

Shyam Steel Industries Ltd

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Date: 25-05-2024

CIN: U27100WB2002PLC094339

SSIL/24-25/Sr.GM/63

To,
Deputy Director General of Forests (C)
Ministry of Env., Forest and Climate Change,
Integrated Regional Office, Kolkata IB – 198,
Sector-III, Salt Lake City, Kolkata – 700106

Sub: Six-monthly Compliance to the Environment Clearance condition vide MoEF Letter No. F No. J-11011/97/2008-IA.II (I) dated 08.06.2009 of Shyam Steel Industries Limited Expansion of Steel Plant (60,000 TPA to 2,50,000 TPA TMT Bars) by installing Ladle Refining Furnace (LRF,1x30MT), Electric arc Furnace (EAF,1 x 30 MT) with Billet Caster along with Captive Power Plant (10MW) At Raturia Industrial Area, Angadpur, Durgapur, District- Paschim Bardhaman, West Bengal, Pin-713215. (For the period of October 2023 to March 2024)

Ref: Environment Clearance No. J-11011/97/2008-IA.II (I) dated 08.06.2009.

Dear Sir.

This has reference to the captioned subject and cited reference. It is to inform you that we are herewith submitting six monthly compliance report for the conditions stipulated in the Environmental Clearance of Expansion of Steel Plant (60,000 TPA to 2,50,000 TPA TMT Bars) by installing Ladle Refining Furnace (LRF,1x30MT), Electric arc Furnace (EAF,1 x 30 MT) with Billet Caster along with Captive Power Plant (10MW) for the period of October 2023 to March 2024 along with monitoring data report for your kind consideration. The copy of above compliance report is also being sent in soft format through email to iro.kolkata-mefcc@gov.in for your kind perusal.

Hope the above are in line with the statutory requirements.

Thanking you.

Yours faithfully,

For Shyam Steel Industries Ltd.

Sr. General Manager (Commercial)

Enclosure: As above

Copy to: The Environmental Engineer, West Bengal Pollution Control Board, Sahid Khudiram Sarani, City Center, Durgapur, Paschim Bardhaman-713216, West Bengal.

ENVIRONMENTAL CLEARANCE COMPLIANCE STATUS REPORT

October 2023 to March 2024

Shyam Steel Industries Ltd, Angadpur, Durgapur

Six Monthly Compliance Status report of Environmental Clearance from expansion of (60,000 TPA to 2,50,000 TPA TMT Bars) by installing Ladle Refining Furnace (LRF,1x30MT), Electric arc Furnace (EAF,1 x 30 MT) with Billet Caster along with Captive Power Plant (10MW).

ENVIRONMENTAL MANAGEMENT DEPARTMENT SHYAM STEEL INDUSTRIES LIMITED

F No. J-11011/97/2008- IA II (I) Date-08.06.2009

Six Monthly Compliance of conditions stipulated in the Environmental Clearance of Shyam Steel Industries Limited. Expansion of Steel Plant (60,000 TPA to 2,50,000 TPA TMT Bars) by installing Ladle Refining Furnace (LRF,1x30MT), Electric arc Furnace (EAF, 1 x 30 MT) with Billet Caster along with Captive Power Plant (10MW) At Raturia Industrial Area, Angadpur ,Durgapur, District-Paschim Bardhaman, West Bengal, Pin-713215.

(For the period of October 2023 to March 2024)

Sr. No	Stipulated Conditions	Action taken / To be taken		
A. S	pecific Conditions			
Γ	Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices shall be provided to keep the emission levels below 100 mg/Nm³. 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	Ambient air quality has been monitored at regula interval i.e. every two months by NABL accredited laboratory ITS Laboratory, Noida. Reports are analysed for PM10, PM2.5, SOx & NOx. Accordingly necessary preventive steps are taken to reduce respirable suspended particulate matter in ambient air. Ambient air quality monitoring report is enclosed as Annexure-III. Monitoring frequency of various environmental parameters and other suggested improvements are implemented at working site as and when instructed. ESPs have been installed to Sponge Iron kilns and boilers of CPP. Furnaces are equipped with bag filters ESPs and Bag filters are designed to achieve Particulate Matter emission level below 50 mg/Nm3. We have installed the Online Emission Monitoring system and data transmission system in stacks as pe CPCB guidelines. We keep a vigilant observation of the readings. In case of RSPM value higher than 50 mg/Nm3, alarm is raised and plant is stopped to take necessary corrective action. Data on ambient air quality and stack emission report has been submitted up to 30.09.2023 to the Regional Office, WBPCB. Soft copy of EC compliance report has been submitted to Regional Officer, Integrated Regional Office, Kolkata.		
ii	Electrostatic precipitator (ESP) shall be provided to WHRB and AFBC boilers. Fume extraction system with bag house shall be provided to electric arc furnace (EAF) and the exhaust gases shall be discharged through a stack of adequate height. Dust extraction system with bag filters shall be provided to ladle refining furnace (LRF). Fume extraction system with bag	Waste heat from DRI Kilns are channelized to Waste Heat Recovery Boiler (WHRB) to generate power from steam produced by the WHRB. To control the particulate emission from the stacks of DRI Kiln, boilers of CPP & SMS, pollution control devices such as ESP's and bag filters have been installed. Stack emission monitoring report is enclosed as Annexure-IV. There are 2 nos. of ESP's for the 2 nos. of WHRB boilers and 1 no. of ESP for the AFBC boiler. Two Fume Extraction system with hoods have been installed for the		

Induction Furnace and Electric Arc Furnace (EAF).

Moreover 5 nos. of Dust extraction system with Bag

extraction system with bag

filters shall be provided to steel

melting shop (SMS). Stack of

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adequate shall be provided to rolling mill to control the gaseous emissions within the permissible limit. Hot gases from DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in waste heat recovery boiler (WHRB). The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack. All the gaseous emissions shall be within 100 mg/Nm3

filter is in place to control the dust level in DRI unit in strategic location.

Dust settling chamber & after burning chamber is provided respectively to arrest the coarse solids and CO to burn completely present in the hot flue gas coming from DRI kiln and is used in Waste heat recovery boiler (WHRB). The recovered heat is effectively being used for generation of power, thereby saving upon fossil fuel usage & reduction of Carbon Footprint.

ii

Data on ambient air quality stack emissions and fugitive emissions shall be uploaded on the Company's website and also regularly submitted on-line to the Ministry's Regional Office at Bhubaneswar, West Bengal Pollution Control Board (WBPCB) and Central Pollution Control Board (CPCB) as well as hard copy once in six months. Data on SPM, SO2 and NOx displayed shall also be outside prominently the premises at the appropriate place for the information of general public.

Environmental monitoring data of ambient air, stack and fugitive emissions are routinely uploaded on the company's website and soft copy of the same is submitted to Regional Officer, Integrated Regional Office, Kolkata.

Data on the emissions are submitted to West Bengal Pollution Control Board (WBPCB) by hard copy once in every six months.

The data of the emissions are displayed outside the Main gate for the information of general public.

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iv	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored Guidelines/Code of Practice issued in this regard by the CPCB shall be followed. New Standards issued by the Ministry for the sponge iron plant in May, 2008 shall be followed.	Monitoring of Fugitive emissions is being done at various potential sources and the data reveals that PM10 ranges b/w 54.6 μg/m3 – 57.4 μg/m3, near product house and near raw material handling yard, which is well within the prescribed standard. Although Fugitive air emission sources are identified and maintained properly to control the fugitive emissions at source itself, we ensure that preventive maintenance of all the potential sources are done on time to prevent the unwanted emissions. Dust extraction system at different unloading bunkers for the product and raw materials handling system has been installed. Bag filters have been provided at stock house, product house, magnetic product separator, cooler discharge area and transfer points to minimize fugitive dust emission. Fugitive emission monitoring report is enclosed as Annexure-V. Water sprinkling at 09 locations and Dry fog at 4 locations are being carried out to control fugitive dust emission. One number of water tanker is being utilized at the waste disposal area and on the road to control fugitive dust emission.
v	Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements should also be made to control dust emissions during loading and unloading of the raw material and finished product.	We ensure that all vehicles engaged to carry raw materials and finished products are having proper PUC certificate. This has also been ensured that all the transporting vehicles are properly covered with the tarpaulin to prevent any kind of spillage. We have vehicle mounted dust extractor to remove the spillage and dust generated due to vehicular movement inside plant premises. Water sprinkling is done on the road, material unloading area & finished product loading area inside the plant to suppress the air borne dust.
vi	In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Dust suppression & extraction system with bag filters shall be installed at various dust generating points including raw material handling area and material transfer points. Bag filters shall be provided in coal stacking, reclaiming, crushing, and feeding and ESP dust handling areas to control fugitive dust in power plant.	Machinery and equipments engaged under operation are listed in preventive maintenance schedule. As per the schedule, maintenance is done to minimize the fugitive emission from all the vulnerable sources. Dust extraction systems are properly functioning at different unloading bunkers and other strategic locations. Bag filters have been provided at stock house, product house, cooler discharge area and transfer points to minimize dust emission. Good housekeeping practices have been followed to restrict any spillages inside plant premises.
	As proposed, total water requirement shall not exceed 103 m³/hr (existing 45 m³/hr &	Water consumption is monitored through flow meters installed at inlet and all individual units which reveals that total consumption is as per the agreement signed

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Sr. General Manager (Commercial)

vii	proposed 58 m³/hr) as per the agreement signed with Durgapur Municipal Corporation dated 28th May, 2004 for 140 m³/hr. No ground water shall be used. Acid and alkaline effluents from the demineralization (DM) plant shall be neutralized and used for dust suppression and green belt development. Process waste water shall be treated in Effluent Treatment Plant (ETP). Boiler blow down, effluent from billet caster and hot rolling mills shall be reused for dust suppression after treatment for oil & grease in settling tank. All the treated wastewater shall be recycled and reused in the process to the maximum extent possible and reused either in the process and / or for dust suppression, green belt development etc.	with Durgapur Municipal Corporation dated 28th May, 2004. Average water consumption for all the operational facilities are approximately 65.25 m3/ Hr. No ground water is being utilized in any of the facility. Waste water generated from CPP, because of Boiler blow down is being used for ash quenching, cooling of Rolling Mill Rolls, Secondary cooling of Billet and DRI Cooler. There is no waste water discharge outside the plant premises. The waste water from CCM and Hot Rolling mills are reused in the process after treatment of oil, grease, ash, sludge and scales in settling tank. Waste water analysis report is enclosed as Annexure-VI.
viii	Zero effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises. Domestic effluent shall be appropriately treated in septic tank followed by soak pit and used for green belt development within the premises.	There is no waste water discharged outside the plant premises and all the necessary protective measures are taken to ensure that plant has maintained Zero Effluent Discharge. Domestic effluent collected from Canteen, Toilets & Offices are appropriately treated in septic tank followed by soak pits and subsequently used for green belt development within plant premises.
ix	The water consumption should not exceed 16 m³/Ton of Steel as per prescribed standard.	Water consumption is below 2.45 m3/Ton of Steel (Finished Product) and is well within the prescribed standard i.e. 16 m3/Ton.
		Water quality analysis report is enclosed as Annexure- VII.
х	Ground water monitoring around the solid waste disposal site/secured landfill (SLF) shall be carried out regularly and report submitted to the Ministry's Regional Office at Bhubaneswar, CPCB and WBPCB.	No ground water is being utilized for operation purpose. Although we have one no. of borewell inside plant premises to mitigate emergency situation. Same is not been utilized till date.

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All the char from DRI plant shall Char has not been disposed off outside plant premises. be utilized in AFBC boiler of Char is generated as a by-product of DRI plant and is power plant and no char shall be being fed to AFBC boiler of the Captive Power Plant. In disposed off anywhere else. addition to that we are procuring char from market AFBC boiler shall be installed because generated char is not enough to feed the Captive simultaneously along with the Power Plant. DRI plant to ensure full utilization of char from the Slag coming out of SMS undergoes TCLP test and if beginning. SMS slag should also found suitable then we utilize the same for filling the be properly utilized. All the low lying area inside plant premises. Other solid wastes xi other solid waste including such as broken refractory mass & crushed ladle are broken refractory mass shall be utilized in making spout of the furnace. In due course of disposed properly off time such material gets disintegrated & ultimately disposed along with the slag for land filling purpose. environment-friendly manner. Oily waste/lubricants shall be Hazardous wastes such as used oil/lubes are collected provided authorized and stored safely in earmarked location and to recyclers/ re-processors subsequently disposed off to SPCB authorized vendor. properly disposed off as per the Hazardous Waste (Management & Handling) Rules, 1989 and subsequent amendment No slag and fly ash shall be We do not dispose off any of the slag and fly ash disposed off in abandoned generated in abandoned Raniganj Mining Area where as Raniganj mining area without we are utilizing fly ash for making composite bricks at prior permission from the Shyam Steel Industries Ltd, Bamunara and remaining concerned authority and a fly ash is being sent to cement plant of Ultratech commitment in this regard shall Cements as per the agreement. be submitted to the Ministry's xii Regional Office Apart from that slag coming out of furnaces of SMS are Bhubaneswar, **WBPCB** duly tested for Toxic Chemical Leachability Potential CPCB. All the slag from Test and if found suitable then utilized in filling the low induction furnace/EAF/LRF lying area inside plant premises. shall be used for land filling inside the plant or used as Solid waste analysis report is enclosed as Annexurebuilding material only after passing through Toxic Chemical Leachability Potential (TCLP) test. Toxic slag shall be disposed in secured landfill as per **CPCB** guidelines. hazardous Otherwise, substances shall be recovered from the slag and output waste and be disposed in secured landfill as per CPCB guidelines. Proper utilization of fly ash shall Fly ash is being utilized for making of composite bricks be ensured as per Fly Ash in Shyam Steel Industries Ltd, Bamunara and remaining Notification, 1999 ash is supplied to Ultratech Cements under xiii subsequent amendment in 2003. 'Memorandum of Understanding' dated 05.05.2014. All the fly ash shall be provided cement and brick manufacturers for further utilization and 'Memorandum of Understanding' shall be submitted to the Ministry's Regional Office

General Manager (Commercial)

Bhubaneswar.

xiv	A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal to the Ministry's Regional Office at Bhubaneswar.	6	Solid wastes are being documented, collected, stored and utilized in best possible manner on daily basis. Dolochar is being used in AFBC boiler as fuel, Fly ash is utilized in composite brick manufacturing, slag is crushed and after recovery of iron given to brick manufacturers. We have already submitted a report containing the Solid Waste management plan and actions at our end to the Ministry's Regional Office at Bhubaneswar.
xv	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bhubaneswar, WBPCB and CPCB.		Wastes are segregated at source and accordingly stored in earmarked locations. Further non-toxic wastes such as cartons, woods and end cuts are sold to recyclers whereas hazardous wastes are tested for TCLP test and waste passing TCLP test are subsequently used for filling purpose of low-lying area. Hazardous wastes are kept separately as per the guidelines and further disposed off in environmentally friendly manner to authorised vendor
xvi	As proposed, green belt shall be developed in 6.6 acres (33 %) out of total 20 acres within and around the plant premises to mitigate the effects of fugitive emissions as per the CPCB guidelines in consultation with DFO		Green belt development is a prime requirement and is been carried out every year inside as well as outside factory premises. Three tier plantation is being developed inside factory premises. Plantation activity is carried out in proper consultation with local Forest Range Officer. The plantation has been raised comprising trees species like Chatim, Ashok, Bakul, kadam, Karanj, Neem etc. Tree plantation report is attached as Annexure- I
xvii	All the recommendations made in the Charter in Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.		There are recommendations under CREP guidelines for solid & hazardous waste management, water conservation, Fugitive & stack emission monitoring and adoption of clean technologies. We have implemented recommendations at our Shyam Steel Industries Ltd. Status report of CREP recommendation is enclosed as Annexure-II.
xviii	The company shall provide housing for 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.		The company is providing the necessary facilities to all contract labours engaged in activity inside plant premises such as washrooms, canteen, drinking water, medical care & creche.

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B. G	eneral Conditions	We have obtained Consent to Occupte (CTO) from
i	The project authorities shall adhere to the stipulations made by the West Bengal Pollution Control Board (WBPCB) and the State Government.	We have obtained Consent to Operate (CTO) from WBPCB vide CTO No CO123387 dated 25.03.2022, valid till 31.03.2027. We have also obtained Hazardous waste authorization from WBPCB vide letter no 251/2S (HW)- 2881/2012. dated 23.12.2022 valid till 30.11.2027.
ii	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.	We will abide by the condition and will obtain all the necessary pre requisites for any future modification / expansion of the unit from the MoEF&CC.
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.	Online stack monitoring system has been installed in stacks to monitor the emission level. If it exceeds the threshold value it raises the alarm for necessary corrective action.
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 CPCB and WBPCB regularly. The instruments used for ambient air quality monitoring shall be calibrated time to time	Ambient air quality as well as ambient noise level is being monitored once in every two months by NABL accredited laboratory ITS Laboratory, Noida. Reports are analysed for PM10, PM2.5, SOx & NOx and necessary preventive steps are taken to reduce respirable suspended particulate matter in ambient air. We have also provided acoustic enclosures where ever it is possible to reduce exposure. Frequency of monitoring of various environmental parameters and other improvements are implemented as and when instructed. ESPs have been installed to Sponge Iron kilns and boilers of CPP and furnaces are equipped with bag filters. ESPs and Bag filters are designed to achieve Particulate Matter emission level below 50 mg/Nm3. Data on ambient air quality and stack emission report has been submitted upto 30.09.2023 to the Regional Office, the Regional Office WBPCB. Soft copy of EC compliance report will be submitted to Regional Officer, Integrated Regional Office, Kolkata.
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	Noise level monitoring is scheduled once in every two months in all the potential noise generation area. Accordingly we have provided noise control measures like acoustic hoods, silencers, sound proof enclosures on all sources of noise generations to keep the overall noise level in and around the plant area well within the prescribed standards. As a protective measure we provide ear plug to all our employees to relieve them of any discomfort due to noise. There is no area inside the plant with noise level

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	Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	above 85dB. Noise level monitoring report is enclosed as Annexure-IX.
vi	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Pre-placement and periodical medical examination of the workers & contract labours engaged in the plant are being done and records maintained. We have well equipped first aid station with 24x7 ambulance facility to attend any emergency to our employees and contract labours. Total employee on company role is 874 & on contract is 828. Personal protective equipment's are being provided to all workers respective to the nature of the job. Initial and periodical awareness training is being imparted to all workers in the Company's Vocational Training Centre located within the plant premises on Safety and Health Aspects.
vii	All the environment management measures given in the EIA/EMP shall be implemented and complied with.	Environment management measures of EIA/EMP reports are duly complied and reviewed for its current status. In addition to that observations of inspecting authority relating to environment management is also taken care for the betterment of residing community & nature.
viii	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	We have constructed surface water harvesting structure wherein we have considered the maximum rainfall in last 20 Years to construct the suitable capacity of holding tank.
ix	Proper housekeeping shall be ensured	Mechanical sweeping machines are being used continuously for maintaining proper housekeeping inside plant premises. We are gradually adopting business excellence models to make our work environment for clean and safe working.
Х	The company shall undertake eco-development measures including community welfare measures in the project area.	The company has implemented community welfare measures at ground level to benefit nearby communities. Company has contributed in healthcare sector by providing monetary and logistic support as mobile healthcare vehicle with well qualified medical staff & medicines, infrastructural development of hospitals by providing Air-conditioners and furniture items and actively participated in supply of food grains to the deprived community amidst covid pandemic.
l part	A TOMBON 13 IT 3 MAYUR	Massive plantation drive by providing saplings to nearby schools and carried out avenue plantation outside factory premises for ecological restoration of surrounding.

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Sr. General Manager (Commercial)

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		Apart from that all the necessary facilities which were previously provided or constructed are maintained properly so that community can utilize the same efficiently. Shyam Steel exclusively focuses on sanitation, drinking water facility, livelihood schemes, repair of village roads, building sports grounds, free distribution of books, helping in various religious activities & environmental sustainability.
m v m u	separate environmental nanagement cell to carry out arious management and nonitoring functions shall be set p under the control of Senior executive.	Environment management cell has been made and environmental manager has been appointed to manage the routine environmental activities under the guidance of factory manager. He has to ensure the environmental monitoring of various parameters, Analysis of monitoring reports, necessary corrective action at site and further submission of compliance report to various regulatory authorities.
xii co en to st E	as proposed, Rs 223.00 Lakhs and Rs. 44.5 Lakhs shall be armarked towards the capital cost recurring cost/annum for an easures and used judiciously a implement the conditions tipulated by the Ministry of an easures and Torests as well as the State Government. The ands so provided shall not be iverted for any other purpose.	Funds allocated for implementation of various environment pollution control measures and its maintenance are being utilized to fulfil the conditions stipulated by the Ministry as well as the State Pollution Control Board.
xiii /C th m th st	The Regional Office of this Ministry at Bhubaneswar CPCB/WBPCB shall monitor the stipulated conditions. A sixton this compliance report and the monitored data along with the statistical interpretation shall be submitted to them regularly.	A soft copy of six monthly compliance report along with monitoring data is submitted on a regular basis to The Regional Officer, Integrated Regional Office, Kolkata. Apart from that hard copy of the same is also submitted to WBPCB.
xiv th	roject authorities shall inform the Regional Office as well as the Ministry, the date of mancial closure and final approval of the project by the concerned authorities and the late of commencing the land evelopment work.	Will be complied.
in ha en M cl	the Project Proponent shall inform the public that the project as been accorded invironmental clearance by the dinistry and copies of the learance letter are available with the W.B. Pollution Control	The clearance letter informing that the project has been accorded Environment Clearance is advertised in two local newspapers namely "The Echo of India" (English Daily) dated. 17-06-2009 and "Arthik Lipi" (Bengali Daily) dated 17.06.2009. SHYAM STEEL INDUSTRIES

Board and may also be seen at
Website of the Ministry of
Environment and Forests at
http://envfor.nic.in. This shall be
advertised within seven days
from the date of issue of the
clearance letter, at least in two
local newspapers that are widely
circulated in the region of which
one shall be in the vernacular
language of the locality
concerned and a copy of the
same should be forwarded to the
Regional office at Bhubaneswar.

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<u>Details of tree plantation report for the period October'23 - March'24</u>

State:	PLANTATION 2009 est Bengal ion Area - 1D, New						
KOLKATA – 700106 FORMAT FOR PROVIDING PARTICULARS ON GREEN BELT/ I UNDER F (C) ACT 1980 AND E (P) ACT 1986 a) Name of Project: SHYAM STEEL INDUSTRIES LIMITED b) Envt./ Forest Clearance Nos.: Location, Block/ Angadpur, Durgapur, Paschim Bardhaman, We Sub. Divn./ Dist./ State: Address of Plot No. DH6/11, Premises No. 03-319, Action Town, District. North 24 Parganas, Kolkata – 7 Existing vegetation in the area/ region: a) Species (trees/ shrubs/ grasses/	PLANTATION 2009 est Bengal ion Area - 1D, New						
UNDER F (C) ACT 1980 AND E (P) ACT 1986 a) Name of Project: SHYAM STEEL INDUSTRIES LIMITED b) Envt./ Forest Clearance Nos.: Location, Block/ Sub. Divn./ Dist./ State: Address of Plot No. DH6/11, Premises No. 03-319, Action Town, District. North 24 Parganas, Kolkata — Town, District.	2009 est Bengal ion Area - 1D, New						
a) Name of Project: SHYAM STEEL INDUSTRIES LIMITED b) Envt./ Forest Clearance Nos.: Location, Block/ Sub. Divn./ Dist./ State: Address of Communication: Plot No. DH6/11, Premises No. 03-319, Action Town, District. North 24 Parganas, Kolkata — Town, District. North 24 Parganas, Mosk — Town	est Bengal on Area - 1D, New						
b) Envt./ Forest Clearance Nos.: Location, Block/ Sub. Divn./ Dist./ State: Address of communication: Existing vegetation in the area/ region: F No. J-11011/97/2008- IA II (I) Date-08.06. Angadpur, Durgapur, Paschim Bardhaman, We Sub. Divn./ Dist./ State: Plot No. DH6/11, Premises No. 03-319, Action Town, District. North 24 Parganas, Kolkata – 7 Existing vegetation in the area/ region: a) Species (trees/ shrubs/ grasses/	est Bengal on Area - 1D, New						
Clearance Nos.: Location, Block/ Sub. Divn./ Dist./ State: Address of communication: Existing vegetation in the area/ region: Angadpur, Durgapur, Paschim Bardhaman, Website Sub. Divn./ Dist./ State: Plot No. DH6/11, Premises No. 03-319, Action Town, District. North 24 Parganas, Kolkata – 7 Existing vegetation in the area/ region: a) Species (trees/ shrubs/ grasses/	est Bengal on Area - 1D, New						
Sub. Divn./ Dist./ State: Address of communication: Plot No. DH6/11, Premises No. 03-319, Action Town, District. North 24 Parganas, Kolkata – 7 Existing vegetation in the area/ region: a) Species (trees/shrubs/ grasses/	ion Area - 1D, New						
Communication: Town, District. North 24 Parganas, Kolkata – 7 Existing vegetation in the area/ region: a) Species (trees/ shrubs/ grasses/ Trees							
a) Species (trees/ Trees shrubs/ grasses/							
shrubs/ grasses/							
	shrubs/ grasses/						
b) Major prevalent species of each type Bakul, Chatim, Ashok, Karanj, Kadam, Neem							
Land coverage by the project:							
a) Total area under the project: 20 Acres Approx.							
b) Area covered for basic infrastructure (roads/ building/ factory etc.):							
Details about natural vegetation:							
a) Name and number of plant of tree/ species felled:	-11						
b) Name and number of plant species still available in the area:	i						
c) By protecting the area will indigenous stock come up:							
d) Extent of greenbelt 33% enveloped							
Plantations required to be carried out as per:							
SHYAM							

	a) Conditions of Environmental clearance in ha. / Nos.: b) Conditions for Forest Act © clearance in ha./ Nos.: c) Voluntarily in ha./ nos.		33%							
7										
			33%							
	Details of	plantation								
	a) Total area available for plantation in each category:									
	i) Green Belt	ii)Dumps	iii) Back filled area	iv)Road side	2.0	V) Block	plantation			
	Nil	Nil	Nil	2 RKM		100	0 Sqm			
	b) Plantati	on details (car	tegory wis	e & method	lology used)					
	Year of Plantatio	Species Planted	Spacing	Height Attaine d	Total Area Covered	Are	Area Still Available			
8	ojamine ot	30 Saplings - Planted inside plant premises.	5- 6 Ft.		0.1 Ha		Gap Filling			
	2023	300 Saplings - Planted outside the plant premises.				-		Gap Filling		
		265 Saplings - Distribute d to different social institution s and employees				-			er.	
		•		c) Survival	of Plantatio	n				
	Year of Plantatio n	2017	2018	2019	2020	2021	2022	2023		
	Total plantatio ns (No.)	200	350	630	1850	950	1100	595		
	Survival (No.)	146	350	630	1480	760	880	505		
	Survival %	73	100	100	80	80	80	85		

SHYAM STEEL INDUSTRIES LTD.

Sr. General Manager (Commercial)

9	plantat	arrying out ion and enance			:	Self
		Fina	ncial detail	s year wise	plantation	wise / item wise
10	Sl. No.	Year		llocated	Expendi ture made	Average cost of each surviving plant in Rs.
	1	2019			420000	
	2	2020			560000	
	3	2021			480000	
	4	2022			500000	- 0
	5	2023			400000	
11	experts and	of plantation d their comments and f	nents and		it at regular survival of	interval is done after plantation to saplings.
12					sprinkling is f saplings.	s frequently done to ensure proper

SHYAM STEEL INDUSTRIES LTD.

Sr. General Manager (Commercial)

Compliance status of CREP recommendations for the period October'23 - March'24

Sl. No.	CREP RECOMMENDATIONS	COMPLIANCE STATUS
CEN	ENT INDUSTRY	NA
1	Cement plants, which are not complying with notified standard, shall do the following to meet the standards; Augmentation of existing Air Pollution Control Devices- By July 2003 Replacement of existing Air Pollution Control Devices- By July 2004	
2	Cement plants located in critically polluted or urban areas (including 5 km distance outside urban boundary) will meet 100mg/Nm3 limit or particulate matter by December 2004 and continue working to reduce the emission of particulate matter to 50mg/Nm3.	- 1-41 - 1-61
3	The new cement kilns to be accorded NOC/ Environmental Clearance w.e.f 01.04.2003 will meet the limit of 50 mg/Nm3 for particulate matter emissions.	
4	CPCB will evolve load based standards by December 2003	
5	CPCB and NCBM will evolve SO2 and NOx emission standards by June 2004	
6	The Cement industries will control fugitive emissions from all the raw material and products storage and transfer points by December 2003. However, the feasibility for the control of fugitive emissions form limestone and coal storage areas will be decided by the National Task Force (NFT). The BTF shall submit its recommendations within three months.	
7	CPCB, NCBM, BIS and Oil refineries will jointly prepare the policy on use of petroleum cokes as fuel in cement kiln by July 2003.	
8	After performance evaluation of various types of continuous monitoring equivalent and feedback form the industries and equipment manufacturers, NTF will decide feasible unit operations/ sections for installation of continuous monitoring equipment. The industry will install the continuous monitoring systems (CMS) by December 2003	
9	Tripping in Kiln ESP to be minimized by July 2003 as per the recommendations of NTF.	
10	Industries will submit the target date to enhance the utilization of waste material by April, 2003.	
11	NCBM will carry out a study on hazardous waste utilization in cement kiln by December 2003.	
12	Cement industries will carry out feasibility study and submit target dates to CPCB for co-generation of power by July 2003.	
*	Non complying units shall be given bank guarantee to respective SPCBs.	
INT	EGRATED IRON & STEEL INDUSTRY	
1	COKE OVEN PLANTS- To meet the parameters PLD(% leaking coolers), 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).	NA
2	STEEL MELTING SHOP- Fugitive emissions- To reduce 30% by March 2004 and 100% by March 2008(including installation of secondary dedusting facilities).	Fugitive emission is under control with PCD
3	BLAST FURNACE- Direct inject of reducing agents by June 2013.	NA

SHYAM STEEL INDUSTRIES LTD.

4	SOLID WASTE/ HAZARDOUS WASTE MANAGEMENT- Utilisation of Steel Melting Shop (SMS)/ Blast Furnace (BF) slag as per the following schedule: * By 2004 - 70% * By 2006 - 80% * By 2007 - 100% Hazardous Waste- Charge of tar sludge/ ETP sludge to Coke Oven by June 2003. Inventorization of the Hazardous waste as per Hazardous Waste (M&H), Rules, 1989 as amended in 2000 and implementation of the Rules by Dec, 2003. (Tar sludge, acid sludge, waste lubricating oil and type fuel falls in the category of Hazardous waste).	Hazardous wastes are stored , transported and disposed off as per the Hazardous Waste Authorization granted.
5	WATER CONSERVATION/ WATER POLLUTION- To reduce specific water consumption to 5 m3/t for long products and 8 m3/t for flat products by December 2005.	We are maintaining water consumption within the limit.
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.	Online stack monitoring system is 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.	Complied
8	To implement the recommendations of Life Cycle Assessment (LCA) study sponsored by MoEF by December 2003.	To be complied.
	The industry will initiate the steps to adopt the following clean technologies measures to improve the performance of industry towards production, energy land environment. - Energy recovery of top Blast Furnace (BF) gas. - Use of Tar- free runner linings. - De- dusting of Cast house at tap holes, runners, skimmers ladle and charging points. - Suppression of fugitive emissions using nitrogen gas or other inert gas. - To study the possibilities of slag and fly ash transportation back to the abandoned mines, to fill up the cavities through empty railway wagons while they return back to the mines and its implementation.	
9	 - Procession of the waste containing flux & ferrous wastes through waste recycling plant. - To implement rain water 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 - To set targets for resource conservation such as Raw material, energy and water consumption to match International Standards. - Up- gradation in the monitoring and analysis facilities for air and water pollution. Also to impart elaborate training to the manpower so that realistic data is obtained in the environmental monitoring laboratories. - To improve overall housekeeping. 	NA ,
10	SPONGE IRON PLANTS Inventorisation of sponge iron plants to be completed by SPCBs/ CPCE by June 2003 and units will be asked to install proper air pollution control equipment by December 2003 to control primary and secondary emissions. As per rebuilding schedule submitted to CPCB/ MoEF.	All required PCD are installed as per the guidelines of SPCB.

SHYAM STEPL INDUSTRIES LTD. Sr. General Manager (Commercial)



TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-070224-01

Issue Date: 12/02/2024

Issued To: *

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

Date of Sampling

Sample Description

Sampling Location

Sampling Plan & Procedure

Analysis Duration

Sampling Instrument Used

ITS Representative

05/02/2024 To 06/02/2024

Ambient Air

Near Main Gate

ITS/LAB/SOP-AAQ/02

07/02/2024 To 12/02/2024

Respirable Dust Sampler (PM10) Fine Particulate

Sampler (PM2.5) With Gaseous Attachment

Weather Condition

TEST RESULT						
S. No.	Parameter	Test Method	Results	Units	Limits as per Environment (Protection) Act.	
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	53.6	$\mu g/m^3$	100	
2.	Particulate Matter (PM _{2.5})	CPCB Volume – 1 / Gravimetric	35.6	μg/m³	60	
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	16.6	μg/m³	80	
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	28.5	μg/m³	80	
5.	Ammonia (as NH ₃)	APHA-AIR402	45.6	μg/m³	400	
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.46	mg/m³	4.0	
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	μg/m³	1.0	
8.	Ozone (as O ₃)	IS:5182 Part-IX	19.3	μg/m³	180	
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-XI	<1.0	μg/m³	5.0	
10.	Benzo (a) Pyrine	IS:5182 Part-XI	<0.1	ng/m³	1.0	
02.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20	
02.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	1800	

ATORY

- ore valid only for the samples tested in our laboratory. 2. Samples will destroyed as per quality policy. It is about the report should be communicated in writing within 7 days.

 For our laboratory is limited to invoiced amount.



TESTING LABORATOR

Laboratory; A-114, Sector-80, Phase-II, Noida, Gautam Budh Nagar - 201305, (U.P.) An ISO 9001: 2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itslaboratorypvtltd@gmail.com, info@itslab.in, contact@itslab.in, itlrelab@gmail.com +91 9911659800, 93505780312, 09958849764, +91 120 3200347

TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-071223-01

Issue Date: 12/12/2023

Issued To: "

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

05/12/2023 To 06/12/2023

Sample Description

Ambient Air

Sampling Location

Near Main Gate

Sampling Plan & Procedure

ITS/LAB/SOP-AAQ/12

Analysis Duration

07/12/2023 To 12/12/2023 Respirable Dust Sampler (PM10) Fine Particulate

Sampling Instrument Used

Sampler (PM2.5) With Gaseous Attachment

Clear

Weather Condition

	TEST RESULT							
S. No.	Parameter	Parameter Test Method	Results	ults Units	Limits as per Environment (Protection) Act.			
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	53.7	μg/m ³	100			
2.	Particulate Matter (PM _{2.5})	CPCB Volume – 1 / Gravimetric	35.7	μg /m ³	60			
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	16.8	μg/m³	80			
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	28.5	μg/m ³	80			
5.	Ammonia (as NH ₃)	APHA-AIR402	45.6	μg/m ³	400			
6.	Carbon monoxide (as CO)	1S:5182 Part-X	0.46	mg/m ³	4.0			
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	μg/m ³	1,0			
8.	Ozone (as O ₃)	IS:5182 Part-IX	19.3	µg/m³	180			
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-XI	<1.0	μg/m ³	5.0			
10.	Benzo (a) Pyrine	IS:5182 Part-XI	< 0.1	ng/m ³	1.0			
12.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20			
12.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	6.0			







Terms & Conditions:

- 1. Test reports are valid only for the samples tested in our laboratory. 2. Samples will destroyed as per quality policy.
- 3. Any complaints about the report should be communicated in writing within 7 days.
- 4. Total liability or our laboratory is limited to invoiced amount.



Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-070223-01

Issue Date: 11/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By Date of Sampling

Sample Description Sampling Location

Sampling Plan & Procedure

Analysis Duration

Sampling Instrument Used

Weather Condition

ITS Representative

05/11/2023 To 06/11/2023

Ambient Air

Near Main Gate

ITS/LAB/SOP-AAQ/11

07/11/2023 To 11/11/2023

Respirable Dust Sampler (PM16) Fine Particulate

Sampler (PM25) With Gaseous Attachment

Clear

TEST RESULT							
S. No.	Parameter	Test Method	Results	Units	Limits as per Environment (Protection) Act.		
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	55.2	μg/m³	100		
2.	Particulate Matter (PM _{2.5})	CPCB Volume – 1 / Gravimetric	36.7	μg/m³	60		
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-11	16.4	μg/m ³	80		
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	29.5	μg/m ³	80		
5.	Ammonia (as NH ₃)	APHA-AIR402	43.6	μg/m ³	400		
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.47	mg/m ³	4.0		
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	μg/m³	1.0		
8.	Ozone (as O ₃)	IS:5182 Part-IX	18.3	μg/m ³	180		
9.	Benzene (as C _o H _o)	IS:5182 Part-XI	<1.0	μg/m³	5.0		
10.	Benzo (a) Pyrine	IS:5182 Part-XI	<0.1	ng/m³	1.0		
11.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m	20		
12.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	6.0		







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TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-090224-02

Issue Date: 13/02/2024

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

07/02/2024 To 08/02/2024

Sample Description

Ambient Air

Sampling Location

Sampling Plan & Procedure

CPP Area

ITS/LAB/SOP-AAQ/02

Analysis Duration Sampling Instrument Used 09/02/2024 To 13/02/2024

Respirable Dust Sampler (PM10) Fine Particulate

Sampler (PM2.5) With Gaseous Attachment

Weather Condition

Clear

	TEST RESULT						
S. No.	Parameter	Test Method	Results	Units	Limits as per Environment (Protection) Act		
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	55.3	$\mu g/m^3$	100		
2.	Particulate Matter (PM _{2.5})	CPCB Volume – 1 / Gravimetric	33.3	μg/m³	60		
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	14.6	μg/m³	80		
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	27.6	$\mu g / m^3$	80		
5.	Ammonia (as NH ₃)	APHA-AIR402	38.4	μg/m³	400		
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.43	mg/m ³	4.0		
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	μg/m³	1.0		
8.	Ozone (as O ₃)	IS:5182 Part-IX	17.6	$\mu g / m^3$	180		
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-XI	<1.0	$\mu g/m^3$	5.0		
10.	Benzo (a) Pyrine	IS:5182 Part-XI	< 0.1	ng/m³	1.0		
02.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20		
02.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	4800		



Fest reports are valid only for the samples tested in our laboratory. 2. Samples will destroyed as per quality policy. Any complaints about the report should be communicated in writing within 7 days. Fotal liability or our laboratory is limited to invoiced amount.

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TEST REPORT

Ambient Air Quality Analysis

Report Code; AAQ-091223-02

Issue Date: 13/12/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

07/12/2023 To 0812/2023

Sample Description

Ambient Air

Sampling Location

CPP Area

Sampling Plan &Procedure

ITS/LAB/SOP-AAQ/12

Analysis Duration

09/12/2023 To 13/12/2023

Sampling Instrument Used

Respirable Dust Sampler (PM₁₀) Fine Particulate Sampler (PM2.5) With Gaseous Attachment

Clear

Weather Condition

TEST RESULT						
S. No.	Parameter	Parameter Test Method	Results	Units	Limits as per Environment (Protection) Act.	
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	55.1	μg/m³	100	
2.	Particulate Matter (PM _{2.5})	CPCB Volume – 1 / Gravimetric	33.2	μg/m³	60	
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	14.7	μg/m ³	80	
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	27.7	μg/m³	80	
5.	Ammonia (as NH ₃)	APHA-AIR402	38.4	μg/m³	400	
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.43	mg/m ³	4.0	
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	μg/m³	1.0	
8.	Ozone (as O ₃)	IS:5182 Part-IX	17.7	μg/m³	180	
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-XI	<1.0	μg/m³	5.0	
10.	Benzo (a) Pyrine	IS:5182 Part-XI	< 0.1	ng/m³	1.0	
12.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20	
12.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	6.0	

our laboratory. 2. Samples will destroyed as per quality policy. nicated in writing within 7 days.



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TEST REPORT

Ambient Air Quality Analysis

Report Code; AAQ-090223-02

Issue Date: 13/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

Date of Sampling

Sample Description Sampling Location

Sampling Plan & Procedure

Analysis Duration

Weather Condition

Sampling Instrument Used

ITS Representative

07/11/2023 To 11/11/2023

Ambient Air

CPP Area

ITS/LAB/SOP-AAQ/11

09/11/2023 To 13/11/2023

Respirable Dust Sampler (PM10) Fine Particulate

Sampler (PM23) With Gaseous Attachment

Clear

TEST RESULT							
S. No.	Parameter	Test Method	Results	Units	Limits as per Environment (Protection) Act		
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	54.3	μg/m³	100		
2.	Particulate Matter (PM ₂₅)	CPCB Volume – 1 / Gravimetric	34.2	µg /m³	60		
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	15.0	μg/m [*]	80		
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	27,4	μg /m ³	80		
5.	Ammonia (as NH ₃)	APHA-AIR402	36.4	µg/m³	400		
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.44	mg/m ³	4.0		
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	μg/m'	1.0		
8.	Ozone (as O ₃)	IS:5182 Part-IX	15.7	μg/m³	180		
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-X1	<1.0	μg/m³	5.0		
10.	Benzo (a) Pyrine	IS:5182 Part-XI	< 0.1	ng/m³	1.0		
11.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20		
12.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	6.0		

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TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-040224-03

Issue Date: 10/02/2024

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

02/02/2024 To 03/02/2024

Sample Description

Ambient Air

Sampling Location

DRI Area

Sampling Plan &Procedure Analysis Duration

ITS/LAB/SOP-AAQ/02

Sampling Instrument Used

04/02/2024 To 10/02/2024

Respirable Dust Sampler (PM10) Fine Particulate Sampler (PM2.5) With Gaseous Attachment

Clear

Weather Condition

S. No.	Parameter	Test Method	Results	Units	Limits as per Environment (Protection) Act.
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	56.3	μg/m³	100
2.	Particulate Matter (PM _{2.5})	CPCB Volume – 1 / Gravimetric	29.3	μg/m³	60
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	14.6	μg/m³	80
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	30.6	μg/m³	80
5.	Ammonia (as NH ₃)	APHA-AIR402	42.8	$\mu g / m^3$	400
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.55	mg/m ³	4.0
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	$\mu g/m^3$	1.0
8.	Ozone (as O ₃)	IS:5182 Part-IX	14.6	$\mu g/m^3$	180
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-XI	<1.0	$\mu g/m^3$	5.0
10.	Benzo (a) Pyrine	IS:5182 Part-XI	< 0.1	ng/m³	1.0
02.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20
02.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	6.0





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TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-141223-03

Issue Date: 17/12/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

12/12/2023 To /13/2023

Sample Description

Ambient Air

Sampling Location

DRI Area

Sampling Plan & Procedure

ITS/LAB/SOP-AAO/12

Analysis Duration

14/12/2023 To 17/12/2023

Sampling Instrument Used

Respirable Dust Sampler (PM10) Fine Particulate

Sampler (PM25) With Gaseous Attachment

Weather Condition

Clear

	TEST RESULT							
S. No.	Parameter	Test Method	Results	Units	Limits as per Environment (Protection) Act.			
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	56.2	μg/m³	100			
2.	Particulate Matter (PM _{2.5})	CPCB Volume – 1 / Gravimetric	29.3	μg/m³	60			
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	14.6	μg/m ³	80			
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	30.7	μg/m ³	80			
5.	Ammonia (as NH ₃)	APHA-AIR402	42.8	μg/m ³	400			
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.55	mg/m ³	4.0			
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	μg/m ³	1.0			
8.	Ozone (as O ₃)	IS:5182 Part-IX	14.6	μg /m ³	180			
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-XI	<1.0	μg/m³	5.0			
10.	Benzo (a) Pyrine	IS:5182 Part-XI	<0.1	ng/m³	1.0			
12.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20			
12.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	6.0			

erms & Conditions :

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Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-120223-03

Issue Date: 14/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

11/11/2023 To 09/11/2023

Sample Description

Ambient Air

Sampling Location

DRI Area

Sampling Plan & Procedure

ITS/LAB/SOP-AAO/11

Analysis Duration

11/11/2023 To 15/11/2023

Sampling Instrument Used

Respirable Dust Sampler (PM10) Fine Particulate Sampler (PM25) With Gaseous Attachment

Clear

Weather Condition

	TEST RESULT						
S. No.	Parameter	Test Method	Results	Units	Limits as per Environment (Protection) Act		
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	57.1	μg/m³	100		
2.	Particulate Matter (PM _{2.5})	CPCB Volume – 1 / Gravimetrie	30.4	μg/m³	60		
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	14.5	μg/m ³	80		
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-V1	31.6	μg/m ³	80		
5.	Ammonia (as NH ₃)	APHA-AIR402	39.7	μg/m ³	400		
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.55	mg/m ³	4.0		
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	μg/m³	1.0		
8.	Ozone (as O ₃)	IS:5182 Part-IX	14.4	μg/m³	180		
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-XI	<1.0	μg/m ³	5.0		
10.	Benzo (a) Pyrine	IS:5182 Part-XI	<0.1	ng/m³	1.0		
11.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20		
12.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m ³	6.0		

Terms & Conditions:

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TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-090224-04

Issue Date: 13/02/2024

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

ITS Representative Sample Drawn By

06/02/2024 To 07/02/2024 Date of Sampling

Ambient Air Sample Description RM Area Sampling Location

ITS/LAB/SOP-AAQ/02 Sampling Plan & Procedure 09/02/2024 To 13/02/2024 Analysis Duration

Sampling Instrument Used Respirable Dust Sampler (PM10) Fine Particulate

Sampler (PM2.5) With Gaseous Attachment

Weather Condition Clear

	TEST RESULT						
S. No.	Parameter	Parameter Test Method	Results	Units	Limits as per Environment (Protection) Act.		
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	53.5	μg/m³	100		
2.	Particulate Matter (PM _{2.5})	CPCB Volume – 1 / Gravimetric	28.6	μg /m ³	60		
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	16.8	μg/m³	80		
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	26.3	μg/m³	80		
5.	Ammonia (as NH ₃)	APHA-AIR402	43.6	μg /m ³	400		
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.50	mg/m ³	4.0		
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	$\mu g / m^3$	1.0		
8.	Ozone (as O ₃)	IS:5182 Part-IX	16.9	μg/m³	180		
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-XI	<1.0	$\mu g / m^3$	5.0		
10.	Benzo (a) Pyrine	IS:5182 Part-XI	< 0.1	ng/m³	1.0		
02.	Nickel (as Ni)	APHA-AIR420	<1.0	ng /m³	20		
02.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	6.0		





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TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-091223-04

Issue Date: 13/12/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

06/12/2023 To 07/12/2023

Sample Description

Ambient Air

Sampling Location

Sampling Plan & Procedure

RM Area

ITS/LAB/SOP-AAQ/12

Analysis Duration

09/12/2023 To 13/12/2023

Sampling Instrument Used

Respirable Dust Sampler (PM10) Fine Particulate Sampler (PM2.5) With Gaseous Attachment

Clear

Weather Condition

	TEST RESULT						
S. No.	Parameter	Parameter Test Method	Results	Units	Limits as per Environment (Protection) Act.		
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	53.5	μg/m³	100		
2.	Particulate Matter (PM _{2.5})	CPCB Volume – 1 / Gravimetric	28.7	μg/m³	60		
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	16.8	μg /m ³	80		
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	26.2	μg/m³	80		
5.	Ammonia (as NH ₃)	APHA-AIR402	43.7	μg/m³	400		
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.50	mg/m³	4.0		
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	μg/m³	1.0		
8.	Ozone (as O ₃)	IS:5182 Part-IX	16.9	μg/m ³	180		
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-XI	<1.0	μg /m ³	5.0		
10.	Benzo (a) Pyrine	IS:5182 Part-XI	< 0.1	ng/m³	1.0		
12.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20		
12.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	6.0		

AUTHORIZED

rms & Conditions:
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TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-090223-04

Issue Date: 11/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

06/11/2023 To 07/11/2023

Sample Description Sampling Location

Weather Condition

Ambient Air

Sampling Plan & Procedure

RM Area

Analysis Duration

ITS/LAB/SOP-AAQ/11

09/11/2023 To 13/11/2023

Sampling Instrument Used

Respirable Dust Sampler (PM10) Fine Particulate Sampler (PM25) With Gaseous Attachment

Clear

	TEST RESULT								
S. No.	Parameter	Test Method	Results	U					
1	Particulate Matter (PM.)	IC. 2193 D VVIII		-					

S. No.		Test Method	Results	Units	Limits as per Environment (Protection) Act.
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	53.4	μg/m³	100
2.	Particulate Matter (PM ₂₅)	CPCB Volume – 1 / Gravimetric	27.6	μg/m³	60
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	14.8	μg/m³	80
4,	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	26.3	μg/m³	80
5.	Ammonia (as NH ₃)	APHA-AIR402	40.7	μg/m ³	400
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.50	mg/m ³	4.0
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	μg/m ³	1.0
8.	Ozone (as O ₃)	IS:5182 Part-IX	15.7	μg/m³	180
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-XI	<1.0	μg/m³	5.0
10.	Benzo (a) Pyrine	IS:5182 Part-XI	<0.1	ng/m³	1.0
11.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20
12.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	6.0

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TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-110224-05

Issue Date: 15/02/2024

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

09/02/2024 To 10/02/2024

Sample Description

Ambient Air

Sampling Location

SMS Area

Sampling Plan &Procedure

ITS/LAB/SOP-AAQ/02

Analysis Duration

11/02/2024 To 15/02/2024

Sampling Instrument Used

Respirable Dust Sampler (PM10) Fine Particulate Sampler (PM2.5) With Gaseous Attachment

Clear

Weather Condition

		TEST RESU	LT		
S. No.	Parameter	Test Method	Results	Units	Limits as per Environment (Protection) Act
1	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	58.6	μg/m³	100
2.	Particulate Matter (PM _{2.5})	CPCB Volume – 1 / Gravimetric	30.6	μg/m³	60
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	14.3	$\mu g / m^3$	80
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	29.6	μg/m³	80
5.	Ammonia (as NH ₃)	APHA-AIR402	45.9	$\mu g/m^3$	400
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.41	mg/m ³	4.0
	Lead(as Pb)	IS:5182 Part-XXII	<1.0	$\mu g/m^3$	1.0
7.	Ozone (as O ₃)	IS:5182 Part-IX	17.3	$\mu g/m^3$	180
8.	Benzene (as C ₆ H ₆)	IS:5182 Part-XI	<1.0	μg/m³	5.0
9.	Benzo (a) Pyrine	IS:5182 Part-XI	< 0.1	ng/m³	1.0
10.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20
02.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	6.0

SNATORY

Terms & Conditions:

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TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-121223-05

Issue Date: 15/12/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

09/12/2023 To 10/12/2023

Sample Description

Ambient Air

Sampling Location

SMS Area

Sampling Plan & Procedure

ITS/LAB/SOP-AAQ/12

Analysis Duration

12/12/2023 To 15/12/2023

Sampling Instrument Used

Respirable Dust Sampler (PM10) Fine Particulate

Sampler (PM2.5) With Gaseous Attachment

Weather Condition

Clear

TEST RESULT							
S. No.	Parameter	Test Method	Results	Units	Limits as per Environment (Protection) Act		
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	58.7	μg/m³	100		
2.	Particulate Matter (PM _{2,5})	CPCB Volume – 1 / Gravimetric	30.7	μg/m³	60		
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	14.3	μg/m³	80		
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	29.7	μg/m³	80		
5.	Ammonia (as NH ₃)	APHA-AIR402	45.9	μg/m³	400		
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.41	mg/m ³	4.0		
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	μg/m³	1.0		
8.	Ozone (as O ₃)	IS:5182 Part-IX	17.2	μg/m³	180		
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-XI	<1.0	$\mu g/m^3$	5.0		
10.	Benzo (a) Pyrine	IS:5182 Part-XI	< 0.1	ng/m³	1.0		
12.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20		
12.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m ³	6.0		

AUTHORIZ

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TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-120223-05

Issue Date: 15/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

Date of Sampling

Sample Description

Sampling Location

Sampling Plan & Procedure

Analysis Duration

Sampling Instrument Used

Weather Condition

ITS Representative

09/11/2023 To 10/11/2023

Ambient Air

SMS Area

ITS/LAB/SOP-AAQ/11

11/11/2023 To 15/11/2023

Respirable Dust Sampler (PM₁₀) Fine Particulate

Sampler (PM25) With Gaseous Attachment

Clear

TEST RESULT						
S. No.	Parameter	Test Method	Results	Units	Limits as per Environment (Protection) Act.	
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	56.6	μg/m ³	100	
2.	Particulate Matter (PM _{2.5})	CPCB Volume – 1 / Gravimetric	31.7	μg/m³	60	
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-11	14.1	μg/m'	80	
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	28.7	μg/m ³	80	
5.	Ammonia (as NH ₃)	APHA-AIR402	42.9	μg/m³	400	
6.	Carbon monoxide (as CO)	IS:5182 Part-X	0.41	mg/m ³	4.0	
7.	Lead(as Pb)	IS:5182 Part-XXII	<1.0	μg/m³	1.0	
8.	Ozone (as O ₃)	IS:5182 Part-IX	16.0	μg/m³	180	
9.	Benzene (as C ₆ H ₆)	IS:5182 Part-X1	<1.0	μg/m ³	5.0	
10.	Benzo (a) Pyrine	IS:5182 Part-XI	<0.1	ng/m³	1.0	
11.	Nickel (as Ni)	APHA-AIR420	<1.0	ng/m³	20	
12.	Arsenic (as As)	APHA-AIR302	<1.0	ng/m³	6.0	

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TEST REPORT

Stack Emission Analysis

Report Code: SE-070224-010

Issue Date: 12/02/2024

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

05/02/2024 Sample Drawn on

ITS Representative Sample Drawn By Stack Emission Sample Description

60 Minutes Sampling Time Sampling Plan &Procedure SOP/SE/09

07/02/2024 To 12/02/2024 Analysis Duration

28.0 Ambient Temperature (°C) 88.0 Stack Temperature (°C)

Stack Attached to Cooler Discharge Source of Emission

Coal Type of Fuel used Normal Operating Load Metal Circular Type of Stack

Stack Height from Ground Level (meter) 24.0 9.3 Average Velocity of Flue Emission (m/s) 7518.34 Quantity of Emission Discharged (m³/hr)

		TEST RESU	ULT		
S.N.	Parameter	Test Method	Results	Units	Specification / Limit (As Per CPCB Norms)
1.	Particulate Matter (PM)	IS:02255(Part-1)	42.8	mg/Nm ³	-
4	Carbon Monoxide (CO)	IS:13270	0.34	% by Vol.	1% By Volume
5	Carbon Dioxide (CO2)	IS:13270	0.9	% by Vol.	Not Specified





- erms & Conditions :
 Test reports are valid only for the samples tested in our laboratory. 2. Samples will destroyed as per quality policy.
 Any complaints about the report should be communicated in writing within 7 days.
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TEST REPORT

Stack Emission Analysis

Report Code: SE-071223-01

Issue Date: 12/12/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn on 05/12/2023

Sample Drawn By ITS Representative Sample Description Stack Emission

Sampling Time 60 Minutes Sampling Plan & Procedure SOP/SE/09

Analysis Duration 07/12/2023 To 12/12/2023

Ambient Temperature (°C) Stack Temperature (°C)

Source of Emission Stack Attached to Cooler Discharge

Type of Fuel used Coal Operating Load Normal Type of Stack Metal Circular

Stack Height from Ground Level (meter) 24.0 9.2 Average Velocity of Flue Emission (m/s) Quantity of Emission Discharged (m³/hr) 7518.24

	TEST RESULT						
S.N.	Parameter	Test Method	Results	Units	Specification / Limit (As Per CPCB Norms)		
1.	Particulate Matter (PM)	IS:12255(Part-1)	42.8	mg/Nm ³	-		
4	Carbon Monoxide (CO)	IS:13270	0.23	% by Vol.	1% By Volume		
5	Carbon Dioxide (CO2)	IS:13270	0.9	% by Vol.	Not Specified		

AUTHORI

Terms & Conditions:

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(An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory)

Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in
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TEST REPORT

Stack Emission Analysis

Report Code: SE-070223-01

Issue Date: 11/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn on : 05/11/2023

Sample Drawn By : ITS Representative Sample Description : Stack Emission

Sampling Time 60 Minutes
Sampling Plan & Procedure SOP/SE/09

Analysis Duration : 07/11/2023 To 11/11/2023

Ambient Temperature (°C) : 28.0 Stack Temperature (°C) : 88.0

Source of Émission : Stack Attached to Cooler Discharge

Type of Fuel used : Coal
Operating Load : Normal
Type of Stack : Metal Circular
Stack Height from Ground Level (meter) : 24.0

Stack Height from Ground Level (meter) : 24.0
Average Velocity of Flue Emission (m/s) : 9.2
Quantity of Emission Discharged (m³/hr) : 7518.24

		TEST RESI	ULT		
S.N.	Parameter	Test Method	Results	Units	Specification / Limit (As Per CPCB Norms)
1.	Particulate Matter (PM)	IS:11255(Part-1)	42.7	mg/Nm ³	-
4	Carbon Monoxide (CO)	IS:13270	0.24	% by Vol.	1% By Volume
5	Carbon Dioxide (CO2)	IS:13270	0.9	% by Vol.	Not Specified

CHECKED BY

AUTHORIZED SIGNATORY

Terms & Conditions

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TEST REPORT

Stack Emission Analysis

Report Code: SE-070224-011

Issue Date: 12/02/2024

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn on

06/02/2024

Sample Drawn By

ITS Representative

Sample Description

Stack Emission

Sampling Time

60 Minutes

Sampling Plan & Procedure

SOP/SE/09

Analysis Duration

07/02/2024 To 12/02/2024

Ambient Temperature (°C)

28.0

Stack Temperature (°C)

209.0

Source of Emission

Stack Attached to CPP

Type of Fuel used

Operating Load

Normal

Type of Stack

Circular

Stack Height from Ground Level (meter)

69.0

Average Velocity of Flue Emission (m/s)

8.3

Quantity of Emission Discharged (m³/hr)

024918.65

	TEST RESULT						
S.N.	Parameter	Test Method	Results	Units	Specification / Limit (As Per CPCB Norms)		
1.	Particulate Matter (PM)	IS:02255(Part-1)	58.5	mg/Nm ³	-		
2.	Sulphur Dioxide (SO ₂)	IS:02255(Part-2)	19.4	mg/Nm ³	-		
3.	Nitrogen Dioxide (NO ₂)	IS:02255(Part-7)	29.6	mg/Nm ³	Not Specified		
4	Carbon Dioxide (CO2)	IS:13270	10.6	% by Vol.	Not Specified		
5	O2	IS:13270	9.6	% by Vol.			





erms & Conditions :

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TEST REPORT

Stack Emission Analysis

Report Code: SE-081223-02

Issue Date: 12/12/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn on 06/12/2023

Sample Drawn By ITS Representative Sample Description Stack Emission

Sampling Time 60 Minutes Sampling Plan & Procedure SOP/SE/09

Analysis Duration 08/12/2023 To 12/12/2023

Ambient Temperature (°C) 28.0 Stack Temperature (°C)

Source of Emission Stack Attached to CPP

Type of Fuel used Coal Operating Load Normal Type of Stack Circular Stack Height from Ground Level (meter) 69.0 Average Velocity of Flue Emission (m/s) 8.2

Quantity of Emission Discharged (m³/hr) 123918.75

TEST RESULT							
S.N.	Parameter	Test Method	Results	Units	Specification / Limit (As Per CPCB Norms)		
1.	Particulate Matter (PM)	IS:12255(Part-1)	58.5	mg/Nm ³	-		
2.	Sulphur Dioxide (SO ₂)	IS:12255(Part-2)	19.4	mg/Nm ³	-		
3.	Nitrogen Dioxide (NO ₂)	IS:12255(Part-7)	29.7	mg/Nm ³	Not Specified		
4	Carbon Dioxide (CO2)	IS:13270	10.6	% by Vol.	Not Specified		
5	O2	IS:13270	9.6	% by Vol.			

- erms & Conditions :

 Test reports are valid only for the samples tested in our laboratory. 2. Samples will destroyed as per quality policy.

 Any complaints about the report should be communicated in writing within 7 days.

 Total liability or our laboratory is limited to invoiced amount.



TEST REPORT

Stack Emission Analysis

Report Code: SE-110223-02

Issue Date: 11/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn on 06/11/2023

Sample Drawn By ITS Representative

Sample Description Stack Emission Sampling Time 60 Minutes Sampling Plan & Procedure SOP/SE/09

Analysis Duration 11/11/2023 To 11/11/2023

Ambient Temperature (°C) 28.0 Stack Temperature (°C) 209.0

Source of Emission Stack Attached to CPP

Type of Fuel used Coal Operating Load Normal Type of Stack Circular Stack Height from Ground Level (meter) 69.0 Average Velocity of Flue Emission (m/s) 8.2 Quantity of Emission Discharged (m³/hr) 123918.75

		TEST RESI	JLT		
S.N.	Parameter	Test Method	Results	Units	Specification / Limit (As Per CPCB Norms)
1.	Particulate Matter (PM)	IS:11255(Part-1)	58.3	mg/Nm ³	-
2.	Sulphur Dioxide (SO ₂)	IS:11255(Part-2)	18.4	mg/Nm ³	-
3.	Nitrogen Dioxide (NO ₂)	1S:11255(Part-7)	29.8	mg/Nm ³	Not Specified
4	Carbon Dioxide (CO2)	IS:13270	10.4	% by Vol.	Not Specified
5	O2	IS:13270	9.6	% by Vol.	



TEST REPORT

Stack Emission Analysis

Report Code: SE-070224-012

Issue Date: 12/02/2024

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn on

06/02/2024

Sample Drawn By

ITS Representative

Sample Description

Stack Emission

Sampling Time

60 Minutes

Sampling Plan &Procedure

SOP/SE/09

Analysis Duration

07/02/2024 To 12/02/2024

Ambient Temperature (°C)

28.0

Stack Temperature (°C)

022.0

Source of Emission

Stack Attached to Induction Furnace

Type of Fuel used

Electricity

Operating Load

Normal Metal Circular

Type of Stack

24.0

Stack Height from Ground Level (meter)

9.8

Average Velocity of Flue Emission (m/s)

Quantity of Emission Discharged (m3/hr)

38437.39

		TEST RESU	JLT		
S.N.	Parameter	Test Method	Results	Units	Specification / Limit (As Per CPCB Norms)
1.	Particulate Matter (PM)	IS:02255(Part-1)	14.3	mg/Nm ³	
2	Carbon Monoxide (CO)	IS:13270	0.07	% by Vol.	1% By Volume







TEST REPORT

Stack Emission Analysis

Report Code: SE-121223-03

Issue Date: 12/12/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn on 06/12/2023

Sample Drawn By ITS Representative Sample Description Stack Emission Sampling Time 60 Minutes

Sampling Plan & Procedure SOP/SE/09 Analysis Duration 08/12/2023 To 12/12/2023

Ambient Temperature (°C) 28.0 Stack Temperature (°C) 122.0

Source of Emission Stack Attached to Induction Furnace

Type of Fuel used Electricity Operating Load Normal Type of Stack Metal Circular

Stack Height from Ground Level (meter) 24.0 Average Velocity of Flue Emission (m/s) 9.8 Quantity of Emission Discharged (m³/hr) 38437.29

		TEST RESI	ULT		
S.N.	Parameter	Test Method	Results	Units	Specification / Limit (As Per CPCB Norms)
1.	Particulate Matter (PM)	IS:12255(Part-1)	14.3	mg/Nm ³	-
2	Carbon Monoxide (CO)	IS:13270	0.07	% by Vol.	1% By Volume

AUTHORIZED



TEST REPORT

Stack Emission Analysis

Report Code: SE-110223-03

Issue Date: 11/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn on 06/11/2023

Sample Drawn By ITS Representative Sample Description Stack Emission

Sampling Time 60 Minutes Sampling Plan & Procedure SOP/SE/09

Analysis Duration 11/11/2023 To 11/11/2023

Ambient Temperature (°C) 28.0 Stack Temperature (°C) 112.0

Source of Emission Stack Attached to Induction Furnace

Type of Fuel used Electricity Operating Load Normal Type of Stack Metal Circular

Stack Height from Ground Level (meter) 24.0 Average Velocity of Flue Emission (m/s) 9.8 Quantity of Emission Discharged (m³/hr) 38437.29

	TEST RESULT							
S.N.	Parameter	Test Method	Results	Units	Specification / Limit (As Per CPCB Norms)			
1.	Particulate Matter (PM)	IS:11255(Part-1)	14.6	mg/Nm ³	-			
2	Carbon Monoxide (CO)	IS:13270	0.07	% by Vol.	1% By Volume			





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TEST REPORT

Stack Emission Analysis

Report Code: SE-090224-013

Issue Date: 13/02/2024

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn on

07/02/2024

Sample Drawn By

ITS Representative

Sample Description

Stack Emission 60 Minutes

Sampling Time

SOP/SE/09

Sampling Plan & Procedure Analysis Duration

09/02/2024 To 13/02/2024

Ambient Temperature (°C)

28.0

Stack Temperature (°C)

109.0

Source of Emission

Stack Attached to Rotary Kiln

Type of Fuel used

Coal Normal

Operating Load Type of Stack

Circular

Stack Height from Ground Level (meter)

39.0

Average Velocity of Flue Emission (m/s)

8.0

Quantity of Emission Discharged (m³/hr)

6971.35

	TEST RESULT								
s.N.	Parameter	Test Method	Results	Units	Specification / Limit (As Per CPCB Norms)				
1.	Particulate Matter (PM)	IS:02255(Part-1)	40.3	mg/Nm ³	-				
2	Carbon Monoxide (CO)	IS:13270	0.35	% by Vol.	1% By Volume				
3	Carbon Dioxide (CO2)	IS:13270	10.3	% by Vol.	Not Specified				
4	O2	IS:13270	9.6	% by Vol.					





TEST REPORT

Stack Emission Analysis

Report Code: SE-091223-04

Issue Date: 13/12/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn on 07/12/2023

Sample Drawn By ITS Representative Sample Description

Stack Emission Sampling Time 60 Minutes Sampling Plan & Procedure SOP/SE/09

Analysis Duration 09/12/2023 To 13/12/2023

Ambient Temperature (°C) 28.0 Stack Temperature (°C) 109.0

Source of Emission Stack Attached to Rotary Kiln

Type of Fuel used Operating Load Normal Type of Stack Circular Stack Height from Ground Level (meter) 39.0 Average Velocity of Flue Emission (m/s) 8.0 Quantity of Emission Discharged (m³/hr) 6971.35

	TEST RESULT							
S.N.	Parameter	Test Method	Results	Units	Specification / Limit (As Per CPCB Norms)			
1.	Particulate Matter (PM)	IS:12255(Part-1)	40.3	mg/Nm ³	-			
2	Carbon Monoxide (CO)	IS:13270	0.25	% by Vol.	1% By Volume			
3	Carbon Dioxide (CO2)	IS:13270	10.2	% by Vol.	Not Specified			
4	O2	IS:13270	9.6	% by Vol.				



TEST REPORT

Stack Emission Analysis

Report Code: SE-090223-04

Issue Date: 13/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn on 07/11/2023

Sample Drawn By ITS Representative Sample Description Stack Emission

Sampling Time 60 Minutes Sampling Plan & Procedure SOP/SE/09

Analysis Duration 09/11/2023 To 13/11/2023

Ambient Temperature (°C) 28.0 Stack Temperature (°C) 109.0

Source of Emission Stack Attached to Rotary Kiln

Type of Fuel used Coal Operating Load Normal Type of Stack Circular Stack Height from Ground Level (meter) 39.0 Average Velocity of Flue Emission (m/s) 0.8

Quantity of Emission Discharged (m³/hr) 6971.35

		TEST RESU	ULT		
S.N.	Parameter	Test Method	Results	Units	Specification / Limit (As Per CPCB Norms)
1.	Particulate Matter (PM)	IS:11255(Part-1)	41,4	mg/Nm ³	-
2	Carbon Monoxide (CO)	IS:13270	0.28	% by Vol.	1% By Volume
3	Carbon Dioxide (CO2)	IS:13270	10.2	% by Vol.	Not Specified
4	O2	IS:13270	9.8	% by Vol.	-



Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

TEST REPORT

Fugitive Air Quality Analysis

Report Code: AAQ-070224-06

Issue Date: 12/02/2024

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

05/02/2024

Sample Description

Fugitive Air

Sampling Location

Near Product House

Sampling Duration

6 Hours.

Sampling Plan & Procedure

ITS/LAB/SOP-AAO/02 07/02/2024 To 12/02/2024

Analysis Duration Sampling Instrument Used

Respirable Dust Sampler (PM₁₀) Fine Particulate

Sampler (PM2.5) With Gaseous Attachment

Weather Condition

Clear

		TEST RESU	JLT		
S.No.	Parameter	Test Method	Results	Units	Permissible Limit of Exposure As Per CPCB/Factories Act
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	56.3	μg/m³	100
2.	Suspended Particulate Matter (SPM)	IS:5182 Part-XXIII	164.3	μg/m³	600
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	14.0	μg/m³	80
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	30.6	μg/m³	80







TEST REPORT

Fugitive Air Quality Analysis

Report Code: AAQ-071223-06

Issue Date: 12/12/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

05/12/2023

Sample Description

Fugitive Air

Sampling Location Sampling Duration

Near Product House 6 Hours.

Sampling Plan & Procedure

ITS/LAB/SOP-AAQ/12

Analysis Duration

07/12/2023 To 12/12/2023

Sampling Instrument Used

Respirable Dust Sampler (PM10) Fine Particulate

Sampler (PM2.5) With Gaseous Attachment

Clear

W	eather	Condition

	TEST RESULT								
S.No.	Parameter	Test Method	Results	Units	Permissible Limit of Exposure As Per CPCB/Factories Act				
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	56.2	μg/m ³	100				
2.	Suspended Particulate Matter (SPM)	IS:5182 Part-XXIII	164.3	μg /m ³	600				
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	14.0	μg/m³	80				
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	30.6	μg/m ³	80				

AUTHOR

Any complaints about the report should be communicated in writing within 7 days.

Total liability or our laboratory is limited to invoiced amount.



Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

TEST REPORT

Fugitive Air Quality Analysis

Report Code: AAQ-070223-06

Issue Date: 11/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling Sample Description

05/11/2023 Fugitive Air

Sampling Location

Near Product House

Sampling Duration

6 Hours.

Sampling Plan & Procedure

ITS/LAB/SOP-AAQ/11

Analysis Duration

07/11/2023 To 11/11/2023 Respirable Dust Sampler (PM10) Fine Particulate

Sampling Instrument Used

Sampler (PM25) With Gaseous Attachment

Weather Condition

Clear

		TEST RESI	ULT		
S.No.	Parameter	Test Method	Results	Units	Permissible Limit of Exposure As Per CPCB/Factories Act
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	57.4	μg/m³	100
2.	Suspended Particulate Matter (SPM)	IS:5182 Part-XXIII	162.3	μg/m³	600
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	14.0	μg/m³	80
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	30.4	μg/m ³	80

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TEST REPORT

Fugitive Air Quality Analysis

Report Code: AAQ-070224-07

Issue Date: 12/02/2024

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

05/02/2024

Sample Description

Fugitive Air

Sampling Location

Near Raw Material Handling Yard (DRI)

Sampling Duration

6 Hours.

Sampling Plan & Procedure

ITS/LAB/SOP-AAQ/02

Analysis Duration

07/02/2024 To 12/02/2024

Sampling Instrument Used

Respirable Dust Sampler (PM10) Fine Particulate

Sampler (PM2.5) With Gaseous Attachment

Weather Condition

Clear

		TEST RESU	JLT		
S.No.	Parameter	Test Method	Results	Units	Permissible Limit of Exposure As Per CPCB/Factories Act
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	54.6	$\mu g/m^3$	100
2.	Suspended Particulate Matter (SPM)	IS:5182 Part-XXIII	168.3	μg/m³	600
2	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	17.5	μg/m³	80
4	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	36.6	μg/m³	80





es tested in our laboratory. 2. Samples will destroyed as per quality policy. be communicated in writing within 7 days. Test reports are valid only for the samples tested in our labor Any complaints about the report should be communicated in Total liability or our laboratory is limited to invoiced amount.

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TEST REPORT

Fugitive Air Quality Analysis

Report Code: AAQ-071223-07

Issue Date: 12/12/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative 05/12/2023

Date of Sampling Sample Description

Sampling Location

Fugitive Air

Near Raw Material Handling Yard (DRI)

Sampling Duration

6 Hours.

Sampling Plan & Procedure

ITS/LAB/SOP-AAO/12 07/12/2023 To 12/12/2023

Analysis Duration Sampling Instrument Used

Respirable Dust Sampler (PM10) Fine Particulate

Sampler (PM2.5) With Gaseous Attachment

Weather Condition Clear

	TEST RESULT								
S.No.	Parameter	Test Method	Results	Units	Permissible Limit of Exposure As Per CPCB/Factories Act				
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	54.6	μg/m ³	100				
2.	Suspended Particulate Matter (SPM)	IS:5182 Part-XXIII	168.3	μg/m³	600				
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	17.5	μg/m³	80				
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	36.6	μg/m ³	80				

AUTHORE

Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

TEST REPORT

Fugitive Air Quality Analysis

Report Code: AAQ-070223-07

Issue Date: 11/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn By

ITS Representative

Date of Sampling

05/11/2023

Sample Description

Fugitive Air

Sampling Location

Sampling Duration

Near Raw Material Handling Yard (DRI) 6 Hours.

Sampling Plan & Procedure

ITS/LAB/SOP-AAQ/11

Analysis Duration

07/11/2023 To 11/11/2023

Sampling Instrument Used

Respirable Dust Sampler (PM₁₀) Fine Particulate

Sampler (PM25) With Gaseous Attachment

Weather Condition Clear

		TEST RESI	ULT		
S.No.	Parameter	Test Method	Results	Units	Permissible Limit of Exposure As Per CPCB/Factories Act
1.	Particulate Matter (PM ₁₀)	IS:5182 Part-XXIII	55.3	μg/m³	100
2.	Suspended Particulate Matter (SPM)	IS:5182 Part-XXIII	166.2	μg/m³	600
3.	Sulphur dioxide (as SO ₂)	IS:5182 Part-II	16.4	μg/m³	80
4.	Nitrogen dioxide (as NO ₂)	IS:5182 Part-VI	35.6	μg/m³	80



TESTING LABORATORY

Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

TEST REPORT

Waste Water Sample Analysis

Report Code: WW-070224-014

Issue Date: 12/02/2024

Issue To

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn On Sample Received On

Sample Drawn By

Sample Description Sample Quantity/Packing detail

Analysis Duration

05/02/2024 07/02/2024

ITS Representative

Drain of DRI Plant

5ltr. in Plastic Cane & 500ml in Glass Bottle

07/02/2024 To 12/02/2024

		TEST RESULTS			
S.No.	Parameter	Test Method	Results	Units	Limit as per CPCB Norms
1	рН	IS:3025(Part-02):1983	7.30	-	5.5 - 9.0
2.	Total Suspended Solid (TSS)	IS:3025(Part-17):1984	32.1	mg/l	100 max
2.	Chemical Oxygen Demand (as O ₂)	APHA 5220 B:2005	62.0	mg/l	250 max
4.	Biological Oxygen Demand (as O ₂)	IS:3025(Part-44):1993	16.3	mg/l	30 max
5.	Oil & grease	IS:3025(Part-39):1984	3.9	mg/l	10 max

Remark: CPCB- Central Pollution Control Board.



- Terms & Conditions:

 1. Test reports are valid only for the samples tested in our laboratory. 2. Samples will destroyed as per quality policy.

 3. Any complaints about the report should be communicated in writing within 7 days.

 4. Total liability or our laboratory is limited to invoiced amount.



TEST REPORT

Waste Water Sample Analysis

Report Code: WW-071223-01

Issue Date: 12/12/2023

Issue To

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn On

05/12/2023

Sample Received On

07/12/2023

Sample Drawn By

ITS Representative

Sample Description

Drain of DRI Plant

Sample Quantity/Packing detail

5ltr. in Plastic Cane & 500ml in Glass Bottle

Analysis Duration

07/12/2023 To 12/12/2023

		TEST RESULTS			
S.No.	Parameter	Test Method	Results	Units	Limit as per CPCB Norms
1.	pH	IS:3025(Part-12):1983	7.30	-	5.5 - 9.0
2.	Total Suspended Solid (TSS)	IS:3025(Part-17):1984	32.1	mg/I	100 max
3.	Chemical Oxygen Demand (as O ₂)	APHA 5220 B:2005	62.0	mg/I	250 max
4.	Biological Oxygen Demand (as O ₂)	IS:3025(Part-44):1993	16.2	mg/l	30 max
5.	Oil & grease	IS:3025(Part-39):1984	3.9	mg/l	10 max

Remark: CPCB- Central Pollution Control Board.



TEST REPORT

Waste Water Sample Analysis

Report Code: WW-070223-01

Issue Date: 11/11/2023

Issue To

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn On

05/11/2023

Sample Received On

07/11/2023

Sample Drawn By

ITS Representative

Sample Description

Drain of DRI Plant

Sample Quantity/Packing detail

5ltr. in Plastic Cane & 500ml in Glass Bottle 07/11/2023 To 11/11/2023

Analysis Duration

TEST RESULTS Limit as per S.No. Parameter Test Method Results Units CPCB Norms рН IS:3025(Part-11):1983 7.33 5.5 - 9.0Total Suspended Solid (TSS) IS:3025(Part-17):1984 32.0 mg/l 100 max Chemical Oxygen Demand (as O2) APHA 5220 B:2005 62.0 mg/l 250 max

Biological Oxygen Demand IS:3025(Part-44):1993 17.2 mg/l 30 max (as O₂) Oil & grease IS:3025(Part-39):1984 3.9 mg/l 10 max

Remark: CPCB- Central Pollution Control Board.



TEST REPORT

Waste Water Sample Analysis

Report Code: WW-070224-015

Issue Date: 12/02/2024

Issue To

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn On Sample Received On

Sample Drawn By

Sample Description

Sample Quantity/Packing detail

Analysis Duration

05/02/2024

07/02/2024

ITS Representative

Drain Near Security Gate

5ltr. in Plastic Cane & 500ml in Glass Bottle

07/02/2024 To 12/02/2024

		TEST RESULTS			
S.No.	Parameter	Test Method	Results	Units	Limit as per CPCB Norms
1.	pH	IS:3025(Part-02):1983	7.31	-	5.5 - 9.0
2.	Total Suspended Solid (TSS)	IS:3025(Part-17):1984	35.6	mg/l	100 max
3.	Chemical Oxygen Demand (as O2)	APHA 5220 B:2005	57.3	mg/l	250 max
4.	Biological Oxygen Demand (as O ₂)	IS:3025(Part-44):1993	16.3	mg/l	30 max
5.	Oil & grease	IS:3025(Part-39):1984	<1.0	mg/l	10 max

Remark: CPCB- Central Pollution Control Board.

ATORY



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TEST REPORT

Waste Water Sample Analysis

Report Code: WW-071223-02

Issue Date: 12/12/2023

Issue To

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn On

05/12/2023 07/12/2023

Sample Received On Sample Drawn By

: ITS Representative

Sample Description

: Drain Near Security Gate

Sample Quantity/Packing detail

5ltr. in Plastic Cane & 500ml in Glass Bottle

Analysis Duration

07/12/2023 To 12/12/2023

	9	TEST RESULTS			
S.No.	Parameter	Test Method	Results	Units	Limit as per CPCB Norms
1.	pH	IS:3025(Part-12):1983	7.31	-	5.5 - 9.0
2.	Total Suspended Solid (TSS)	IS:3025(Part-17):1984	35.7	mg/l	100 max
3.	Chemical Oxygen Demand (as O ₂)	APHA 5220 B:2005	57.3	mg/l	250 max
4.	Biological Oxygen Demand (as O ₂)	IS:3025(Part-44):1993	16.2	mg/l	30 max
5.	Oil & grease	IS:3025(Part-39):1984	<1.0	mg/l	10 max

Remark: CPCB- Central Pollution Control Board.



Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

TEST REPORT

Waste Water Sample Analysis

Report Code: WW-070223-02

Issue Date: 11/11/2023

Issue To

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Drawn On

Sample Received On

Sample Drawn By

Sample Description

Sample Quantity/Packing detail

Analysis Duration

05/11/2023

07/11/2023

ITS Representative

Drain Near Security Gate

5ltr. in Plastic Cane & 500ml in Glass Bottle

07/11/2023 To 11/11/2023

		TEST RESULTS			
S.No.	Parameter	Test Method	Results	Units	Limit as per CPCB Norms
1.	pH	IS:3025(Part-11):1983	7.36	-	5.5 - 9.0
2.	Total Suspended Solid (TSS)	IS:3025(Part-17):1984	36.0	mg/l	100 max
3.	Chemical Oxygen Demand (as O2)	APHA 5220 B:2005	56.0	mg/l	250 max
4.	Biological Oxygen Demand (as O ₂)	IS:3025(Part-44):1993	15.0	mg/l	30 max
5,	Oil & grease	IS:3025(Part-39):1984	<1.()	mg/l	10 max

Remark: CPCB- Central Pollution Control Board.



Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

Report Code: W-070224-016 (Page- 1 of 2)

Issue Date: 12/02/2024

TEST REPORT

Water Sample Analysis

Report Code: W-070224-016

Issue To

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

05/02/2024 Sample Received On

ITS Representative Sample Drawn By

Raw Water Storage Tank Sample Description

07/02/2024 Sample Drawn On

4.0 Liter Plastic Bottle & 500ml in Glass Bottle. Sample Quantity

07/02/2024 To 12/02/2024 Analysis Duration

				mits :10500-2018)	D 1	
S.No.	Parameters	Units	Desirable Limit	Permissible Limit	Results	Test Method
1	Color	Hazen	5	15	<1.0	IS:3025(Pt-4)
2	Odour	-	Agreeable	Agreeable	Agreeable	IS:3025(Pt-5)
3	Turbidity	NTU	1	5	<1.0	IS:3025(Pt-10)
4	рН	-	6.5-8.5	No Relaxation	7.41	IS:3025(Pt-02)
5	Total Hardness (as CaCO3)	mg/l	200	600	68	IS:3025(Pt-21)
6	Iron (as Fe)	mg/l	1.0	No Relaxation	< 0.05	APHA22ndEd.,3020
7	Chlorides (as Cl)	mg/l	250	1000	20.3	IS:3025(Pt-32)
8	Fluoride (as F)	mg/l	1	1.5	< 0.1	APHA22 nd Ed.,4500 F (D)
9	TDS	mg/l	500	2000	156	IS:3025(Pt-16)
10	Calcium (as Ca ²⁺)	mg/l	75	200	15.3	IS:3025(Pt-40)
02	Magnesium (as Mg ²⁺)	mg/l	30	100	7.33	APHA22 nd Ed.,3500- Mg (B)
02	Sulphate (as SO4)	mg/l	200	400	13.38	IS:3025(Pt-24)
13	Free Residual Chlorine	mg/l	0.3	1	Nil	IS:3025(Pt-26)





- rms & Conditions:
 Test reports are valid only for the samples tested in our laboratory. 2. Samples will destroyed as per quality policy.
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 Total liability or our laboratory is limited to invoiced amount.



Report Code: W-070224-016 (Page- 2 of 2)

14	Copper (as Cu)	mg/l	0.05	1.5	ND	APHA22 nd Ed.,3020B/3021 B(AAS)
15	Cadmium(asCd)	mg/l	0.002	NoRelaxation	ND	APHA 22 nd Ed., 3020 B / 3021 B (AAS)
16	Arsenic(asAs)	mg/l	0.01	0.05	ND	APHA 22 nd Ed., 3020 B / 3024, AAS- VGA
17	Cyanide(asCN)	mg/l	0.05	NoRelaxation	ND	APHA 22nd Ed., 4500CN
18	Lead(asPb)	mg/l	0.01	NoRelaxation	ND	APHA 22 nd Ed., 3020 B / 3021 BAAS
19	Zinc(asZn)	mg/l	5	15	ND	APHA 22 nd Ed., 3020 B/ 3021 B (AAS)
20	Nickel(asNi)	mg/l	0.03	NoRelaxation	ND	APHA 3021 (B)
21	Chromium(asCr ⁶⁺)	mg/l	0.04	NoRelaxation	ND	IS:3025(Pt-52)
	Alkalinity(asCaCO ₃)	mg/l	191	600	70	IS:3025(Pt-24)
22	Aluminum(asAl)	mg/l	0.02	0.3	ND	APHA 22 nd Ed3020 B / 3021 B (AAS) / IS3025 (pt-55)
24	Conductivityat25°C	mS	Not Specified	NotSpecified	247	APHA 2510
25	Taste	-	Agreeable	Agreeable	Agreeable	IS:3025(Pt-8)
23	BacteriologicalParame	ters				
1	Total Coliform		MPN/100ml	Shall Not Be Detectable	NotDetected(<2)	IS:1622-1981(Reaff:3003)
2	E.coli		E.coli/100ml	Shall Not Be Detectable	Absent	IS:1622-1981(Reaff.3003)





Report Code: W-071223-01 (Page- 1 of 2)

Issue Date: 12/12/2023

TEST REPORT

Water Sample Analysis

Report Code: W-071223-01

Issue To

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Received On

05/12/2023

Sample Drawn By

ITS Representative

Sample Description

Raw Water Storage Tank

Sample Drawn On

07/12/2023

Sample Quantity

4.0 Liter Plastic Bottle & 500ml in Glass Bottle.

Analysis Duration

07/12/2023 To 12/12/2023

C NI-	D	Limits (as per IS:10500-2018) Res				
S.No.	Parameters	Units	Desirable Limit	Permissible Limit	Results	Test Method
1	Color	Hazen	5	15	<1.0	IS:3025(Pt-4)
2	Odour	-	Agreeable	Agreeable	Agreeable	IS:3025(Pt-5)
3	Turbidity	NTU	1	5	<1.0	IS:3025(Pt-10)
4	pH	-	6.5-8.5	No Relaxation	7.41	IS:3025(Pt-12)
5	Total Hardness (as CaCO3)	mg/l	200	600	68	IS:3025(Pt-21)
6	Iron (as Fe)	mg/l	1.0	No Relaxation	< 0.05	APHA22ndEd.,3120
7	Chlorides (as Cl)	mg/l	250	1000	20.2	IS:3025(Pt-32)
8	Fluoride (as F)	mg/l	1	1.5	< 0.1	APHA22 nd Ed.,4500 F (D)
9	TDS	mg/l	500	2000	156	IS:3025(Pt-16)
10	Calcium (as Ca ²⁺)	mg/l	75	200	15.2	IS:3025(Pt-40)
12	Magnesium (as Mg ²⁺)	mg/l	30	100	7.33	APHA22ndEd.,3500- Mg (B)
12	Sulphate (as SO4)	mg/l	200	400	13.28	IS:3025(Pt-24)
13	Free Residual Chlorine	mg/l	0.2	1	Nil	IS:3025(Pt-26)

the samples tested in our laboratory. 2. Samples will destroyed as per quality policy. ort should be communicated in writing within 7 days. is limited to invoiced amount.



Report Code: W-071223-01 (Page- 2 of 2)

2	E.coli		E.coli/100ml	Shall Not Be Detectable	Absent	IS:1622-1981(Reaff.2003)
1	Total Coliform		MPN/100m1	Shall Not Be Detectable	NotDetected(<2)	IS:1622-1981(Reaff.2003)
	BacteriologicalParamet	ers				
25	Taste	-	Agreeable	Agreeable	Agreeable	IS:3025(Pt-8)
24	Conductivityat25°C	mS	Not Specified	NotSpecified	237	APHA 2510
23	Aluminum(asAl)	mg/l	0.02	0.2	ND	APHA 22 nd Ed3120 B / 3121 B (AAS) / IS3025 (pt-55)
22	Alkalinity(asCaCO ₃)	mg/l	191	600	70	IS:3025(Pt-23)
21	Chromium(asCr ⁶⁺)	mg/l	0.04	NoRelaxation	ND	IS:3025(Pt-52)
20	Nickel(asNi)	mg/l	0.03	NoRelaxation	ND	APHA 3121 (B)
19	Zinc(asZn)	mg/l	5	15	ND	APHA 22 nd Ed., 3120 B/ 3121 B (AAS)
18	Lead(asPb)	mg/l	0.01	NoRelaxation	ND	APHA 22 nd Ed., 3120 B / 3121 BAAS
17	Cyanide(asCN)	mg/l	0.05	NoRelaxation	ND	APHA 22nd Ed., 4500CN
16	Arsenic(asAs)	mg/l	0.01	0.05	ND	APHA 22 nd Ed., 3120 B / 3124, AAS- VGA
15	Cadmium(asCd)	mg/l	0.002	NoRelaxation	ND	APHA 22 nd Ed., 3120 B / 3121 B (AAS)
14	Copper (as Cu)	mg/l	0.05	1.5	ND	APHA22 nd Ed.,3120B/3121 B(AAS)
	0 (0)					ie. 47-071225-01 (Fage- 2



^{1.} Test reports are valid only for the samples tested in our laboratory. 2. Samples will destroyed as per quality policy.
3. Any complaints about the report should be communicated in writing within 7 days.
4. Total liability or our laboratory is limited to invoiced amount.



TEST REPORT TEST REPORT

Report Code: W-070223-01 (Page- | of 2)

Water Sample Analysis

Report Code: W-070223-01

Issue Date: 11/11/2023

Issue To

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

SAMPLING & ANALYSIS DATA

Sample Received On

05/11/2023

Sample Drawn By

ITS Representative

Sample Description

Raw Water Storage Tank

Sample Drawn On

07/11/2023

Sample Quantity

4.0 Liter Plastic Bottle & 500ml in Glass Bottle.

Analysis Duration

07/11/2023 To 11/11/2023

C No	Parameters	Timber.		imits 5:10500-2018)		
5.110.	rarameters	Units	Desirable Limit	Permissible Limit	Results	Test Method
1	Color	Hazen	5	15	<1.0	IS:3025(Pt-4)
2	Odour	-	Agreeable	Agreeable	Agreeable	IS:3025(Pt-5)
3	Turbidity	NTU	1	5	<1.0	IS:3025(Pt-10)
4	pH	-	6.5-8.5	No Relaxation	7.43	IS:3025(Pt-11)
5	Total Hardness (as CaCO3)	mg/l	200	600	69	IS:3025(Pt-21)
6	Iron (as Fe)	mg/l	1.0	No Relaxation	< 0.05	APHA22 nd Ed.,3120
7	Chlorides (as Cl)	mg/l	250	1000	20.0	IS:3025(Pt-32)
8	Fluoride (as F)	mg/l	1	1.5	<0.1	APHA22 nd Ed.,4500 F (D)
9	TDS	mg/l	500	2000	154	IS:3025(Pt-16)
10	Calcium (as Ca ²⁻)	mg/l	75	200	15.2	IS:3025(Pt-40)
11	Magnesium (as Mg ²)	mg/l	30	100	7.33	APHA22 nd Ed.,3500- Mg (B)
12	Sulphate (as SO4)	mg/l	200	400	13.28	IS:3025(Pt-24)
13	Free Residual Chlorine	mg/l	0.2	1	Nil	IS:3025(Pt-26)





2	E.coli		E.coli/100ml	Shall Not Be Detectable	Absent	IS:1622-1981(Reaff,2003)
1	Total Coliform		MPN/100ml	Shall Not Be Detectable	NotDetected(<2)	IS:1622-1981(Reaff.2003)
	BacteriologicalParamet	ers			~	
25	Taste	-	Agreeable	Agreeable	Agreeable	IS:3025(Pt-8)
24	Conductivityat25°C	mS	Not Specified	NotSpecified	236	APIIA 2510
23	∆luminum(as∆l)	mg/l	0.02	0.2	ND	APHA 22 nd Ed3120 B / 3111 B (AAS) / IS3025 (pt-55)
22	Alkalinity (asCaCO ₃)	mg/l	191	600	70	IS:3025(Pt-23)
21	Chromium(asCr ^{6*})	mg/l	0.04	NoRelaxation	ND	IS:3025(Pt-52)
20	Nickel(asNi)	mg/l	0.03	NoRelaxation	ND	APHA 3111 (B)
19	Zinc(asZn)	mg/l	5	15	ND	APHA 22 nd Ed., 3120 B/ 3111 B (AAS)
18	Lead(asPb)	mg/l	0.01	NoRelaxation	ND	APHA 22 nd Ed., 3120 B / 3111 BAAS
17	Cyanide(asCN)	mgЛ	0.05	NoRelaxation	ND	APHA 22 nd Ed., 4500CN
16	Arsenic(asAs)	mg/l	0.01	0.05	ND	APHA 22 nd Ed., 3120 B / 3114, AAS- VGA
15	Cadmium(asCd)	mg/l	0.002	NoRelaxation	ND	APHA 22 nd Ed., 3120 B / 3111 B (AAS)
14	Copper (as Cu)	mg/l	0.05	1.5	ND	APHA22 nd Ed.,3120B/3111 B(AAS)
					Report Cod	le: W-070223-01 (Page- 2 of 2)

Terms & Conditions:

1. Test reports are valid only for the samples tested in our laboratory, 2. Samples will destroyed as per quality policy.

3. Any complaints about the report should be communicated in writing within 7 days.

4. Total liability or our laboratory is limited to invoiced amount.



Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

Report Code: SW-070224-017, Page 1 of 2

TEST REPORT

Solid Waste Sample analysis

Report Code: SW: 070224-017 Issue Date: 12/02/2024

Issued To

: M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

Sample Received On Sample Drawn On

: 07/02/2024 05/02/2024

: 12/02/2024

Sample Drawn By Sampling Location

ITS Representative : Slag Dumping Yard

Sample Description Job Start Date Job Completion date : Solid Waste (Induction Furnace Slag) : 07/02/2024

TEST RESULT

S. No.	Test Parameters	Protocol By TCLP	Results	Requirement / Limit Per EPA Chapter-	
				Min.	Max.
1.	1.3Dichloroethane	EPA 5030C	BDL(DL:0.1µg/l)	-	0.5mg/l
2.	2,4-D	EPA8151A	BDL(DL:0.1µg/l	-	10.0mg/l
3.	2,4,6Trichlorophenol	EPA8041A	BDL(DL:0.1µg/l	-	2.0mg/l
4.	Benzene	EPA5030C	BDL(DL:0.1µg/l	-	0.5mg/1
5.	Chloro Benzene	EPA5030C	4.6	-	100.0mg/l
6.	Carbon Tetra Chloride	EPA5030C	BDL(DL:0.1µg/l	-	0.5mg/l
7.	Chlorodane	EPA8021A	BDL(DL:0.1µg/l	-	0.03mg/l
8.	Chloroform	EPA5030C	BDL(DL:0.1µg/l	-	6.0mg/l
9.	1,1 Dichloroethylene	EPA5030C	BDL(DL:0.1µg/l	-	0.07mg/l
10.	1,4Dichlorobenzene	EPA 5030C	BDL(DL:0.1µg/l	-	7.5mg/l
02.	2,4,5 TP (Silvex)	By GC-MS(DCM-Etraction)	Absent	-	1.0mg/l
02.	2,4 Dinitrotoluene	By GC-MS(DCM-Etraction)	Absent	-	0.13mg/l
13.	Cresol (Total)	EPA8041A	BDL(DL:0.1µg/l	-	200.0mg/l
14.	Hexachlorobutadiene	EPA5030C	BDL(DL:0.1µg/l	-	0.5mg/1
15.	Hexachloroethane	By GC-MS(DCM-Etraction)	Absent	-	3.0mg/1
16.	Hexachlorobenzene	EPA8021A	BDL(DL:0.1µg/l	-	0.13mg/l
17.	m-Cresol	EPA8041A	BDL(DL:0.1µg/l	-	200.0mg/l
18.	Methoxychlor	EPA8021A	BDL(DL:0.1µg/l		10.0mg/l
19. 1	Methyl Ethyle Ketone	By GC-MS(DCM-Etraction)	Absent	-	200.0mg/l

CHECKEDB

AUTHOR IGNATORY

- ms & Conditions : est reports are valid only for the samples tested in our laboratory. 2. Samples will destroyed as per quality policy ny complaints about the report should be communicated in writing within 7 days.
- Any complaints about the report should be communicated in Total liability or our laboratory is limited to invoiced amount.



Report Code: SW-070224-017, Page 2 of

20.	o-Cresol	EPA8041A	BDL(DL:0.1µg/l)	-	200.0mg/l
21.	p-Cresol	EPA8041A	BDL(DL:0.1µg/l)	-	200.0mg/l
22.	Pyridine	By GC-MS(DCM-Etraction)	Absent	-	5.0mg/l
24.	Tetrachloroethylene	EPA5030C	BDL(DL:0.1µg/l)	-	0.6mg/l
24.	Toxaphene	By GC-MS(DCM-Etraction)	Absent	-	0.5mg/l
25.	Trichloroethylene	EPA5030C	BDL(DL:0.1µg/l)	-	0.5mg/l
26.	2,4,5Trichlorophenol	EPA8021A	BDL(DL:0.1µg/l)	-	400.0mg/l
27.	Barium (as Ba)	EPA200.8	8.5	-	100.0mg/l
28.	Cadmium (as Cd)	EPA200.8	BDL(DL:0.1µg/l)	-	1.0mg/l
29.	Total Chromium (as Cr)	EPA200.8	0.33	-	5.0mg/l
30.	Lead (as Pb)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
31.	Arsenic (as As)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
32.	Vinyl Chloride	EPA5030C	BDL(DL:0.1µg/l)	-	0.3mg/l
33.	Mercury (as Hg)	EPA200.8	BDL(DL:0.1µg/l)	-	0.3mg/l
34.	Selenium (as Se)	EPA200.8	BDL(DL:0.1µg/l)	-	1.0mg/l
35.	Silver (as Ag)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
36.	Copper (as Cu)	EPA200.8	0.32 mg/l	-	-
37.	Hexavalent Chromium (as Cr ⁺⁶)	By GC-MS/EPA	BDL(DL:0.5mg/kg)	-	-
38.	Endrin	EPA8021A	BDL(DL:0.1µg/l)	-	0.02mg/l
39.	Heptachlor	EPA8021A	BDL(DL:0.1µg/l)	-	0.002mg/l
40.	Lindane	EPA8021A	BDL(DL:0.1µg/l)	-	0.4mg/l
41.	Nitrobenzene	By GC-MS (Purge & Trap)	Absent	-	2.0mg/l



Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

Report Code: SW-071223-01, Page 1 of 2

TEST REPORT

Solid Waste Sample analysis

Report Code: SW: 071223-01

Issue Date: 12/12/2023

Issued To

: M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

Sample Received On Sample Drawn On

Sample Drawn By Sampling Location

Sample Description

Job Start Date Job Completion date : 07/12/2023 : 05/12/2023

: ITS Representative : Slag Dumping Yard

: Solid Waste (Induction Furnace Slag)

: 07/12/2023 : 12/12/2023

TEST RESULT

S. No.	Test Parameters	Parameters Protocol By TCLP		Requirement / Limit A Per EPA Chapter- 7	
				Min.	Max.
1.	1.2Dichloroethane	EPA 5030C	BDL(DL:0.1µg/l)	-	0.5mg/l
2.	2,4-D	EPA8151A	BDL(DL:0.1µg/l	-	10.0mg/l
3.	2,4,6Trichlorophenol	EPA8041A	BDL(DL:0.1µg/l	-	2.0mg/l
4.	Benzene	EPA5030C	BDL(DL:0.1µg/l	-	0.5mg/l
5.	Chloro Benzene	EPA5030C	4.7	-	100.0mg/l
6.	Carbon Tetra Chloride	EPA5030C	BDL(DL:0.1µg/l	-	0.5mg/I
7.	Chlorodane	EPA8121A	BDL(DL:0.1µg/l	-	0.03mg/l
8.	Chloroform	EPA5030C	BDL(DL:0.1µg/l	-	6.0mg/l
9.	1,1Dichloroethylene	EPA5030C	BDL(DL:0.1µg/l	-	0.07mg/l
10.	1,4Dichlorobenzene	EPA 5030C	BDL(DL:0.1µg/l	-	7.5mg/l
12.	2,4,5 TP (Silvex)	By GC-MS(DCM-Etraction)	Absent	-	1.0mg/l
12.	2.4 Dinitrotoluene	By GC-MS(DCM-Etraction)	Absent	-	0.13mg/l
13.	Cresol (Total)	EPA8041A	BDL(DL:0.1µg/l	-	200.0mg/l
14.	Hexachlorobutadiene	EPA5030C	BDL(DL:0.1µg/l	-	0.5mg/l
15.	Hexachloroethane	By GC-MS(DCM-Etraction)	Absent	-	3.0mg/l
16.	Hexachlorobenzene	EPA8121A	BDL(DL:0.1µg/l	-	0.13mg/l
17.	m-Cresol	EPA8041A	BDL(DL:0.1µg/l	-	200.0mg/l
18.	Methoxychlor	EPA8121A	BDL(DL:0.1µg/l		/10.0mg/l
19.	Methyl Ethyle Ketone	By GC-MS(DCM-Etraction)	Absent	-	200.0mg/l
				1	



Report Code: SW-071223-01, Page 2 of 2

20.	o-Cresol	EPA8041A	BDL(DL:0.1µg/l)	-	200.0mg/
21.	p-Cresol	EPA8041A	BDL(DL:0.1µg/l)		200.0mg/
22.	Pyridine	By GC-MS(DCM-Etraction)	Absent	-	5.0mg/l
23.	Tetrachloroethylene	EPA5030C	BDL(DL:0.1µg/l)	-	0.7mg/l
24.	Toxaphene	By GC-MS(DCM-Etraction)	Absent	-	0.5mg/l
25.	Trichloroethylene	EPA5030C	BDL(DL:0.1µg/l)	-	0.5mg/l
26.	2,4,5Trichlorophenol	EPA8121A	BDL(DL:0.1µg/l)	_	400.0mg/
27.	Barium (as Ba)	EPA200.8	8.5	-	100.0mg/
28.	Cadmium (as Cd)	EPA200.8	BDL(DL:0.1µg/l)	-	1.0mg/l
29.	Total Chromium (as Cr)	EPA200.8	0.33	-	5.0mg/l
30.	Lead (as Pb)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
31.	Arsenic (as As)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
32.	Vinyl Chloride	EPA5030C	BDL(DL:0.1µg/l)	-	0.2mg/l
33.	Mercury (as Hg)	EPA200.8	BDL(DL:0.1µg/l)	-	0.2mg/l
34.	Selenium (as Se)	EPA200.8	BDL(DL:0.1µg/l)	-	1.0mg/l
35.	Silver (as Ag)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
36.	Copper (as Cu)	EPA200.8	0.22 mg/l	-	
37.	Hexavalent Chromium (as Cr ⁺⁶)	By GC-MS/EPA	BDL(DL:0.5mg/kg)	÷	-
38.	Endrin	EPA8121A	BDL(DL:0.1µg/l)	-	0.02mg/l
39.	Heptachlor	EPA8121A	BDL(DL:0.1µg/l)	-	0.012mg/
40.	Lindane	EPA8121A	BDL(DL:0.1µg/l)	-	0.4mg/l
41.	Nitrobenzene	By GC-MS (Purge & Trap)	Absent	-	2.0mg/l





Report Code: SW-070223-01, Page 1 of 2

TEST REPORT

Solid Waste Sample analysis

Report Code: SW: 070223-01

Issue Date: 11/11/2023

Issued To

: M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

Sample Received On

Sample Drawn On

Sample Drawn By Sampling Location

Sample Description Job Start Date

Job Completion date

07/11/2023 05/11/2023

ITS Representative

Slag Dumping Yard

: Solid Waste (Induction Furnace Slag)

: 07/11/2023 : 11/11/2023

TEST RESULT

S. No.	Test Parameters	Protocol By TCLP	Results	Requirement / Limit Per EPA Chapter-	
				Min.	Max.
1.	1.2Dichloroethane	EPA 5030C	BDL(DL:0.1µg/l)	-	0.5mg/l
2.	2.4-D	EPA8151A	BDL(DL:0.1µg/l	-	10.0mg/1
3.	2.4.6Trichlorophenol	EPA8041A	BDL(DL:0.1µg/l	-	2.0mg/l
4.	Benzene	EPA5030C	BDL(DL:0.1µg/l	-	0.5mg/l
5.	Chloro Benzene	EPA5030C	4.6		100.0mg/l
6.	Carbon Tetra Chloride	EPA5030C	BDL(DL:0.1µg/I	-	0.5mg/I
7.	Chlorodane	EPA8111A	BDL(DL:0.1µg/l	- 1	0.03 mg/l
8.	Chloroform	EPA5030C	BDL(DL:0.1µg/l	-	6.0mg/l
9.	1.1 Dichloroethylene	EPA5030C	BDL(DL:0.1µg/1	-	0.07mg/l
10.	1,4Dichlorobenzene	EPA 5030C	BDL(DL:0.1µg/l	-	7.5mg/l
11.	2.4.5 TP (Silvex)	By GC-MS(DCM-Etraction)	Absent		1.0mg/l
12.	2.4 Dinitrotoluene	By GC-MS(DCM-Etraction)	Absent	-	0.13mg/l
13.	Cresol (Total)	EPA8041A	BDL(DL:0.1µg/l		200,0mg/l
14.	Hexachlorobutadiene	EPA5030C	BDL(DL:0.1µg/l	-	0.5mg/l
15.	Hexachloroethane	By GC-MS(DCM-Etraction)	Absent		3.0mg/I
16.	Hexachlorobenzene	EPA8111A	BDL(DL:0.1µg/l	-	0.13mg/l
17.	m-Cresol	EPA8041A	BDL(DL:0.1µg/l	-	200.0mg/l
18.	Methoxychlor	EPA8111A	BDL(DL:0.1μg/1		10,0mg/I
19.	Methyl Ethyle Ketone	By GC-MS(DCM-Etraction)	Absent	-	200.0mg/l





Report Code: SW-070223-01, Page 2 of 2

20.	o-Cresol	EPA8041A	BDL(DL:0.1µg/l)		, ,
					200.0mg/
21.	p-Cresol	EPA8041A	BDL(DL:0.1µg/l)	-	200.0mg/
22.	Pyridine	By GC-MS(DCM-Etraction)	Absent	-	5.0mg/1
23.	Tetrachloroethylene	EPA5030C	BDL(DL:0.1μg/l)	н.	0.7mg/l
24.	Toxaphene	By GC-MS(DCM-Etraction)	Absent	-	0.5mg/l
25.	Trichloroethylene	EPA5030C	BDL(DL:0.1µg/l)	-	0.5mg/l
26.	2.4.5Trichlorophenol	EPA8111A	BDL(DL:0.1µg/l)	-	400.0mg/
27.	Barium (as Ba)	EPA200.8	8.6	-	100.0mg/
28.	Cadmium (as Cd)	EPA200.8	BDL(DL:0.1µg/l)	-	1.0mg/l
29.	Total Chromium (as Cr)	EPA200.8	0.32	-	5.0mg/l
30.	Lead (as Pb)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
31.	Arsenic (as As)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
32.	Vinyl Chloride	EPA5030C	BDL(DL:0.1µg/l)	-	0.2mg/l
33.	Mercury (as Hg)	EPA200,8	BDL(DL:0.1µg/l)	-	0.2mg/l
34.	Selenium (as Se)	EPA200,8	BDL(DL:0.1µg/l)	-	1.0mg/l
35.	Silver (as Ag)	EPA200.8	BDL(DL:0.1µg/l)		5.0mg/1
36.	Copper (as Cu)	EPA200.8	0.22 mg/l	-	1 .
37.	Hexavalent Chromium (as Cr ⁻⁶)	By GC-MS/EPA	BDL(DL:0.5mg/kg)	-	-
38.	Endrin	EPA8111A	BDL(DL:0.1µg/l)	-	0.02mg/l
39.	Heptachlor	EPA8111A	BDL(DL:0,1µg/l)		0.011mg/
40.	Lindane	EPA8111A	BDL(DL:0.1µg/l)	-	0.4mg/l
41.	Nitrobenzene	By GC-MS (Purge & Trap)	Absent	-	2.0mg/l

Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

Report Code: SW-070224-018, Page 1 of 2

TEST REPORT

Solid Waste Sample analysis

Report Code: SW: 070224-018

Issue Date: 12/02/2024

Issued To

: M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

Sample Received On

Sample Drawn On

Sample Drawn By Sampling Location Sample Description

Job Start Date

Job Completion date

: 07/02/2024 : 05/02/2024

: ITS Representative

: Slag Dumping Yard : Solid Waste (CPP)

: 07/02/2024

: 12/02/2024

TEST RESULT

S. No.	Test Parameters	Protocol By TCLP	Results	Requirement / Limit Per EPA Chapter-	
				Min.	Max.
1.	1.3Dichloroethane	EPA 5030C	BDL(DL:0.1µg/l)	-	0.5mg/l
2.	2,4-D	EPA8151A	BDL(DL:0.1µg/l	-	10.0mg/l
3.	2,4,6Trichlorophenol	EPA8041A	BDL(DL:0.1µg/l	-	2.0mg/l
4.	Benzene	EPA5030C	BDL(DL:0.1µg/l	-	0.5mg/l
5.	Chloro Benzene	EPA5030C	6.4	-	100.0mg/l
6.	CarbonTetraChloride	EPA5030C	BDL(DL:0.1µg/l	-	0.5mg/l
7.	Chlorodane	EPA8021A	BDL(DL:0.1µg/l	-	0.03mg/l
8.	Chloroform	EPA5030C	BDL(DL:0.1µg/l	-	6.0mg/l
9.	1,1Dichloroethylene	EPA5030C	BDL(DL:0.1µg/l	-	0.07mg/l
10.	1,4Dichlorobenzene	EPA 5030C	BDL(DL:0.1µg/l	-	7.5mg/l
02.	2,4,5 TP (Silvex)	By GC-MS(DCM-Etraction)	Absent	-	1.0mg/1
02.	2,4 Dinitrotoluene	By GC-MS(DCM-Etraction)	Absent	-	0.13mg/l
13.	Cresol (Total)	EPA8041A	BDL(DL:0.1µg/l	-	200.0mg/
14.	Hexachlorobutadiene	EPA5030C	BDL(DL:0.1µg/l	-	0.5mg/l
15.	Hexachloroethane	By GC-MS(DCM-Etraction)	Absent	-	3.0mg/l
16.	Hexachlorobenzene	EPA8021A	BDL(DL:0.1µg/l	-	0.13mg/l
17.	m-Cresol	EPA8041A	BDL(DL:0.1µg/l	-	200.0mg/
18.	Methoxychlor	EPA8021A	BDL(DL:0.1µg/l		10.0mg/l
19.1	Methyl Ethyle Ketone	By GC-MS(DCM-Etraction)	Absent	-	200.0mg/

AUTHO



Report Code: SW-070224-018, Page 2 of 2

20.	o-Cresol	EPA8041A	BDL(DL:0.1µg/l)	-	200.0mg/l
21.	p-Cresol	EPA8041A	BDL(DL:0.1µg/l)	-	200.0mg/l
22.	Pyridine	By GC-MS(DCM-Etraction)	Absent	-	5.0mg/l
24.	Tetrachloroethylene	EPA5030C	BDL(DL:0.1µg/l)	-	0.6mg/l
24.	Toxaphene	By GC-MS(DCM-Etraction)	Absent	-	0.5mg/l
25.	Trichloroethylene	EPA5030C	BDL(DL:0.1µg/l)	-	0.5mg/1
26.	2,4,5Trichlorophenol	EPA8021A	BDL(DL:0.1µg/l)	-	400.0mg/l
27.	Barium (as Ba)	EPA200.8	8.0	-	100.0mg/
28.	Cadmium (as Cd)	EPA200.8	BDL(DL:0.1µg/l)	-	1.0mg/l
29.	Total Chromium (as Cr)	EPA200.8	0.37	-	5.0mg/l
30.	Lead (as Pb)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
31.	Arsenic (as As)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
32.	Vinyl Chloride	EPA5030C	BDL(DL:0.1µg/l)	-	0.3mg/l
33.	Mercury (as Hg)	EPA200.8	BDL(DL:0.1µg/l)	-	0.3mg/l
34.	Selenium (as Se)	EPA200.8	BDL(DL:0.1µg/l)	-	1.0mg/l
35.	Silver (as Ag)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
36.	Copper (as Cu)	EPA200.8	0.38 mg/l	-	-
37.	Hexavalent Chromium (as Cr ⁻⁶)	By GC-MS/EPA	BDL(DL:0.5mg/kg)	-	•



Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

Report Code: SW-071223-02, Page 1 of 2

TEST REPORT

Solid Waste Sample analysis

Report Code: SW: 071223-02

Issue Date: 12/12/2023

Issued To

: M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

Sample Received On Sample Drawn On

Sample Drawn By Sampling Location

Sample Description Job Start Date

Job Completion date

: 07/12/2023

: 05/12/2023

: ITS Representative : Slag Dumping Yard : Solid Waste (CPP)

: 07/12/2023 : 12/12/2023

TEST RESULT

S. No.	Test Parameters	Protocol By TCLP	Results	Requirement / Limit A Per EPA Chapter- 7	
	1.2Dichloroethane EPA 5030C BDL(DL:0.1µg/l) 2,4-D EPA8151A BDL(DL:0.1µg/l) 2,4,6Trichlorophenol EPA8041A BDL(DL:0.1µg/l) Benzene EPA5030C BDL(DL:0.1µg/l) Chloro Benzene EPA5030C BDL(DL:0.1µg/l) Chlorodane EPA5030C BDL(DL:0.1µg/l) Chloroform EPA5030C BDL(DL:0.1µg/l) Chloroform EPA5030C BDL(DL:0.1µg/l) 1,1Dichloroethylene EPA5030C BDL(DL:0.1µg/l) 1,4Dichlorobenzene EPA5030C BDL(DL:0.1µg/l) 2,4,5 TP (Silvex) By GC-MS(DCM-Etraction) Absent 2,4 Dinitrotoluene By GC-MS(DCM-Etraction) Absent Cresol (Total) EPA8041A BDL(DL:0.1µg/l) Hexachlorobutadiene EPA5030C BDL(DL:0.1µg/l) Hexachlorobutadiene EPA5030C BDL(DL:0.1µg/l) Hexachlorobutadiene EPA8041A BDL(DL:0.1µg/l) Hexachloroethane By GC-MS(DCM-Etraction) Absent EPA8121A BDL(DL:0.1µg/l) m-Cresol EPA8041A BDL(DL:0.1µg/l)	Min.	Max.		
1.	1.2Dichloroethane	EPA 5030C	BDL(DL:0.1µg/l)	-	0.5mg/l
2.	2,4-D	EPA8151A	BDL(DL:0.1µg/l	-	10.0mg/l
3.	2,4,6Trichlorophenol	EPA8041A	BDL(DL:0.1µg/l	-	2.0mg/l
4.	Benzene	EPA5030C	BDL(DL:0.1µg/l	-	0.5mg/l
5.	Chloro Benzene	EPA5030C		-	100.0mg/l
6.	CarbonTetraChloride		BDL(DL:0.1µg/l	-	0.5mg/l
7.	Chlorodane	EPA8121A		-	0.03mg/l
8.	Chloroform	EPA5030C	BDL(DL:0.1µg/l	-	6.0mg/l
9.	1,1Dichloroethylene	EPA5030C		-	0.07mg/l
10.	1.4Dichlorobenzene	EPA 5030C	BDL(DL:0.1µg/l	-	7.5mg/l
12.	2,4,5 TP (Silvex)	By GC-MS(DCM-Etraction)		-	1.0mg/l
12.	2,4 Dinitrotoluene	By GC-MS(DCM-Etraction)	Absent	-	0.13mg/l
13.	Cresol (Total)	EPA8041A	BDL(DL:0.1µg/l	-	200.0mg/l
14.	Hexachlorobutadiene	EPA5030C	BDL(DL:0.1µg/l		0.5mg/l
15.	Hexachloroethane	By GC-MS(DCM-Etraction)		-	3.0mg/l
16.	Hexachlorobenzene	EPA8121A	BDL(DL:0.1µg/l		0.13mg/l
17.	m-Cresol	EPA8041A		-	200.0mg/l
18.	Methoxychlor	EPA8121A	BDL(DL:0.1µg/l		10.0mg/l
19.	Methyl Ethyle Ketone	By GC-MS(DCM-Etraction)	Absent	-	200.0mg/l

3. Any complaints about the report should be communicated in writing within 7 days.

4. Total liability or our laboratory is limited to invoiced amount.



Report Code: SW-071223-02, Page 2 of 2

10000					-,
20.	o-Cresol	EPA8041A	BDL(DL:0.1µg/l)	-	200.0mg/l
21.	p-Cresol	EPA8041A	BDL(DL:0.1µg/l)	-	200.0mg/l
22.	Pyridine	By GC-MS(DCM-Etraction)	Absent	_	5.0mg/l
23.	Tetrachloroethylene	EPA5030C	BDL(DL:0.1µg/l)	-	0.7mg/l
24.	Toxaphene	By GC-MS(DCM-Etraction)	Absent		0.5mg/l
25.	Trichloroethylene	EPA5030C	BDL(DL:0.1µg/l)	-	0.5mg/l
26.	2.4,5Trichlorophenol	EPA8121A	BDL(DL:0.1µg/l)	-	400.0mg/l
27.	Barium (as Ba)	EPA200.8	8.0	-	100.0mg/l
28.	Cadmium (as Cd)	EPA200.8	BDL(DL:0.1μg/l)	-	1.0mg/l
29.	Total Chromium (as Cr)	EPA200.8	0.37		5.0mg/l
30.	Lead (as Pb)	EPA200.8	BDL(DL:0.1µg/l)		5.0mg/1
31.	Arsenic (as As)	EPA200.8	BDL(DL:0.1µg/l)	_	5.0mg/l
32.	Vinyl Chloride	EPA5030C	BDL(DL:0.1µg/l)	_	0.2mg/l
33.	Mercury (as Hg)	EPA200.8	BDL(DL:0.1µg/l)	-	0.2mg/l
34.	Selenium (as Se)	EPA200.8	BDL(DL:0.1µg/l)	-	1.0mg/l
35.	Silver (as Ag)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
36.	Copper (as Cu)	EPA200.8	0.28 mg/l	-	, , , ,
37.	Hexavalent Chromium (as Cr ⁺⁶)	By GC-MS/EPA	BDL(DL:0.5mg/kg)	-	-

- Test reports are valid only for the samples tested in our laboratory. 2. Samples will destroyed as per quality policy.
 Any complaints about the report should be communicated in writing within 7 days.
 Total liability or our laboratory is limited to invoiced amount.

Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

Report Code: SW-070223-02, Page 1 of 2

TEST REPORT

Solid Waste Sample analysis

Report Code: SW: 070223-02

Issue Date: 11/11/2023

Issued To

: M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

Sample Received On

Sample Drawn On

Sample Drawn By

Sampling Location Sample Description

Job Start Date

Job Completion date

: 07/04/2023

05/04/2023

ITS Representative

: Slag Dumping Yard

: Solid Waste (CPP)

07/11/2023

11/11/2023

TEST RESULT

S. No.	Test Parameters	Protocol By TCLP	Results	Requirement / Limit A Per EPA Chapter- 7		
				Min.	Max.	
1.	1,2Dichloroethane	EPA 5030C	BDL(DL:0.1µg/l)	-	0.5mg/l	
2.	2.4-D	EPA8151A	BDL(DL:0.1µg/l		10.0mg/l	
3.	2,4,6Trichlorophenol	EPA8041A	BDL(DL:0.1µg/l	-	2.0mg/l	
4.	Benzene	EPA5030C	BDL(DL:0.1µg/I	-	0.5mg/l	
5.	Chloro Benzene	EPA5030C	6.3		100.0mg/l	
6.	CarbonTetraChloride	EPA5030C	BDL(DL:0.1µg/I	-	0.5mg/l	
7.	Chlorodane	EPA8IIIA	BDL(DL:0.1µg/I	-	0.03 mg/l	
8.	Chloroform	EPA5030C	BDL(DL:0.1µg/l		6.0mg/l	
9.	1.1Dichloroethylene	EPA5030C	BDL(DL:0.1µg/l	-	0.07mg/l	
10.	1.4Dichlorobenzene	EPA 5030C	BDL(DL:0.1µg/l	-	7.5mg/l	
11.	2.4.5 TP (Silvex)	By GC-MS(DCM-Etraction)	Absent	-	1.0mg/l	
12.	2.4 Dinitrotoluene	By GC-MS(DCM-Etraction)	Absent	-	0.13mg/l	
13.	Cresol (Total)	EPA8041A	BDL(DL:0.1µg/1	-	200.0mg/l	
14.	Hexachlorobutadiene	EPA5030C	BDL(DL:0.1µg/l		0.5mg/l	
15.	Hexachloroethane	By GC-MS(DCM-Etraction)	Absent	-	3.0mg/I	
16.	Hexachlorobenzene	EPA8111A	BDL(DL:0.1µg/l	-	0.13mg/l	
17.	m-Cresol	EPA8041A	BDL(DL:0.1µg/l		2(i(),()mg/l	
18.	Methoxychlor	EPA8111A	BDL(DL:0.1µg/1		10.0mg/l	
19.	Methyl Ethyle Ketone	By GC-MS(DCM-Etraction)	Absent	-	200,0mg/l	







Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

Report Code: SW-070223-02, Page 2 of 2

20.	o-Cresol	EPA8041A	BDL(DL:0.1µg/l)	-	200.0mg/l
21.	p-Cresol	EPA8041A	BDL(DL:0.1µg/l)	-	200.0mg/l
22.	Pyridine	By GC-MS(DCM-Etraction)	Absent		5.0mg/l
23.	Tetrachloroethylene	EPA5030C	BDL(DL:0.1µg/l)	-	0.7mg/l
24.	Toxaphene	By GC-MS(DCM-Etraction)	Absent	-	0.5mg/l
25.	Trichloroethylene	EPA5030C	BDL(DL:0.1µg/l)	-	0.5mg/l
26.	2.4.5Trichlorophenol	EPA8111A	BDL(DL:0.1µg/l)	-	400.0mg/l
27.	Barium (as Ba)	EPA200.8	8.0	/-	100.0mg/l
28.	Cadmium (as Cd)	EPA200.8	BDL(DL:0.1µg/l)		1.0mg/l
29.	Total Chromium (as Cr)	EPA200.8	0.35	+	5.0mg/l
30.	Lead (as Pb)	EPA200.8	BDL(DL:0,1µg/l)	-	5.0mg/l
31.	Arsenic (as As)	EPA200.8	BDL(DL:0.1µg/l)	-	5.0mg/l
32.	Vinyl Chloride	EPA5030C	BDL(DL:0.1µg/l)	-	0.2mg/l
33.	Mercury (as Hg)	EPA200.8	BDL(DL:0.1µg/l)		0.2mg/l
34.	Selenium (as Se)	EPA200.8	BDL(DL:0.1µg/l)	-	1.0mg/I
35.	Silver (as Ag)	EPA200.8	BDL(DL:0.1µg/l)		5.0mg/l
36.	Copper (as Cu)	EPA200.8	0.26 mg/l	-	-
37.	Hexavalent Chromium (as Cr *6)	By GC-MS/EPA	BDL(DL:0.5mg/kg)		-



Laboratory: A-114, Sector-80, Phase-II Noida, Gautam Budh Nagar - 201305, (U.P.) (An ISO 9001: 2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory) Website: www.itslab.in, Email: itlrclab@gmail.com, info@itslab.in, contact@itslab.in +91 9911659800, 9305780312, 09958849764

TEST REPORT

Ambient Noise Analysis

Report Code: N-070224-08

Issue Date: 12/02/2024

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur- 713215,

Paschim Bardhaman, West Bengal, India

Sample Drawn On Sample Drawn By

05/02/2024 To 06/02/2024

Sample Received On Sample description

ITS Representative 07/02/2024

Sampling Location

Ambient Noise Near Main Gate

Sampling Duration Analysis Duration

24 hours

: 07/02/2024 To 12/02/2024

		T	EST RESU	LTS		
S. No	Test Parameters	Results	sults Units	Requirement (as per CPCB Guidelines Limits indB(A) Leq		
1.	Equivalent Noise Level (6.0 Am To	55.3	dB(A)	Category of Area/ Zone	Day Time	Night Time
**	10.0 Pm)			Industrial	75	70
2.	Equivalent Noise Level (10.0 Pm To 6.0 Am)	38.3	dB(A)	Commercial Area	65	55
3.	Lmax	59.5	dB(A)	Residential Area	55	45
4.	Lmin	32.5	dB(A)	Silence Zone	50	40





Terms & Conditions:

1. Test reports are valid only for the samples tested in our laboratory. 2. Samples will destroyed as per quality policy.

3. Any complaints about the report should be communicated in writing within 7 days.

4. Total liability or our laboratory is limited to invoiced amount.



TEST REPORT

Ambient Noise Analysis

Report Code: N-071223-01

Issue Date: 12/12/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

Sample Drawn On

Sample Drawn By

05/12/2023 To 06/12/2023 ITS Representative

Sample Received On

Sample description

07/12/2023

Sampling Location

Ambient Noise

Near Main Gate

Sampling Duration

24 hours

Analysis Duration

07/12/2023 To 12/12/2023

		T	EST RESU	LTS				
S. No	Test Parameters	Results	Units	Requirement Lin	ment (as per CPCB Guidelin Limits indB(A) Leq			
1.	Equivalent Noise Level (6.0 Am To	55.3	dB(A)	Category of Area/ Zone	Day Time	Night Time		
	10.0 Pm)			Industrial	75	70		
	Equivalent Noise			Area				
2.	Level (10.0 Pm To 6.0 Am)	38.3	dB(A)	Commercial Area	65	55		
3.	Lmax	59.5	dB(A)	Residential Area	55	45		
4.	Lmin	32.5	dB(A)	Silence Zone	50	40		

laboratory. 2. Samples will destroyed as per quality policy. ad in writing within 7 days. unt.



TEST REPORT

Ambient Noise Analysis

Report Code: N-070223-01

Issue Date: 11/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

Sample Drawn On

05/11/2023 To 06/11/2023

Sample Drawn By

ITS Representative

Sample Received On Sample description

07/11/2023

Sampling Location

Ambient Noise Near Main Gate

Sampling Duration

24 hours

Analysis Duration

07/11/2023 To 11/11/2023

		T	EST RESU	LTS		
S. No	Test Parameters	Results	Units		(as per CPCB nits indB(A) Le	
	Equivalent Noise Level (6.0 Am To	55.2	dB(A)	Category of Area/Zone	Day Time	Night Time
	10.0 Pm)			Industrial	75	70
	Equivalent Noise			Area		
2.	Level (10.0 Pm To 6.0 Am)	38.3	dB(A)	Commercial Area	65	55
3.	Lmax	60.4	dB(A)	Residential Area	55	45
4.	Lmin	32.5	dB(A)	Silence Zone	50	40



TEST REPORT

Ambient Noise Analysis

Report Code: N-070224-09

Issue Date: 12/02/2024

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

Sample Drawn On

05/02/2024 To 06/02/2024

Sample Drawn By

ITS Representative

Sample Received On

07/02/2024

Sample description

Ambient Noise Near DRI Gate

Sampling Location Sampling Duration

24 hours

Analysis Duration

: 07/02/2024 To 12/02/2024

		T	EST RESU	LTS			
S. No	Test Parameters	(as per CPCB nits indB(A) Le					
Equivalent Noise Level (6.0 Am To			50.4	dB(A)	Category of Area/ Zone	Day Time	Night Time
	10.0 Pm)			Industrial	75	70	
	Equivalent Noise			Area			
2.	Level (10.0 Pm To 6.0 Am)	34.9	dB(A)	Commercial Area	65	55	
3.	Lmax	57.6	dB(A)	Residential Area	55	45	
4.	Lmin	30.0	dB(A)	Silence Zone	50	40	



complaints about the report should be communicated in writing within 7 days.

I liability or our laboratory is limited to invoiced amount.

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TEST REPORT

Ambient Noise Analysis

Report Code: N-121223-02

Issue Date: 12/12/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

Sample Drawn On

05/12/2023 To 06/12/2023

Sample Drawn By

ITS Representative

Sample Received On

12/12/2023

Sample description

Ambient Noise

Sampling Location

Near DRI Gate

Sampling Duration

24 hours

Analysis Duration

12/12/2023 To 12/12/2023

		T	EST RESU	LTS			
S. No	Test Parameters	Results	Units	Requirement (as per CPCB Guidel Limits indB(A) Leq			
Equivalent Noise Level (6.0 Am To	Equivalent Noise Level (6.0 Am To	50.4	dB(A)	Category of Area/ Zone	Day Time	Night Time	
	10.0 Pm)			Industrial	75	70	
	Equivalent Noise			Area			
2.	Level (10.0 Pm To 6.0 Am)	34.9	dB(A)	Commercial Area	65	55	
3.	Lmax	57.6	dB(A)	Residential Area	55	45	
4.	Lmin	30.0	dB(A)	Silence Zone	50	40	



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TEST REPORT

Ambient Noise Analysis

Report Code: N-110223-02

Issue Date: 11/11/2023

Issued To:

M/S. Shyam Steel Industries Ltd.

Raturia Industrial Area, Angadpur, Durgapur-713215,

Paschim Bardhaman, West Bengal, India

Sample Drawn On

05/11/2023 To 06/11/2023

Sample Drawn By

ITS Representative

Near DRI Gate

Sample Received On

11/11/2023

Sample description

Sampling Location

Ambient Noise

Sampling Duration

24 hours

Analysis Duration

11/11/2023 To 11/11/2023

		T	EST RESU	LTS		
S. No	Test Parameters	Results	Units	Requirement Lin		
1.	Equivalent Noise Level (6.0 Am To	51.6	dB(A)	Category of Area/ Zone	Day Time	Night Time
	10.0 Pm)			Industrial	75	70
	Equivalent Noise			Area		
2.	Level (10.0 Pm To 6.0 Am)	34.8	dB(A)	Commercial Area	65	55
3.	Lmax	57.3	dB(A)	Residential Area	55	45
4.	Lmin	30.0	dB(A)	Silence Zone	50	40

laboratory. 2. Samples will destroyed as per quality policy. ed in writing within 7 days.