPA) of Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011/284/2007- IA. II (I) dated 23 February 2017**

<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>Specific conditions</b>	
	proponent, representatives of village panchayat and District Administration. Action taken report in this regard shall be submitted to the ministry's Regional Office.	
xix	The proponent shall prepare a detailed CSR plan for every year for the next 5 years for the existing – cum-expansion project, which includes village- wise, sector- wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR plan will be including the amount of 2% retain annual profits as provided for in clause 135 of the companies' act ,2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the plan shall be submitted as part of the compliance report to RO. The details of the CSR plan shall also be uploaded on the company website and shall also be provided in the annual report of the company. The plan so prepared shall be based on SMART (Specific, Measurable, Achievable, Relevant and time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included	This is a Division of Tata Steel for coke making unit which is used for steel making at JSR. The division is not a profit centre and has no separate book of accounts. Tata Steel central CSR team drives the CSR activity of all units including HMC and allot the budget accordingly which is within 2% of Company (Tata Steel) profit.
xx	The company shall submit their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process / procedure to bring into focus any infringement / deviation/violation of environmental or forest norms/ conditions, (ii) Hierarchical system or administrative order of the company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of noncompliance/ violation	Tata Steel's central environment policy is followed by HMC division

**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven plant (1.6 MTPA to 2.2 MTPA) of Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011//284/2007- IA. II (I) dated 23 February 2017**

<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>Specific conditions</b>	
	environmental norms to the board of directors of the company and/or stakeholders	
xxi	All the commitments made to the public during the public Hearing / Public Consultation meeting shall be satisfactorily implemented and a separated budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office	There was no public Hearing / Public Consultation taken place. Public Hearing was exempted in the TOR condition
xxii	Haulage roads shall be sprinkled with water at regular intervals for which water tankers with sprinkler arrangement is deployed. Regular sweeping of roads shall be practiced with vacuum sweeping machine or water flushing to minimize dust	Water sprinkling arrangements are made to control the fugitive emissions from coal handling plant. More than 2.5 Kilometres of the road inside the material handling area (Coal / Coke / Tippler area) has been paved to reduce dust generation. Water sprinkling is done through mobile tankers with water sprinkling arrangement on roads within factory and in the periphery area. Mechanised Mobile Vacuum Cleaning system is used regularly for arresting the fugitive emission. Stationary vacuum cleaning machine has been provided at Wagon Tippler to prevent fugitive dusts.
xxiii	Trucks carrying coal and other raw material shall be covered with tarpaulin to prevent spreading of dust during transportation	At HMC the raw material transported through tarpaulin covered rail only. Inside the plant the raw materials transported through covered conveyor belt only.
xxiv	Provision shall be made for the housing of construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe Drinking water, medical health care etc. The housing may be in the form of temporary structures to be removed after the completion of the project	Noted and shall be complied.

<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>General conditions</b>	
i.	The project authorities must strictly adhere to the stipulations made by the West Bengal Pollution Control Board and the state government.	Agreed
ii.	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.	Agreed
iii.	At least four ambient air quality monitoring stations should downward direction as well as where maximum ground level concentration of PM10,	Five Ambient air quality monitoring stations are installed & monitoring is being done regularly & submitted to WBPCB every month Data on ambient air quality

**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven plant (1.6 MTPA to 2.2 MTPA) of Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011/284/2007- IA. II (I) dated 23 February 2017**

	PM2.5, SO2 and NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its regional office at Orissa and the SPCB/CPCB once in six months.	and stack emission is regularly submitted along with six monthly EC compliance report. Reports of last six months is attached as <b>Annexure-1</b> .
iv.	Industrial Wastewater shall be properly collected, treated so as to confirm to the standards prescribed under GSR 422 (E) dated 19th may, 1993 and 31st December 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose	A Storm water pond of having 6,500 Cum capacity has been developed to collect wastewater & Pipeline has been laid in all 4 rows for use the same water for coke Quenching purpose. Pump has been installed at the end of Row#4 drain final outlet to re- circulate the water in the quenching pond. The water is being monitored through NABL accredited Laboratory.
v.	The overall noise levels in and around the plant area shall be kept well within the standards (85dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Adequate Noise Control measures such as silencers, enclosures, hoods, rubber pads, have been provided at the appropriate places in the existing plant. Workers working at work areas where noise levels are high, are provided earplugs and earmuffs to reduce the noise exposure. Regular Noise Monitoring is conducted, and the noise level is found within prescribed limits. Noise monitoring report is attached as <b>Annexure-1</b> .
vi.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	PME (Periodical Medical Examination) has been done for all company employees has been done and records are being maintained at our occupational Health Centre. Health check-up for contractors' persons is conducted regularly during the time of the renewal of the respective gate pass.
vii.	The company shall develop rainwater harvesting structures to harvest the rainwater for utilization in the lead season besides recharging the ground water table.	A Storm water pond of capacity 6,500 Cum (approx.) has been developed. Pipeline has been laid in all 4 rows for use the same water for coke Quenching purpose pump has been installed at the end of Row#4 drain final outlet to re-circulate the water in the quenching pond. Use of air-cooled condensers will be explored
viii.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	The environmental management measures given in the REIA are implemented and being complied with. The local people as permanent employee and contractual employees are being employed by the company. Three projects on Infrastructure development in school & hospital has been executed during FY'24 & identified 6 drinking water projects in schools for FY'25. Apart from this Employees are engaged in Black board painting of peripheral schools, awareness sessions to school students through volunteering wings for CSR

**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven plant (1.6 MTPA to 2.2 MTPA) of Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011//284/2007- IA. II (I) dated 23 February 2017**

ix.	Requisite funds shall be earmarked towards capital cost and recurring cost/ annum for environment pollution control measures to implement the condition stipulated by the ministry of environment, Forest and Climate change (MoEF&CC) as well as the state government. An implementation schedule for implementing all the condition stipulated herein shall be submitted to the regional office of the ministry at Orissa. The funds so provided shall not be diverted for any other purpose.	Adequate funds has been allocated and utilized judiciously for environment management activities like dust suppression by water spraying & sprinkling system, mobile vacuum cleaning system for controlling dust in work area, installation & regular maintenance of DF system to control fugitive emission, installation and maintenance of Online ambient air quality monitoring system, monitoring the environment parameters by third party regularly, Green Belt development.
x.	A copy of clearance letter shall be sent by the proponent to concern Panchayat, Zila parishad / Municipal Corporation, Urban local body and the local NGO, If any, from whom suggestion/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied.
xi	The Project proponent shall upload the status of the stipulated environmental clearance conditions, including results of monitored data on their website and shall simultaneously be sent to the Regional Office of the MOEFCC at Orissa. The respective zonal office of CPCB and the SPCB. The criteria pollutant levels namely, PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicate for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain update the same periodically.	Environment Clearance Status is being uploaded in our website and six-monthly compliance report along with the monitoring data is being submitted to IRO, Kolkata, Zonal Office CPCB, Member secretary, WBPCB & Regional Office WBPCB, Haldia. Last six-monthly compliance report was submitted on 29.11.2023.
xii.	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by email) to the regional office of MOEFCC, the respective Zonal office of CPCB and the SPCB. The Regional office of this ministry at Orissa /CPCB / SPCB shall monitor the stipulated conditions.	Six monthly compliance report along with the monitoring data shall be submitted to IRO, Kolkata , Zonal Office CPCB, Member secretary , WBPCB & Regional Office WBPCB, Haldia ( both in hard copy & email )
xiii.	The environmental statement for each financial year ending 31st march in form V as is mandated to be submitted by the project proponent to the concerned state pollution control	Environmental Statement is submitted on time. Environmental Statement for FY24 was submitted vide TSL/HMC/ENV/ FY24/0015 dated: 25.09.2024

**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven plant (1.6 MTPA to 2.2 MTPA) of Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011//284/2007- IA. II (I) dated 23 February 2017**

	Board as prescribed under the environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEFCC at Orissa by e-mail.	
xiv.	The project proponent shall inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of the Ministry of environment, Forest and Climate change (MoEFCC) at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the regional office at Orissa.	Communication regarding grant of environment clearance for expansion project of Coke Oven Plant from 1.6 MTPA to 2.2 MTPA vide F. No. J11011//284/2007- IA II (I) was published in the newspapers viz., The Times of India, The Economic Times, and The Business Standards, dated 24 February 2017.
xv.	Project authorities shall inform the regional office as well as the ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work	Noted and shall be complied.

### **Annexure-1: Environment Monitoring reports**

<b>Stack Emission Monitoring Report</b> <b>Monthly average For period April'24 to Sep'24</b>						
Stack Name	SPM (mg/Nm <sup>3</sup> )		SO <sub>2</sub> (mg/Nm <sup>3</sup> )		NO <sub>x</sub> (mg/Nm <sup>3</sup> )	
	Prescribed Limit	Result	Prescribed Limit	Result	Prescribed Limit	Result
Chimney 1AB	50	27.11	800	295.30	500	156.90
Chimney 1CD	50	19.95	800	199.63	500	173.20
Chimney 2AB	50	25.15	800	313.60	500	180.27
Chimney 2CD	50	32.35	800	351.90	500	208.65
Chimney 3AB	50	31.75	800	339.70	500	182.58
Chimney 3CD	50	35.43	800	268.10	500	154.10
Chimney 4AB	50	38.57	800	295.90	500	180.65
Chimney 4CD	50	26.30	800	320.00	500	201.30

<b>Online Stack Emission Monitoring Report for SPM (in mg/Nm<sup>3</sup>)</b> <b>For Period: Apr'24- Sep'24</b>							
Stack	Apr'24	May'24	Jun'24	Jul'24	Aug'24	Sep'24	Average
Chimney 1AB	29.76	26.18	25.79	24.38	24.14	24.05	25.72
Chimney 1CD	28.45	29.45	34.04	34.89	36.51	33.42	32.79
Chimney 2AB	25.12	22.37	14.65	13.72	22.87	24.79	20.59
Chimney 2CD	25.62	26.99	26.88	21.57	28.14	28.5	26.28
Chimney 3AB	18.18	17.92	18.06	18.06	21.37	22.04	19.27
Chimney 3CD	29.88	30.36	33.9	28.3	29.25	24.98	29.45
Chimney 4AB	21.03	23.88	27.68	32.68	26.95	29.14	26.89
Chimney 4CD	18.77	26.92	14.34	14.64	15.97	19.05	18.28

<b>AMBIENT AIR QUALITY MONITORING REPORT</b> <b>Period: Apr'24 to Sep'24</b>													
Sl. No	Sampling Stations	PM 10 µg/m <sup>3</sup>	PM <sub>2.5</sub> µg /m <sup>3</sup>	SO <sub>2</sub> µg/ m <sup>3</sup>	NO <sub>x</sub> µg / m <sup>3</sup>	CO mg/m <sup>3</sup>	Ozone (O <sub>3</sub> ) µg/m <sup>3</sup>	Lead (Pb) µg/m <sup>3</sup>	Ammonia (NH <sub>3</sub> ) µg/m <sup>3</sup>	Benzene (C <sub>6</sub> H <sub>6</sub> )	Benzo (a) Pyrene ng /m <sup>3</sup>	Arsenic (As) 3 ng / m	Nickel (Ni) ng/m <sup>3</sup>
1	Near CCR (Centre)	81.6	39.4	22.6	32.4	<0.01	<4.2	30.3	16.8	0.5	<0.5	<1.0	<5.0
2	Back Side of ADM Building (South side)	72.0	34.9	9.7	28.0	<0.01	<4.2	32.6	18.8	0.5	<0.5	<1.0	<5.0
3	Near Coal Yard (East Side)	86.0	43.2	10.0	32.3	0.02	<4.2	39.1	19.2	0.5	<0.5	<1.0	<5.0
4	Patikhali Gate (North Side)	78.6	36.8	10.3	25.4	0.01	<4.2	28.4	18.4	0.4	<0.5	<1.0	<5.0
5	Near Simplex Gate / ENS office (West Side)	78.2	35.5	9.8	29.7	0.0	<4.2	36.9	19.2	0.5	<0.5	<1.0	<5.0

<b>NOISE QUALITY MONITORING REPORT (in dBA)</b> <b>Period: Apr'24 to Sep'24</b>													
Sl.No	NOISE MONITORING LOCATIONS	Apr'24		May'24		Jun'24		Jul'24		Aug'24		Sep'24	
		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
1	Stamping Station-1							60.3	56.5				
2	Junction House-7			61.9	58.9								
3	Near Patikhali Gate			52.8	47.6			54.2	47.2			56.8	43.3
4	Near Simplex Gate			52.0	45.9			52	45.0			58.0	42.5
5	Occupational Health Center			51.2	47.1			50.2	43.6			49.8	40.4
6	Wagon Tippler							58.8	54.8			60.5	55.0
7	Crusher House					61.4	58.7			50.2	44.2		
8	Admin Building	51.8	44.4			51.1	42.4			47.9	43		
9	CCR	51.8	44.2			50.7	43.2			56.4	47.3		
10	Engineering Service Center	55.6	52.5			53.3	47.4						

11	<b>Blending Bunker Floor</b>									61.9	53.7		
12	<b>Screen House</b>	61.4	59.4										
13	<b>Stamping Station-2</b>	60.7	56.4									62.0	56.1
14	<b>Stamping Station-3</b>			61.4	60.2					61.0	55.4		
15	<b>Stamping Station-4</b>					61.0	57.4						



**Annexure - 2**

**Compliance status of applicable CREP points**

<b>Sl. No.</b>	<b>CREP point</b>	<b>Compliance Status</b>
1	To meet the parameters PLD (% leaking colors), PLL (% leaking lids), PLO (% leaking off take), of the notified standards under EPA within three years by December 2005). Industry will submit time bound action plan and PER Chart along with the Bank Guarantee for the implementation or the time. -To rebuild at least 40% of the coke oven batteries in next 10 years (by December 2012.).	PLD,PLL & PLO parameters are applicable for byproduct recovery type Coke Ovens. Hooghly Met Coke Division is of 'Non-Recovery Type'.
4	Inventorisation of the Hazardous waste as per Hazardous Waste (M&H), Rules, 1989 as amended in 2000 and implementation of the Rules by December 2003 (Tar sludge, acid sludge, waste Lubricating oil and type fuel falls in the category of Hazardous waste).	Inventorization of all Hazardous waste generated within the plant was done as per Hazardous Waste (Management and Handling) Rules, 2016 (and as amended). The waste are collected stored and disposed to authorized recyclers as mandated in the rules. Returns are submitted regularly.
5	To operate the Co-BP effluent treatment plant efficiently to achieve the notified effluent discharge standards. – by June 2003.	Coke Oven Plant is of Non-recovery type and there is no Co-BP effluent discharge from Coke Oven Plant.
6	Installation of Continuous stack monitoring system & its calibration in major stacks and setting up of the online ambient air quality monitoring stations by June 2005	Continuous Stack Monitoring System with calibration facility & Continuous Ambient Air Quality Monitoring Stations have been installed.
7	To operate the existing pollution control equipment efficiently and to keep proper record of run hours, failure time and efficiency with immediate effect. Compliance report in this regard be submitted to CPCB/SPCB every three months.	All pollution control equipment is efficiently maintained.
9	The industry will initiate the steps to adopt the following clean technologies measures to improve the performance of industry towards production, energy and land environment.  - To implement rainwater harvesting. - Reduction Green House Gases by: * Reduction in power consumption * Use of by –products gases for power generation * Promotion of Energy Optimisation technology including energy/ audit	<ul style="list-style-type: none"> <li>• A storm water pond of capacity ~ 6500 cum has been developed. During rain, the roof water from all building like ADM building / Store / Laboratory / pump house are collected in a common storm water drain and this water is collected in the storm water pond. The collected water is utilized in coke quenching and other purposes like gardening, water sprinkling on roads, etc</li> <li>• CO2 emission under GHG is regularly monitored and operational controls are undertaken for controlling it.</li> </ul>

	<ul style="list-style-type: none"> <li>- To set targets for Resource Conservation such as Raw material, energy and water consumption to match International Standards.</li> <li>- Up- gradation in the monitoring and analysis facilities for air and water pollution. Also, to impart elaborate training to the manpower so that realistic data is obtained in the environmental monitoring laboratories.</li> <li>- To Improve overall house keeping</li> </ul>	<ul style="list-style-type: none"> <li>• Short- and long-term goals are fixed for several environment KPIs such as Water, energy, raw materials etc. The performance against the targets is regularly monitored and incremental improvements are achieved.</li> <li>• On-line Continuous stack monitoring equipment have been installed at all the eight (08) Nos. of stacks. Manual stack monitoring is also conducted on regular basis through registered third party. Ambient Air Quality Monitoring Stations have been set- up at Four corners (North / South / East / West) adjacent to the boundary wall and central of the plant and regular monitoring is conducted though certified 3rd party.</li> <li>• To maintain proper housekeeping inside plant, a dedicated team has been appointed for removal of scarps and maintaining proper housekeeping within the plant. "Colour Coded Bins have been provided at various location for waste segregation at source. Hazardous wastes are stored under covered shed above concrete flooring. Regular 5S audit is being conducted to improve the housekeeping in the plant.</li> </ul>
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## Mitra S.K.Private Limited



Building No.D5, Unit No- 230, Bhumi World Industrial Park,  
Mumbai, Nashik Highway, Pimplas Village, Bhiwandi, Near Kalyan  
Bhiwandi Bypass, Tal - Bhiwandi  
Dist. Thane- 421302.  
Tel. : 0252 2672352.  
Email: [mumbailab@mitrask.com](mailto:mumbailab@mitrask.com)  
Web : [www.mitrask.com](http://www.mitrask.com)

**TEST REPORT****ULR: TC-867324000001184F****Name & Address of the Customer:**

Tata Steel Limited  
HMC Complex, Patikhali, Haldia,  
Purba Medinipur-721606.

**Report No.**

:C/2024/1184

**Date**

:30.09.24

**Sample No.**

:MSK/MUM/2024/1184

**Date of receipt of sample**

:23.09.24

**Date(s) of performance**

:23.09.24-30.09.24

**Ref. No. & Date**

:4700116478/002 dt.30.08.23


**Discipline**

:Chemical

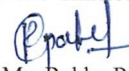
*We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:*

1	Group	: Atmospheric Pollution
2	Description of sample (As declared by customer)	: Stack Emission
3	Sample Mark (if any, given by the customer)	: Stack Emission
4	Date of sampling	: 21.09.24 at 03.45 pm
5	Place of sampling	: Chimney-1 CD
6	Environmental conditions during sampling	: Cold Chain Maintained
7	Sampling Drawn By	: Mr. Saikat Mukherjee
8	Sampling Plan & Procedures used	: IS 11255 (Part-1, Part-2, Part-3, Part-7) & IS:13270
9	Location of performance of laboratory activities	: Laboratory Permanent Facility
10	Additions to, Deviation from the method (if any)	: No

**Reviewed By:**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

**Authorized Signatory**  
**For Mitra S.K. Private Limited**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

## Mitra S.K.Private Limited



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Web : [www.mitrask.com](http://www.mitrask.com)



Report No. : C/2024/1184  
Sample No. : MSK/MUM/2024/1184

**ANALYSIS RESULT**


ULR: TC-867324000001184F


A: GENERAL INFORMATION ABOUT STACK:					
1	Stack connected to	Chimney-1 CD			
2	Emission due to	Combustion of Coal			
3	Material of construction of Stack	RCC			
4	Shape of Stack	Circular			
5	Whether Stack is provided with permanent platform	Yes			
6	Capacity	NA			
B: PHYSICAL CHARACTERISTICS OF STACK:					
1	Height of Stack from ground level	70.0 m			
2	Diameter of Stack at sampling point	4.33 m			
3	Height of the sampling point from ground level	46.386 m			
4	Area of Stack	14.71 m2			
C: ANALYSIS/CHARACTERSTIC OF STACK:					
1	Fuel used :Coal	2. Fuel consumption: NA			
D: RESULTS OF SAMPLING & ANALYSIS OF GASEOUS EMISSION:		Unit	RESULT	METHOD	Standard/ Requirement Limit as per CPCB
1	Temperature	°C	174	IS 11255 (Part-3)	Not Specified
2	Barometric pressure	mm of Hg	752	IS 11255 (Part-3)	Not Specified
3	Velocity	m/sec	5.09	IS 11255 (Part-3)	Not Specified
4	Flow rate of the flue gas	Nm³/hr	167039	IS 11255 (Part-3)	Not Specified
5	Carbon monoxide	%v/v	BDL(DL:0.2)	IS 13270	Not Specified
6	Carbon Dioxide	%v/v	8.4	IS 13270	Not Specified
7	Sulphur Dioxide as SO2	mg/Nm3	317	IS 11255 (Part-2)	Not Specified
8	Nitrogen dioxide as NO2	mg/Nm3	172	IS 11255 (Part-7)	Not Specified
9	Particulate Matter	mg/Nm³	42	IS 11255 (Part-1)	150
10	Moisture	%v/v	5.9	IS 11255 (Part-3)	Not Specified
11	Oxygen	%v/v	12.6	IS 13270	Not Specified
E: POLLUTION: - Details of pollution control devices attached with the stack: 2 Nos WHRB (Both are running)					

Note:	1.Equipment name: - Stack Sampler	2.Model No: EI -106
	3.Make: - Envirotech	4.SI. No. 56 - G - 21
	5.Calibration Done: - 16.08.24	6.Calibration Due: - 15.08.25

End

Authorized Signatory  
For Mitra S.K. Private Limited

Reviewed By:   
Signature :  
Name : Ms. Rekha Patel  
Designation : Technical Manager

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

- The results relate only to the item(s) tested.
- This Test Report shall not be reproduced except in full, without the permission of Mitra S.K. Private Limited.
- The reserved part of sample(s) shall be retained for 10 days & 30 days (Air) from the date of issue of the Test Report.

Page 2 of 2



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**TEST REPORT****Name & Address of the Customer:**

Tata Steel Limited  
HMC Complex, Patikhali, Haldia,  
Purba Medinipur-721606.

**Report No.**

:C/2024/1184A

**Date**

:30.09.24

**Sample No.**

:MSK/MUM/2024/1184

**Date of receipt of sample**

:23.09.24

**Date(s) of performance**

:23.09.24-30.09.24

**Ref. No. & Date**

:4700116478/002 dt.30.08.23

**Discipline**

:Chemical

*We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:*


1	Group	: Atmospheric Pollution
2	Description of sample (As declared by customer)	: Stack Emission
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4	Date of sampling	: 21.09.24 at 03.45 pm
5	Place of sampling	: Chimney-1 CD
6	Environmental conditions during sampling	: Cold Chain Maintained
7	Sampling Drawn By	: Mr. Saikat Mukherjee
8	Sampling Plan & Procedures used	: IS 11255 (Part-1)
9	Location of performance of laboratory activities	: Laboratory Permanent Facility
10	Additions to, Deviation from the method (if any)	: No

**ANALYSIS RESULT**

D: RESULTS OF SAMPLING & ANALYSIS OF GASEOUS EMISSION:		Unit	RESULT	METHOD	Standard/ Requirement Limit as per CPCB
1	PM at 6 % CO2	mg/Nm <sup>3</sup>	30	By Calculation	Not Specified


End

**Reviewed By:**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

**Authorized Signatory**

For Mitra S.K. Private Limited

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

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Web : [www.mitrask.com](http://www.mitrask.com)

**TEST REPORT****ULR: TC-867324000001183F****Name & Address of the Customer:**

Tata Steel Limited  
HMC Complex, Patikhali, Haldia,  
Purba Medinipur-721606.

**Report No.**

:C/2024/1183

**Date**

:30.09.24

**Sample No.**

:MSK/MUM/2024/1183

**Date of receipt of sample**

:23.09.24

**Date(s) of performance**

:23.09.24-30.09.24

**Ref. No. & Date**

:4700116478/002 dt.30.08.23


**Discipline**

:Chemical

*We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:*

1	Group	: Atmospheric Pollution
2	Description of sample (As declared by customer)	: Stack Emission
3	Sample Mark (if any, given by the customer)	: Stack Emission
4	Date of sampling	: 21.09.24 at 02.35 pm
5	Place of sampling	: Chimney-2CD
6	Environmental conditions during sampling	: Cold Chain Maintained
7	Sampling Drawn By	: Mr. Saikat Mukherjee
8	Sampling Plan & Procedures used	: IS 11255 (Part-1, Part-2, Part-3, Part-7) & IS:13270
9	Location of performance of laboratory activities	: Laboratory Permanent Facility
10	Additions to, Deviation from the method (if any)	: No

**Reviewed By:**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

**Authorized Signatory**  
**For Mitra S.K. Private Limited**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

Page 1 of 2



## Mitra S.K.Private Limited

Building No.D5, Unit No- 230, Bhumi World Industrial Park,  
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Web : [www.mitrask.com](http://www.mitrask.com)



Report No. : C/2024/1183  
Sample No. : MSK/MUM/2024/1183

**ANALYSIS RESULT**

ULR: TC-867324000001183F

**A: GENERAL INFORMATION ABOUT STACK:**

1	Stack connected to	Chimney-2CD
2	Emission due to	Combustion of Coal
3	Material of construction of Stack	RCC
4	Shape of Stack	Circular
5	Whether Stack is provided with permanent platform	Yes
6	Capacity	NA

**B: PHYSICAL CHARACTERISTICS OF STACK:**

1	Height of Stack from ground level	70.0 m
2	Diameter of Stack at sampling point	4.33 m
3	Height of the sampling point from ground level	46.386 m
4	Area of Stack	14.71 m <sup>2</sup>

**C: ANALYSIS/CHARACTERSTIC OF STACK:**

1	Fuel used :Coal	2. Fuel consumption: NA
---	-----------------	-------------------------

**D: RESULTS OF SAMPLING & ANALYSIS OF GASEOUS EMISSION:**

1	Temperature	°C	178	IS 11255 (Part-3)	Not Specified
2	Barometric pressure	mm of Hg	752	IS 11255 (Part-3)	Not Specified
3	Velocity	m/sec	5.16	IS 11255 (Part-3)	Not Specified
4	Flow rate of the flue gas	Nm³/hr	169586	IS 11255 (Part-3)	Not Specified
5	Carbon monoxide	%v/v	BDL(DL:0.2)	IS 13270	Not Specified
6	Carbon Dioxide	%v/v	8.8	IS 13270	Not Specified
7	Sulphur Dioxide as SO2	mg/Nm3	291	IS 11255 (Part-2)	Not Specified
8	Nitrogen dioxide as NO2	mg/Nm3	148	IS 11255 (Part-7)	Not Specified
9	Particulate Matter	mg/Nm³	36	IS 11255 (Part-1)	150
10	Moisture	%v/v	4.7	IS 11255 (Part-3)	Not Specified
11	Oxygen	%v/v	11.2	IS 13270	Not Specified


**E: POLLUTION:** - Details of pollution control devices attached with the stack: 2 Nos WHRB (Both are running)


<b>Note:</b>	1.Equipment name: - Stack Sampler	2.Model No: EI-106
	3.Make: - Envirotech	4.SI. No. 56 - G - 21
	5.Calibration Done: - 16.08.24	6.Calibration Due: - 15.08.25

End

Authorized Signatory  
For Mitra S.K. Private Limited

Reviewed By:

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

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# Mitra S.K.Private Limited



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Email: [mumbailab@mitrask.com](mailto:mumbailab@mitrask.com)  
Web : [www.mitrask.com](http://www.mitrask.com)

## TEST REPORT

**Name & Address of the Customer:**

Tata Steel Limited  
HMC Complex, Patikhali, Haldia,  
Purba Medinipur-721606.

**Report No.**

:C/2024/1183A

**Date**

:30.09.24

**Sample No.**

:MSK/MUM/2024/1183

**Date of receipt of sample**

:23.09.24

**Date(s) of performance**

:23.09.24-30.09.24

**Ref. No. & Date**

:4700116478/002 dt.30.08.23

**Discipline**

:Chemical

*We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:*


1	Group	: Atmospheric Pollution
2	Description of sample (As declared by customer)	: Stack Emission
3	Sample Mark (if any, given by the customer)	: Stack Emission
4	Date of sampling	: 21.09.24 at 02.35 pm
5	Place of sampling	: Chimney-2CD
6	Environmental conditions during sampling	: Cold Chain Maintained
7	Sampling Drawn By	: Mr. Saikat Mukherjee
8	Sampling Plan & Procedures used	: IS 11255 (Part-1)
9	Location of performance of laboratory activities	: Laboratory Permanent Facility
10	Additions to, Deviation from the method (if any)	: No

## ANALYSIS RESULT

D: RESULTS OF SAMPLING & ANALYSIS OF GASEOUS EMISSION:		Unit	RESULT	METHOD	Standard/ Requirement Limit as per CPCB
1	PM at 6 % CO2	mg/Nm <sup>3</sup>	26.3	By Calculation	Not Specified

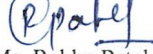
\_\_\_\_\_ End \_\_\_\_\_

**Reviewed By:**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

**Authorized Signatory**

For Mitra S.K. Private Limited

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

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## Mitra S.K.Private Limited



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Web : [www.mitrask.com](http://www.mitrask.com)

**TEST REPORT****ULR: TC-867324000001182F****Name & Address of the Customer:**

Tata Steel Limited  
HMC Complex, Patikhali, Haldia,  
Purba Medinipur-721606.

**Report No.**

:C/2024/1182

**Date**

:30.09.24

**Sample No.**

:MSK/MUM/2024/1182

**Date of receipt of sample**

:23.09.24

**Date(s) of performance**

:23.09.24-30.09.24

**Ref. No. & Date**

:4700116478/002 dt.30.08.23


**Discipline**

:Chemical

*We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:*

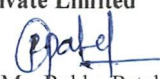
1	Group	: Atmospheric Pollution
2	Description of sample (As declared by customer)	: Stack Emission
3	Sample Mark (if any, given by the customer)	: Stack Emission
4	Date of sampling	: 21.09.24 at 11.45 am
5	Place of sampling	: Chimney-2AB
6	Environmental conditions during sampling	: Cold Chain Maintained
7	Sampling Drawn By	: Mr. Saikat Mukherjee
8	Sampling Plan & Procedures used	: IS 11255 (Part-1, Part-2, Part-3, Part-7) & IS:13270
9	Location of performance of laboratory activities	: Laboratory Permanent Facility
10	Additions to, Deviation from the method (if any)	: No

**Reviewed By:**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

**Authorized Signatory**

For Mitra S.K. Private Limited

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

Page 1 of 2

## Mitra S.K.Private Limited

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Email: [mumbailab@mitrask.com](mailto:mumbailab@mitrask.com)  
Web : [www.mitrask.com](http://www.mitrask.com)



Report No. : C/2024/1182  
Sample No. : MSK/MUM/2024/1182

**ANALYSIS RESULT**

ULR: TC-867324000001182F

**A: GENERAL INFORMATION ABOUT STACK:**

1	Stack connected to	Chimney-2AB
2	Emission due to	Combustion of Coal
3	Material of construction of Stack	RCC
4	Shape of Stack	Circular
5	Whether Stack is provided with permanent platform	Yes
6	Capacity	NA

**B: PHYSICAL CHARACTERISTICS OF STACK:**

1	Height of Stack from ground level	70.0 m
2	Diameter of Stack at sampling point	4.33 m
3	Height of the sampling point from ground level	46.386 m
4	Area of Stack	14.71 m <sup>2</sup>

**C: ANALYSIS/CHARACTERSTIC OF STACK:**

1	Fuel used : Coal	2. Fuel consumption: NA
---	------------------	-------------------------

**D: RESULTS OF SAMPLING & ANALYSIS OF GASEOUS EMISSION:**


1	Temperature	°C	172	IS 11255 (Part-3)	Requirement Limit as per CPCB Not Specified
2	Barometric pressure	mm of Hg	752	IS 11255 (Part-3)	Not Specified
3	Velocity	m/sec	5.15	IS 11255 (Part-3)	Not Specified
4	Flow rate of the flue gas	Nm³/hr	171574	IS 11255 (Part-3)	Not Specified
5	Carbon monoxide	%v/v	BDL(DL:0.2)	IS 13270	Not Specified
6	Carbon Dioxide	%v/v	8.6	IS 13270	Not Specified
7	Sulphur Dioxide as SO2	mg/Nm3	298	IS 11255 (Part-2)	Not Specified
8	Nitrogen dioxide as NO2	mg/Nm3	157	IS 11255 (Part-7)	Not Specified
9	Particulate Matter	mg/Nm³	39	IS 11255 (Part-1)	150
10	Moisture	%v/v	5.4	IS 11255 (Part-3)	Not Specified
11	Oxygen	%v/v	11.6	IS 13270	Not Specified


**E: POLLUTION:** - Details of pollution control devices attached with the stack: 2 Nos WHRB (Both are running)

Note:	1.Equipment name: - Stack Sampler	2.Model No: EI -106
	3.Make: - Envirotech	4.SI. No. 56 - G - 21
	5.Calibration Done: - 16.08.24	6.Calibration Due: - 15.08.25

End

Authorized Signatory  
For Mitra S.K. Private Limited

Reviewed By:  
Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

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## Mitra S.K.Private Limited



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Web : [www.mitrask.com](http://www.mitrask.com)

**TEST REPORT****Name & Address of the Customer:**

Tata Steel Limited  
HMC Complex, Patikhali, Haldia,  
Purba Medinipur-721606.

**Report No.**

:C/2024/1182A

**Date**

:30.09.24

**Sample No.**

:MSK/MUM/2024/1182

**Date of receipt of sample**

:23.09.24

**Date(s) of performance**

:23.09.24-30.09.24

**Ref. No. & Date**

:4700116478/002 dt.30.08.23

**Discipline**

:Chemical

*We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:*


1	Group	: Atmospheric Pollution
2	Description of sample ( <i>As declared by customer</i> )	: Stack Emission
3	Sample Mark ( <i>if any, given by the customer</i> )	: Stack Emission
4	Date of sampling	: 21.09.24 at 11.45 am
5	Place of sampling	: Chimney-2AB
6	Environmental conditions during sampling	: Cold Chain Maintained
7	Sampling Drawn By	: Mr. Saikat Mukherjee
8	Sampling Plan & Procedures used	: IS 11255 (Part-1)
9	Location of performance of laboratory activities	: Laboratory Permanent Facility
10	Additions to, Deviation from the method (if any)	: No

**ANALYSIS RESULT**

D: RESULTS OF SAMPLING & ANALYSIS OF GASEOUS EMISSION:		Unit	RESULT	METHOD	Standard/ Requirement Limit as per CPCB
1	PM at 6 % CO <sub>2</sub>	mg/Nm <sup>3</sup>	27.2	By Calculation	Not Specified


\_\_\_\_\_ End \_\_\_\_\_

**Reviewed By:**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

**Authorized Signatory**

For Mitra S.K. Private Limited

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

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Web : [www.mitrask.com](http://www.mitrask.com)



## TEST REPORT

ULR: TC-867324000001181F

**Name & Address of the Customer:**

Tata Steel Limited  
HMC Complex, Patikhali, Haldia,  
Purba Medinipur-721606.

**Report No.**

:C/2024/1181

**Date**

:30.09.24

**Sample No.**

:MSK/MUM/2024/1181

**Date of receipt of sample**

:23.09.24

**Date(s) of performance**

:23.09.24-30.09.24

**Ref. No. & Date**

:4700116478/002 dt.30.08.23


**Discipline**

:Chemical

*We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:*

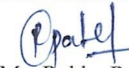
1	Group	: Atmospheric Pollution
2	Description of sample (As declared by customer)	: Stack Emission
3	Sample Mark (if any, given by the customer)	: Stack Emission
4	Date of sampling	: 21.09.24 at 10.30 am
5	Place of sampling	: Chimney-1AB
6	Environmental conditions during sampling	: Cold Chain Maintained
7	Sampling Drawn By	: Mr. Saikat Mukherjee
8	Sampling Plan & Procedures used	: IS 11255 (Part-1, Part-2, Part-3, Part-7) & IS:13270
9	Location of performance of laboratory activities	: Laboratory Permanent Facility
10	Additions to, Deviation from the method (if any)	: No

**Reviewed By:**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

**Authorized Signatory**

For Mitra S.K. Private Limited

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager



## Mitra S.K.Private Limited

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Web : [www.mitrask.com](http://www.mitrask.com)



Report No. : C/2024/1181  
Sample No. : MSK/MUM/2024/1181

**ANALYSIS RESULT**

ULR: TC-867324000001181F

**A: GENERAL INFORMATION ABOUT STACK:**

1	Stack connected to	Chimney-IAB
2	Emission due to	Combustion of Coal
3	Material of construction of Stack	RCC
4	Shape of Stack	Circular
5	Whether Stack is provided with permanent platform	Yes
6	Capacity	NA

**B: PHYSICAL CHARACTERISTICS OF STACK:**

1	Height of Stack from ground level	70.0 m
2	Diameter of Stack at sampling point	4.33 m
3	Height of the sampling point from ground level	46.386 m
4	Area of Stack	14.71 m <sup>2</sup>

**C: ANALYSIS/CHARACTERSTIC OF STACK:**

1	Fuel used : Coal	2. Fuel consumption: NA
---	------------------	-------------------------

**D: RESULTS OF SAMPLING & ANALYSIS OF GASEOUS EMISSION:**


1	Temperature	°C	174	IS 11255 (Part-3)	Requirement Limit as per CPCB
2	Barometric pressure	mm of Hg	752	IS 11255 (Part-3)	Not Specified
3	Velocity	m/sec	5.26	IS 11255 (Part-3)	Not Specified
4	Flow rate of the flue gas	Nm³/hr	172618	IS 11255 (Part-3)	Not Specified
5	Carbon monoxide	%v/v	BDL(DL:0.2)	IS 13270	Not Specified
6	Carbon Dioxide	%v/v	8.8	IS 13270	Not Specified
7	Sulphur Dioxide as SO2	mg/Nm3	304	IS 11255 (Part-2)	Not Specified
8	Nitrogen dioxide as NO2	mg/Nm3	152	IS 11255 (Part-7)	Not Specified
9	Particulate Matter	mg/Nm³	47	IS 11255 (Part-1)	150
10	Moisture	%v/v	5.9	IS 11255 (Part-3)	Not Specified
11	Oxygen	%v/v	11.2	IS 13270	Not Specified


**E: POLLUTION:** - Details of pollution control devices attached with the stack: 2 Nos WHRB (Both are running)

<b>Note:</b>	1.Equipment name: - Stack Sampler	2.Model No: EI -106
	3.Make: - Envirotech	4.SI. No. 56 - G - 21
	5.Calibration Done: - 16.08.24	6.Calibration Due: - 15.08.25

\_\_\_\_ End \_\_\_\_

Authorized Signatory  
For Mitra S.K. Private Limited

Reviewed By:   
Signature :  
Name : Ms. Rekha Patel  
Designation : Technical Manager

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

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Web : [www.mitrask.com](http://www.mitrask.com)



## TEST REPORT

**Name & Address of the Customer:**

Tata Steel Limited  
HMC Complex, Patikhali, Haldia,  
Purba Medinipur-721606.

**Report No.**

:C/2024/1181A

**Date**

:30.09.24

**Sample No.**

:MSK/MUM/2024/1181

**Date of receipt of sample**

:23.09.24

**Date(s) of performance**

:23.09.24-30.09.24

**Ref. No. & Date**

:4700116478/002 dt.30.08.23

**Discipline**

:Chemical

*We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:*


1	Group	: Atmospheric Pollution
2	Description of sample (As declared by customer)	: Stack Emission
3	Sample Mark (if any, given by the customer)	: Stack Emission
4	Date of sampling	: 21.09.24 at 10.30 am
5	Place of sampling	: Chimney-1AB
6	Environmental conditions during sampling	: Cold Chain Maintained
7	Sampling Drawn By	: Mr. Saikat Mukherjee
8	Sampling Plan & Procedures used	: IS 11255 (Part-1)
9	Location of performance of laboratory activities	: Laboratory Permanent Facility
10	Additions to, Deviation from the method (if any)	: No

## ANALYSIS RESULT


D: RESULTS OF SAMPLING & ANALYSIS OF GASEOUS EMISSION:		Unit	RESULT	METHOD	Standard/ Requirement Limit as per CPCB
1	PM at 6 % CO <sub>2</sub>	mg/Nm <sup>3</sup>	32.0	By Calculation	Not Specified

\_\_\_\_\_ End \_\_\_\_\_

**Reviewed By:**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

**Authorized Signatory  
For Mitra S.K. Private Limited**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

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Web : [www.mitrask.com](http://www.mitrask.com)



## TEST REPORT

ULR: TC-867324000001180F

### Name & Address of the Customer:

Tata Steel Limited  
HMC Complex, Patikhali, Haldia,  
Purba Medinipur-721606.

### Report No.

:C/2024/1180

### Date

:30.09.24

### Sample No.

:MSK/MUM/2024/1180

### Date of receipt of sample

:23.09.24

### Date(s) of performance

:23.09.24-30.09.24

### Ref. No. & Date

:4700116478/002 dt.30.08.23

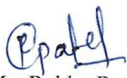
### Discipline

:Chemical

We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:


1	Group	: Atmospheric Pollution
2	Description of sample (As declared by customer)	: Stack Emission
3	Sample Mark (if any, given by the customer)	: Stack Emission
4	Date of sampling	: 21.09.24 at 11.20 am
5	Place of sampling	: Chimney-3AB
6	Environmental conditions during sampling	: Cold Chain Maintained
7	Sampling Drawn By	: Mr. Saikat Mukherjee
8	Sampling Plan & Procedures used	: IS 11255 (Part-1, Part-2, Part-3, Part-7) & IS:13270
9	Location of performance of laboratory activities	: Laboratory Permanent Facility
10	Additions to, Deviation from the method (if any)	: No

### Reviewed By:

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

### Authorized Signatory

For Mitra S.K. Private Limited

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

## Mitra S.K.Private Limited

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Web : [www.mitrask.com](http://www.mitrask.com)



Report No. : C/2024/1180  
Sample No. : MSK/MUM/2024/1180

**ANALYSIS RESULT**

ULR: TC-867324000001180F

**A: GENERAL INFORMATION ABOUT STACK:**

1	Stack connected to	Chimney-3AB
2	Emission due to	Combustion of Coal
3	Material of construction of Stack	RCC
4	Shape of Stack	Circular
5	Whether Stack is provided with permanent platform	Yes
6	Capacity	NA

**B: PHYSICAL CHARACTERISTICS OF STACK:**

1	Height of Stack from ground level	70.0 m
2	Diameter of Stack at sampling point	4.33 m
3	Height of the sampling point from ground level	46.386 m
4	Area of Stack	14.71 m <sup>2</sup>

**C: ANALYSIS/CHARACTERSTIC OF STACK:**

1	Fuel used : Coal	2. Fuel consumption: NA
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**D: RESULTS OF SAMPLING & ANALYSIS OF GASEOUS EMISSION:**


	Unit	RESULT	METHOD	Standard/ Requirement Limit as per CPCB	
1	Temperature	°C	168	IS 11255 (Part-3)	Not Specified
2	Barometric pressure	mm of Hg	752	IS 11255 (Part-3)	Not Specified
3	Velocity	m/sec	5.16	IS 11255 (Part-3)	Not Specified
4	Flow rate of the flue gas	Nm³/hr	171606	IS 11255 (Part-3)	Not Specified
5	Carbon monoxide	%v/v	BDL(DL:0.2)	IS 13270	Not Specified
6	Carbon Dioxide	%v/v	8.0	IS 13270	Not Specified
7	Sulphur Dioxide as SO2	mg/Nm3	335	IS 11255 (Part-2)	Not Specified
8	Nitrogen dioxide as NO2	mg/Nm3	163	IS 11255 (Part-7)	Not Specified
9	Particulate Matter	mg/Nm³	40	IS 11255 (Part-1)	150
10	Moisture	%v/v	6.1	IS 11255 (Part-3)	Not Specified
11	Oxygen	%v/v	13.0	IS 13270	Not Specified


**E: POLLUTION:** - Details of pollution control devices attached with the stack: 2 Nos WHRB (Both are running)

<b>Note:</b>	1.Equipment name: - Stack Sampler	2.Model No: EI -106
	3.Make: - Envirotech	4.SI. No. 56 - G - 21
	5.Calibration Done: - 16.08.24	6.Calibration Due: - 15.08.25

\_\_\_\_\_ End \_\_\_\_\_

**Authorized Signatory**  
For Mitra S.K. Private Limited

**Reviewed By:**  
Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

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Page 2 of 2



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## TEST REPORT

**Name & Address of the Customer:**

Tata Steel Limited  
HMC Complex, Patikhali, Haldia,  
Purba Medinipur-721606.

**Report No.** : C/2024/1180A  
**Date** : 30.09.24  
**Sample No.** : MSK/MUM/2024/1180  
**Date of receipt of sample** : 23.09.24  
**Date(s) of performance** : 23.09.24-30.09.24  
**Ref. No. & Date** : 4700116478/002 dt.30.08.23  
**Discipline** : Chemical

*We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:*


1	Group	: Atmospheric Pollution
2	Description of sample (As declared by customer)	: Stack Emission
3	Sample Mark (if any, given by the customer)	: Stack Emission
4	Date of sampling	: 21.09.24 at 11.20 am
5	Place of sampling	: Chimney-3AB
6	Environmental conditions during sampling	: Cold Chain Maintained
7	Sampling Drawn By	: Mr. Saikat Mukherjee
8	Sampling Plan & Procedures used	: IS 11255 (Part-1)
9	Location of performance of laboratory activities	: Laboratory Permanent Facility
10	Additions to, Deviation from the method (if any)	: No

## ANALYSIS RESULT

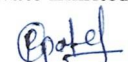
D: RESULTS OF SAMPLING & ANALYSIS OF GASEOUS EMISSION:		Unit	RESULT	METHOD	Standard/ Requirement Limit as per CPCB
1	PM at 6 % CO <sub>2</sub>	mg/Nm <sup>3</sup>	30	By Calculation	Not Specified

\_\_\_\_\_ End \_\_\_\_\_

**Reviewed By:**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

**Authorized Signatory  
For Mitra S.K. Private Limited**

Signature :   
Name : Ms. Rekha Patel  
Designation : Technical Manager

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## TEST REPORT

**Name & Address of Customer :****Tata Steel Ltd\_HMC Division****HFC Complex patikhali haldia purba Medinipur west bengal India Pin 721606****Report No. :**

MSKGL/ED/2024-25/004790

**Date :**

14/10/2024

**Sample No. :**

MSKGL/ED/2024-25/09/01607

**Drawn/Submitted on :**

23/09/2024

**Reference No. & Date :** 4700116478/002, Date - 30/08/2023

We hereby certify that the following sample drawn by us / submitted by the customer has been analyzed with the following results:

1. Description of sample (As declared by customer)	Surface Water
2. Date of sampling	23.09.2024
3. Place of sampling	(SW-1) Quenching Pond-1

**Report No. :** MSKGL/ED/2024-25/004790**Sample No. :** MSKGL/ED/2024-25/09/01607

## ANALYSIS RESULT

Chemical				
Sl No.	Test Parameters	Unit	Test Method	Result
1	pH value	None	APHA 24th Edition, 2023 4500- H+B	8.50 At 25 deg C
2	Total Dissolved Solids (as TDS)	mg/l	APHA (24th Edition), 2540C	1180
3	Free Residual Chlorine	mg/l	IS 3025 (Part 26)-1986 Rffm:2014_(O)	BDL(DL:0.1)
4	Phenolic Compounds ( as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	APHA (24th Edition), 5530C (Chloroform Extraction)	BDL(DL:0.001)
5	Total Suspended Solid (as TSS)	mg/l	APHA (24th Edition), 2540D	65
6	Biochemical Oxygen Demand (as BOD)	mg/l	APHA (24th Edition), 5210B	22
7	Chemical Oxygen Demand (COD)	mg/l	APHA (24th Edition), 5220B	72
8	Oil and Grease	mg/l	APHA (24th Edition), 5520B	BDL(DL:5.0)

**DL : Detection Limit    BDL : Below Detection Limit****Opinion : NA****Report Verified By:** **For Mitra S. K. Private Limited**  
**Authorised Signatory**

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Tel.: 0252 2672352.  
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## TEST REPORT

**Name & Address of Customer :****Tata Steel Ltd\_HMC Division****HFC Complex patikhali haldia purba Medinipur west bengal India Pin 721606****Report No. :**

MSKGL/ED/2024-25/004791

**Date :**

14/10/2024

**Sample No. :**

MSKGL/ED/2024-25/09/01608

**Drawn/Submitted on :**

23/09/2024

**Reference No. & Date :** 4700116478/002, Date - 30/08/2023

We hereby certify that the following sample drawn by us / submitted by the customer has been analyzed with the following results:

1. Description of sample	Surface Water
2. Date of sampling	23.09.2024
3. Place of sampling	(SW-2) Quenching Pond-2

**Report No. :** MSKGL/ED/2024-25/004791**Sample No. :** MSKGL/ED/2024-25/09/01608

## ANALYSIS RESULT

Chemical				
SI No.	Test Parameters	Unit	Test Method	Result
1	pH value	None	APHA 24th Edition, 2023 4500-H+B	8.39 At 25 deg C
2	Total Dissolved Solids (as TDS)	mg/l	APHA (24th Edition), 2540C	1160
3	Free Residual Chlorine	mg/l	IS 3025 (Part 26)-1986 Rffm:2014 (O)	BDL(DL:0.1)
4	Phenolic Compounds ( asC6H5OH)	mg/l	APHA (24th Edition), 5530C(Chloroform Extraction)	BDL(DL:0.001)
5	Total Suspended Solid (as TSS)	mg/l	APHA (24th Edition), 2540D	180
6	Biochemical Oxygen Demand(as BOD)	mg/l	APHA (24th Edition), 5210B	46
7	Chemical Oxygen Demand (COD)	mg/l	APHA (24th Edition), 5220B	148.0
8	Oil and Grease	mg/l	APHA (24th Edition), 5520B	BDL(DL:5.0)

**DL : Detection Limit    BDL : Below Detection Limit****Opinion : NA****Report Verified By:** **For Mitra S. K. Private Limited**  
**Authorised Signatory**

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**TEST REPORT****Name & Address of Customer :**

Tata Steel Ltd\_HMC Division

HFC Complex patikhali haldia purba Medinipur west bengal  
India Pin 721606**Report No. :**

MSKGL/ED/2024-25/004792

**Date :**

14/10/2024

**Sample No. :**

MSKGL/ED/2024-25/09/01609

**Reference No. & Date :**

4700116478/002, Date - 30/08/2023

We hereby certify that the following sample drawn by us / submitted by the customer has been analyzed with the following results:

1. Description of sample	Surface Water
2. Date of sampling	23.09.2024
3. Place of sampling	(SW-3) Quenching Pond-3

**Report No. :** MSKGL/ED/2024-25/004792**Sample No. :** MSKGL/ED/2024-25/09/01609**RESULT**

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	pH value	None	APHA 24th Edition, 2023 4500- H+B	8.48 At 25 deg C
2	Total Dissolved Solids (as TDS)	mg/l	APHA (24th Edition), 2540C	1190
3	Free Residual Chlorine	mg/l	IS 3025 (Part 26)-1986 Rffm:2014_(O)	BDL(DL:0.1)
4	Phenolic Compounds ( as C6H5OH)	mg/l	APHA (24th Edition), 5530C (Chloroform Extraction)	BDL(DL:0.001)
5	Total Suspended Solid (as TSS)	mg/l	APHA (24th Edition), 2540D	50
6	Biochemical Oxygen Demand (as BOD)	mg/l	APHA (24th Edition), 5210B	21
7	Chemical Oxygen Demand (COD)	mg/l	APHA (24th Edition), 5220B	68.0
8	Oil and Grease	mg/l	APHA (24th Edition), 5520B	BDL(DL:5.0)

**DL : Detection Limit    BDL : Below Detection Limit****Opinion : NA****— END —****Report Verified By****For Mitra S. K. Private Limited****Authorised Signatory**

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## TEST REPORT

**Name & Address of Customer :****Tata Steel Ltd\_HMC Division****HFC Complex patikhali haldia purba Medinipur west bengal India Pin 721606****Report No. :**

MSKGL/ED/2024-25/004793

**Date :**

14/10/2024

**Sample No. :**

MSKGL/ED/2024-25/09/01610

**Drawn/Submitted on :**

23/09/2024

**Reference No. & Date :**

4700116478/002, Date - 30/08/2023

We hereby certify that the following sample drawn by us / submitted by the customer has been analyzed with the following results:

1. Description of sample	Surface Water
3. Date of sampling	23/09/2024
4. Place of sampling	(SW-4) Quenching Pond-4

**Report No. :** MSKGL/ED/2024-25/004793**Sample No. :** MSKGL/ED/2024-25/09/01610

## ANALYSIS RESULT

Chemical				
SI No.	Test Parameters	Unit	Test Method	Result
1	pH value	None	APHA 24th Edition, 2023 4500-H+B	8.46 At 25 deg C
2	Total Dissolved Solids (as TDS)	mg/l	APHA (24th Edition), 2540C	1168
3	Free Residual Chlorine	mg/l	IS 3025 (Part 26)-1986 Rfmm:2014 (O)	BDL(DL:0.1)
4	Phenolic Compounds ( asC6H5OH)	mg/l	APHA (24th Edition), 5530C(Chloroform Extraction)	BDL(DL:0.001)
5	Total Suspended Solid (as TSS)	mg/l	APHA (24th Edition),2540D	45
6	Biochemical Oxygen Demand(as BOD)	mg/l	APHA (24th Edition), 5210B	19
7	Chemical Oxygen Demand (COD)	mg/l	APHA (24th Edition), 5220B	64
8	Oil and Grease	mg/l	APHA (24th Edition), 5520B	BDL(DL:5.0)

**DL : Detection Limit    BDL : Below Detection Limit****Opinion :****Report Verified By:** **For Mitra S. K. Private Limited**  
**Authorised Signatory**

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## TEST REPORT

**Name & Address of Customer :****Tata Steel Ltd\_HMC Division****HFC Complex patikhall haldia purba Medinipur west bengal India Pin 721606****Report No. :**

MSKGL/ED/2024-25/004794

**Date :**

14/10/2024

**Sample No. :**

MSKGL/ED/2024-25/09/01611

**Drawn/Submitted on :**

23/10/2024

**Reference No. & Date :**

4700116478/002, Date - 30/08/2023

We hereby certify that the following sample drawn by us / submitted by the customer has been analyzed with the following results:

1. Description of sample	Surface Water
2. Date of sampling	23.09.2024
3. Place of sampling	(SW-5) STP Outlet

**Report No. :**

MSKGL/ED/2024-25/004794

**Sample No. :**

MSKGL/ED/2024-25/09/01611

## ANALYSIS RESULT

Chemical				
Sl No.	Test Parameters	Unit	Test Method	Result
1	pH value	None	APHA 24th Edition, 2023 4500-H+B	7.35 At 25 deg C
2	Total Dissolved Solids (as TDS)	mg/l	APHA (24th Edition), 2540C	1198
3	Free Residual Chlorine	mg/l	IS 3025 (Part 26)-1986 Rffm:2014 (O)	BDL(DL:0.1)
4	Phenolic Compounds ( asC <sub>6</sub> H <sub>5</sub> OH)	mg/l	APHA (24th Edition), 5530C(Chloroform Extraction)	BDL(DL:0.001)
5	Total Suspended Solid (as TSS)	mg/l	APHA (24th Edition), 2540D	10
6	Biochemical Oxygen Demand(as BOD)	mg/l	APHA (24th Edition), 5210B	20
7	Chemical Oxygen Demand (COD)	mg/l	APHA (24th Edition), 5220B	68
8	Oil and Grease	mg/l	APHA (24th Edition), 5520B	BDL(DL:5.0)

**DL : Detection Limit    BDL : Below Detection Limit****Opinion : NA****Report Verified By:****For Mitra S. K. Private Limited**  
**Authorised Signatory**

\* This results relate only to the item(s) tested.

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