

ELECTROSTEEL CASTINGS LIMITED

Vill : Kashberia, P. O. : Shibrarnagar, Haldia, Dist. : Purba Medinipur 721 635, India
Tel : 03224 277 721. Fax : 03224 278107
CIN : L27310OR1955PLC000310
Web : www.electrosteelcastings.com

(10/copy)



Ref: ECL/MOEFCC/FA/Haldia/02/24-25

Date: 26/11/2024

To
Deputy Director(S),
Ministry of Environment, Forest & Climate Change,
Eastern Regional Office,
A/3, Chandrasekharpur,
Bhubaneswar – 751023.

RECEIVED
CONTENT NOT VERIFIED
Date..02/12/2024..
MoEF&CC, Sub-Office, Kolkata

Ref: EC Letter No.-J-11011/02/2016-IA-II(I), dated 12.04.2017.

Sub: Six monthly Compliance Report of the conditions of Environmental Clearance issued by Ministry of Environment & Forest, New Delhi for Proposed installation of the Ferro Alloy Plant through setting up of 1X6MVA & 1x9MVA submerged Arc Furnace for production of Ferro Manganese (38,156TPA) or Silico Manganese (27,109 TPA) or Ferro Silicon (10,421 TPA) by M/s- Electrosteel Castings Ltd, Located at Haldia, Dist –Purba Medinipur, West Bengal for the Period April-24 to September-24.

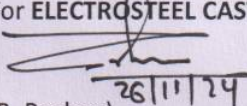
Respected Sir,

This has reference to the Environmental Clearance letter no-J-11011/02/2016-IA-II(I), dated 12.04.2017 issued by Ministry of Environment, Forest & Climate Change, New Delhi.

We enclose herewith Compliance Report for the Period of April-2024 to September-2024 for your perusal.

This is for your information.

Thanking you,
Yours faithfully,
For ELECTROSTEEL CASTINGS LIMITED,


(R. Roshan)
Associate Vice President

- Encl: a) EC Compliance Report-(Annexure-1).
b) Report of Stack Monitoring (Annexure-2).
c) Report of AAQM (Annexure-3).
d) Report of Ambient Noise (Annexure-4).
e) Report of Neurological & Periodical Health check-up (Annexure-5).
f) Environmental Statement Report for FY2023-24(Annexure-6).

Follow the Electrosteel Group on



H.O. : 19, Camac Street, Kolkata 700 017
Tel : 91 33 7103 4400, 2283 9990. Fax : 91 33 2289 4340
Regd. Office : Rathod Colony, Rajgangpur, Sundergarh, Odisha 770 017



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PIONEERING



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CC: - 1) Regional Director,
Central pollution control board,
Southend conclave, Block 502,
5th & 6th floor 1582 Rajdanga main road,
Saratpark, Bose pukur, Kasba.
Kolkata-700107.

✓ 2) Regional Director,
GOI, MOEF & CC,
Integrated Regional Office,
Kolkata, 1b-198, Salt Lake City,
Sector -III, Kolkata-700106.

3) The Environmental Engineer & In- charge.
West Bengal Pollution Control Board,
Haldia Regional Office,
Raghunathchak, P.O:- Barghasipur,
P.S:-Bhabanipur,
Medinipur (East)-721657.

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**ENVIRONMENT CLEARANCE SIX MONTHLY COMPLIANCE REPORT
(FROM APRIL-2024 TO SEPTEMBER-2024)**

Project Name :- Proposed installation of the Ferro Alloy Plant through setting up of 1 x 6 MVA & 1 x 9 MVA submerged Arc Furnace for production of Ferro Manganese (38,156 TPA) or Silico Manganese (27,109 TPA) or Ferro Silicon (10,421 TPA) by M/s. Electrosteel Castings Ltd., located at Haldia, Dist. Purba Medinipur, West Bengal.
Environment Clearance: J-11011/02/2016-IA-II (I), dated 12.04.2017

	CONDITION OF ENVIRONMENTAL CLEARANCE	STATUS OF COMPLIANCE
PART A- Specific Conditions		
i.	The project proponent should install 24x7 air monitoring devices to monitor air emission, as provided by CPCB and submit report to Ministry and its Regional Office.	OCEMS has been installed in two stacks one is connected with Furnace stack & another one is connected with raw material handling stack. OCEMS connectivity of Furnace bag filter stack with CPCB server through M/s- Forb Marshal has been completed. Now real time online data is available in CPCB web portal.
ii.	Bag filters to be installed to reduce the emission of Particulate Matter (PM). PM emission should not exceed 100 mg/m ³ . Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the permissible limits which have been most recently prescribed by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should also be followed.	Two bag filters have been installed. One is attached with the 9MVA Submerged Electric Arc Furnace (SEAF) & another with raw material handling system. Stack monitoring reports of CPCB approved 3 rd party is attached in "Annexure-2" & the results are within the limit.
iii.	Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	Is being followed and records maintained.
iv.	Neurological Evaluation of workers exposed to Manganese should be monitored annually and the report should be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.	Is being followed and records maintained. (Annexure-5)
v.	Measures shall be taken to reduce PM levels in the ambient air. Stack of adequate height & diameter with continuous stack monitoring facilities for all the stacks should be provided. In addition, sufficient air pollution control devices viz. bag house, bag filters etc. should be provided.	Following measures have been taken to reduce PM level in the ambient air. i) Two Stationary sprinklers & one mobile water sprinkler have been deployed for dust suppression. ii) Installed two stacks of adequate height & diameter with continuous stack monitoring facility in both stacks. All stacks are connected with suitable PC device (Bag filter).



vi.	Dust extraction system comprising of pulse jet type bag filter, centrifugal fan and motor, duct work including suction hoods, dust supports, stack, duct hopper, rotary air lock valves etc. should be installed to control the primary and secondary emission.	Adequate dust extraction system comprising of required equipment has been installed to control the primary and secondary emission during commissioning of plant & presently in operation.
vii.	Water sprinkling arrangements as well as dry fog system to control fugitive emission shall put up. Water sprinkling should be carried out at the raw material stockyard to control fugitive dust emissions.	Stationary water sprinklers, mobile water sprinkler & Dry Fog System have been installed to control fugitive emissions. One Mobile water sprinkler has been deployed to carry out water sprinkling in the raw material yard to control fugitive emission.
viii.	Efforts should be made to use maximum water from the rain water harvesting sources. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from others. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption. Water requirement should be modified accordingly.	One rain water harvesting tank has been constructed to use rain water. Close circuit cooling system has been provided to reduce water consumption.
ix.	10-15 m wide green belt should be developed all along the boundary of the plant and in all 33% of the area should be developed green by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines. The entire plantation work should be completed in 3 years.	Green belt development activity is continuing in consultation with Forest Range Office at Balughata under Nandakumar forest range office and local communities. Green belt cover is being maintained continuously throughout the year within the project site as well as outside the plant premises along the HDA road. Distribute different type of saplings to the local villages and school children as a part of Celebration of World Environment Day 2024 and also planted saplings in surrounding area of Doro Rajrampur Board Prathamik Vidyalaya, Haldia to observe "Bonmahatsov-2024" as directed by Haldia regional office of WBPCB.
x.	All the Ferro alloy slag shall be used in the preparation of building materials.	All Ferro Alloy Slags are being used for road making & construction purpose only.
xi.	The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address i) Standard operating process/procedure to being into focus any infringement/deviation/violation of environmental or forest norms/conditions,	Environmental policy has been already Submitted to MoEFCC on 10.01.2018. Standard operating procedure will be followed as stated in EMP.



	<p>ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and</p> <p>iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.</p>	<p>Already Submitted on 10.01.2018.</p> <p>All the environmental issues are communicated to the top management in monthly MIS meeting and also to the Board of Directors quarterly through a systematic structured format by Head – Environment.</p>
xii.	<p>An amount equal to Rs. 125 Lakhs, which is 2.5% of the total project cost (Rs. 50 Crores) shall be earmarked towards the Enterprise Social Commitment based on issues raised during the Public Hearing and needs of local people. Item-wise detailed plan with time bound action plan would be prepared as indicated by the project proponent and this plan shall be implemented. Action taken report in this regard shall be submitted to the Ministry's Regional Office.</p>	<p>(1) Restoration work for school Building have been completed in Doro Gobindapur Prathamik Vidyalaya in village Gobindapur and S.C.M Sikhniketan School in Village Kishmat shibramnagar respectively.</p> <p>(2) Installation of solar-systems in primary school named Kishmat shibramnagar 2 No Primary, village- kishmat shibramnagar and Primary Section Pranchak (H.S) School, village- Pranchak have been completed.</p> <p>(3) Installation of 12 No's Solar Street Lights along the connecting road of Kashberia village with HPL Link Road are under progress.</p> <p>Total expense in this period (April-24 to Sep-24) is Rs.19.83 lakhs.</p> <p>Total cumulative expenses for the period September 2018 to September 2024: - Rs. 128.97/-Lakhs against the total ESC cost 125 lakhs.</p>
xiii.	<p>The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.</p>	<p>Six Solar Street lights have been installed within project site with all necessary arrangement & Maintained.</p>
xiv.	<p>The project proponent shall fully provide for LED lights in their offices and residential areas.</p>	<p>LED light has been installed throughout the plant.</p>
xv.	<p>Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.</p>	<p>All facilities & infrastructures has been provided as per the requirement.</p>
PART B – General Conditions		
i.	<p>The project authorities must strictly adhere to the stipulations made by the West Bengal Pollution Control Board and the State Government.</p>	<p>Following all stipulated guideline of WBPCB & the state Government.</p>



ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment Forest and Climate Change (MoEF&CC).	We will not do any further expansion or modification in the plant without prior approval of MoEF&CC.
iii.	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM ₁₀ , PM _{2.5} , SO ₂ , NO _x are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the SPCB/CPCB once in six month.	Four AAQ monitoring stations have already been installed at different locations based on wind direction in consultation with SPCB. AAQ monitoring has been started from March 2019 on wards & the results are within limit value. Month wise summary report of AAQ is being attached for the said period in (Annexure-3).
iv.	Industrial waste water shall be properly collected treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated waste water shall be utilized for plantation purpose.	Industrial waste water is being collected inland pond through surface drain & utilized it for plantation & dust suppression purpose.
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 should conform to the standards prescribed under EPA Rules ,1989 viz.75 db A (day time) and 70 dbA (night time).	In house Ambient noise monitoring report as well as approve 3 rd party report is being attached in (Annexure -4). Results are within limit.
vi.	Occupational health surveillance of the worker shall be done on a regular basis and records maintained as per the Factories Act	Occupational Health Surveillance programme is being done as per Factory Rules & records is being maintained as per Factories Act.
vii.	The company shall develop rain water harvesting structure to harvest the rain water for utilization in the lean season besides recharging the ground water table.	We have constructed a pond inside the plant. All rain water are collected in the pond through surface drain and it was utilize for dust suppression, water sprinkling & gardening purpose.
viii.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA /EMP report .Further the company must undertake socio –economic development activities in the surrounding village like community development programme ,educational programme ,drinking water supply and health care etc.	Complying as per EIA/EMP report.
ix.	Requisite funds shall be earmarked towards capital cost and recurring cost /annum for environment pollution control measures to implement the conditions stipulated by the Ministry Of Environment, Forest and Climate Change (MoEFCC) as well as the State Government .An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of	Complied as per documents already submitted on 10.01.2018.



	the Ministry at Bhubaneswar. The funds so provide shall not be diverted for any other purpose.	
x.	A copy of clearance letter shall be sent by the proponent to concerned Panchayats, Zila Prishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any were received while processing the proposal. The clearance letter shall also be put on the web site of the Company by the proponent.	Copy of clearance letter had already been Submitted to concern authority and it is also put on the web site of the company.
xi.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Officer of the MoEF&CC at Bhubaneswar. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral parameters indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Is being done.
xii.	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Officer of MoEF&CC, the respective Zonal Office of CPCB and the SPCB .The Regional Office of this Ministry at Bhubaneswar /CPCB/SPCB shall monitor the stipulated conditions.	Is being followed.
xiii.	The environmental statement for each financial year ending 31st March in Form- V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environmental (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MoEF&CC at Bhubaneswar by e-mail.	Environmental statement report for the financial year 2023-2024 has been submitted in Form-V on 24/09/2024 to WBPCB (Attached in Annexure-6). Upload Environmental statement report along with six monthly compliance report in company's website. As per EC Condition, we have also send Environmental statement report to regional office of the MOEF & CC at Bhubaneswar on 28.09.2024 through e-mail.



xiv.	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and climate Change (MoEF&CC) AT http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance 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.	Already complied. Copy of which Submitted to your office on 10.01.2018.
xv.	Project authorities shall inform the Regional Office as well as the Ministry: i)The date of financial closure. ii)Final approval of the project by the concerned authorities iii) The date of commencing the land development work.	Project to be done out of internal accrual. 1) Received NOC from WBPCB valid up to 11.04.2027. 2) Received the renewed Consent to Operate from WBPCB on 31.01.24 & valid up to 31.03.2029. Started on 02.04.2018.





ENVIROCHECK

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(April-24)
(Annexure-2)

TEST REPORT

FORMAT NO : ENV/EM/38

Name of the Industry	: Electro Steel Castings Ltd. (Ferro Alloy Plant)	Type of Industry	: Ferro Alloy Plant
Address	: Kashberia, P.O. - Shivram Nagar, Haldia, Purba Medinipur - 721635	Sampling Date & Time	: 26.04.2024 (12:30 p.m. - 01:15 p.m.)
		Period of Analysis	: 27.04.2024 - 27.04.2024
		Date of Issue	: 29.04.2024
Sampling Plan & Procedure	: ENV/SOP/01	Deviation from the Sampling Method and Plan	: No
Sample Condition	: Sealed	Sample ID No.	: ENV/80/April/A/I
		Report No.	: ENV/80/April/TR(A)/1/24-25
		Type of Sample	: Stack Emission

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	: SEAF - I
Shape of Stack	: Circular
	Height of Stack (mtr.) (from G.L.) : 35.0
Materials of Construction	: M.S.
	Stack I.D. at sampling point (mtr.) : 1.80
Capacity	: Rated - 9.0 MVA (Running - 9.0 MVA)
	Height of sampling port (mtr.) (from G.L.) : 30.0
Emission Due to	: Melting of Coke, Coal, Mn-Ore, Quartz & Dolomite
Fuel Used	: Electrically Operated
Working Fuel Consumption	: N.A.
Pollution Control Device	: Bag Filter
	Permanent Platform & Ladder : Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS : 11255 (Part 1)	: 93.0
2.	Barometric Pressure	mm of Hg.	--	: 757.0
3.	Velocity of Gas flow	m/s	IS : 11255 (Part 3)	: 14.17
4.	Quantity of Gas flow	Nm ³ /hr.	IS : 11255 (Part III)	: 103624.12
5.	Concentration of SO ₂	mg/Nm ³	IS 11255 (Part 2) : 2019	: 126.26
6.	Concentration of NO _x	mg/Nm ³	IS 11255 (Part 7) : 2017 / ASTM D 1608-98, Sec. 11 (Vol. 11.07) : 2017	: 60.95
7.	Concentration of CO ₂	% (v/v)	IS 13270 : 2019	: 1.8
8.	Concentration of O ₂	% (v/v)	EPA Method 3 : 2017	: 17.0
9.	Concentration of CO	% (v/v)	IS 13270 : 2019	: <1.0
10.	Concentration of Particulate Matter	mg/Nm ³	IS 11255 (Part - 1) : 2019 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol.11.07) : 2017	: 24.94

Remarks : Result relates only to the sample tested.

Reviewed By :

Indrani Bhattacharya

INDRANI BHATTACHARYA
By, Technical Manager, Chemical

Authorised Signatory :

Sumit Chowdhury

Dr. SUMIT CHOWDHURY
Technical Manager



Page 1 of 3

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 Branch Office : Siliguri ■ Haldia ■ Durgapur ■ Dhanbad ■ Gangtok ■ Port Blair ■ Dehradun ■ New Delhi
 Overseas : UAE ■ Qatar ■ Netherlands



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TEST REPORT

FORMAT NO.: ENV/FM/38

Name of the Industry	: Electro Steel Castings Ltd. (Ferro Alloy Plant)	Type of Industry	: Ferro Alloy Plant		
Address	: Kashberia, P.O. - Shivram Nagar, Haldia, Purba Medinipur - 721635	Sampling Date & Time	: 26.04.2024 (01:30 p.m. - 02:15 p.m.)		
		Period of Analysis	: 27.04.2024 - 27.04.2024		
		Date of Issue	: 29.04.2024		
Sampling Plan & Procedure	: ENV/SOP/01	Deviation from the Sampling Method and Plan	: No	Type of Sample	: Stack Emission
Sample Condition	: Sealed	Sample ID No.	: ENV/80/April/A/II	Report No.	: ENV/80/April/TR(A)/II/24-25

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	: Raw Material Handling System		
Shape of Stack	: Circular	Height of Stack (mtr.) (from G. L.)	: 30.0
Materials of Construction	: M.S.	Stack I.D. at sampling point (mtr.)	: 0.6096
Capacity	: --	Height of sampling port (mtr.) (from G.L.)	: 12.18
Emission Due to	: Process Activity (Handling of Raw Materials)		
Fuel Used	: N.A.	Permanent Platform & Ladder	: Yes
Working Fuel Consumption	: Nil		
Pollution Control Device	: Bag Filter		

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS: 11255 (Part 1)	: 45.0
2.	Barometric Pressure	mm of Hg.	--	: 757.0
3.	Velocity of Gas flow	m/s	IS: 11255 (Part 3)	: 19.78
4.	Quantity of Gas flow	Nm ³ /hr.	IS: 11255 (Part III)	: 19420.18
5.	Concentration of Particulate Matter	mg/Nm ³	IS 11255 (Part - 1) : 2019 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol.11.07) : 2017	: 19.15

Remarks : Result relates only to the sample tested.

Reviewed By :

Indrani Bhattacharya

INDRANI BHATTACHARYA
Dy. Technical Manager, Chemical

Authorised Signatory :

Sumit Chowdhury

Dr. SUMIT CHOWDHURY
Technical Manager



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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Industry	: Electro Steel Castings Ltd. (Ferro Alloy Plant)	Type of Industry	: Ferro Alloy Plant		
Address	: Kashberia, P.O. - Shivram Nagar, Haldia, Purba Medinipur - 721635	Sampling Date & Time	: 26.04.2024 (02:30 p.m. - 03:15 p.m.)		
		Period of Analysis	: 27.04.2024 - 27.04.2024		
		Date of Issue	: 29.04.2024		
Sampling Plan & Procedure	: ENV/SOP/01	Deviation from the Sampling Method and Plan	: No	Type of Sample	: Stack Emission
Sample Condition	: Sealed	Sample ID No.	: ENV/80/April/A/III	Report No.	: ENV/80/April/TR(A)/III/24-25

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	: Diesel Generator (Acoustic Enclosure attached)		
Shape of Stack	: Circular	Height of Stack (mtr.) (from G. L.)	: 10.36
Materials of Construction	: M.S.	Stack I.D. at sampling point (mtr.)	: 0.1524
Capacity	: 250 KVA	Height of sampling port (mtr.) (from G.L.)	: 7.92
Emission Due to	: Combustion of H.S.D		
Fuel Used	: H.S.D	Permanent Platform & Ladder	: Yes
Working Fuel Consumption	: 57 liter./hr.		
Pollution Control Device	: Nil		

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS : 11255 (Part 1)	: 109.0
2.	Barometric Pressure	mm of Hg.	..	: 757.0
3.	Velocity of Gas flow	m/s	IS : 11255 (Part 3)	: 12.13
4.	Quantity of Gas flow	Nm ³ /hr.	IS : 11255 (Part III)	: 617.24
5.	Concentration of SO ₂	mg/Nm ³	IS 11255 (Part 2) : 2019	: 27.80
6.	Concentration of NO _x	mg/Nm ³	IS 11255 (Part 7) : 2017 / ASTM D 1608-98, Sec. 11 (Vol. 11.07) : 2017	: 37.0
7.	Concentration of CO ₂	% (v/v)	IS 13270 : 2019	: 7.2
8.	Concentration of O ₂	% (v/v)	EPA Method 3 : 2017	: 12.2
9.	Concentration of CO	% (v/v)	IS 13270 : 2019	: <1.0
10.	Concentration of Particulate Matter	mg/Nm ³	IS 11255 (Part - 1) : 2019 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol.11.07) : 2017	: 20.36

Remarks : Result relates only to the sample tested.

Reviewed By :

Indrani Bhattacharya

INDRANI BHATTACHARYA
Dy. Technical Manager, Chemical

Authorised Signatory :

Sumit Chowdhury

Dr. SUMIT CHOWDHURY
Technical Manager

<End of Report>



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 Overseas : UAE ■ Qatar ■ Netherlands



ENVIROCHECK

Recognised by MoEF & CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017) & NABET (CERTIFICATE NO. NABET/EIA/2326/IA 0117)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

(July-2024)



TEST REPORT

FORMAT NO.: ENV/FM/3B

Name of the Industry	: Electro Steel Castings Ltd. (Ferro Alloy Plant)	Type of Industry	: Ferro Alloy Plant
Address	: Kashberia, P.O. - Shibram Nagar, Haldia, Purba Medinipur - 721635	Sampling Date & Time	: 18.07.2024
		Period of Analysis	: 20.07.2024 - 20.07.2024
		Date of Issue	: 22.07.2024
Sampling Plan & Procedure	: ENV/SOP/01	Deviation from the Sampling Method and Plan	: No
Sample Condition	: Sealed	Sample ID No.	: ENV/37/July/A/IV
		Report No.	: ENV/37/July/TR(A)/IV/24-25
		Type of Sample	: Stack Emission

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	: Diesel Generator (Acoustic Enclosure attached)	
Shape of Stack	: Circular	
Materials of Construction	: M.S.	
	Height of Stack (mtr.) (from G. L.)	: 10.36
Capacity	: 250 KVA	
Emission Due to	: Combustion of H.S.D	
	Stack I.D. at sampling point (mtr.)	: 0.1524
Fuel Used	: H.S.D	
Working Fuel Consumption	: 57 liter./hr.	
Pollution Control Device	: Nil	
	Permanent Platform & Ladder	: Yes
	Height of sampling port (mtr.) (from G.L.)	: 7.92

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS: 11255 (Part 1)	: 108.0
2.	Barometric Pressure	mm of Hg.	--	: 753.0
3.	Velocity of Gas flow	m/s	IS: 11255 (Part 3)	: 12.14
4.	Quantity of Gas flow	Nm ³ /hr.	IS: 11255 (Part III)	: 616.10
5.	Concentration of SO ₂	mg/Nm ³	IS 11255 (Part 2): 2019	: 117.48
6.	Concentration of NO _x	mg/Nm ³	IS 11255 (Part 7): 2017 / ASTM D 1608-98, Sec. 11 (Vol. 11.07): 2017	: 63.72
7.	Concentration of CO ₂	% (v/v)	IS 13270: 2019	: 7.2
8.	Concentration of CO	% (v/v)	IS 13270: 2019	: <1.0
9.	Concentration of O ₂	% (v/v)	EPA Method 3: 2017	: 12.2
	Moisture	%	Emission Control Part - III, CPCB	: Nil
11.	Concentration of Particulate Matter	mg/Nm ³	IS 11255 (Part - 1): 2019 & ASTM D 3685/D 3685M-98 (reapproved 2005): Sec. 11 (Vol.11.07): 2017	: 17.11

Remarks : Result relates only to the sample tested.

Reviewed By :

Indrani Bhattacharya

INDRANI BHATTACHARYA
Dy. Technical Manager, Chemical

Authorised Signatory :

Dr. Ajoy Paul

Dr. AJOY PAUL
Quality Manager





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TEST REPORT

FORMAT NO.: ENV/FM/38

Name of the Industry	: Electro Steel Castings Ltd. (Ferro Alloy Plant)	Type of Industry	: Ferro Alloy Plant
Address	: Kashberia, P.O. - Shibram Nagar, Haldia, Purba Medinipur - 721635	Sampling Date & Time	: 18.07.2024
		Period of Analysis	: 20.07.2024 - 20.07.2024
		Date of Issue	: 22.07.2024
Sampling Plan & Procedure	: ENV/SOP/01	Deviation from the Sampling Method and Plan	: No
Sample Condition	: Sealed	Sample ID No.	: ENV/37/July/A/VI
		Report No.	: ENV/37/July/TR(A)/VI/24-25
		Type of Sample	: Stack Emission

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	: Raw Material Handling System	
Shape of Stack	: Circular	
Materials of Construction	: M.S.	
	Height of Stack (mtr.) (from G.L.)	: 30.0
Capacity	: --	
	Stack I.D. at sampling point (mtr.)	: 0.6096
Emission Due to	: Process Activity (Handling of Raw Materials)	
Fuel Used	: N.A. (Electrically Operated)	
Working Fuel Consumption	: Nil	
Pollution Control Device	: Bag Filter	
	Permanent Platform & Ladder	: Yes
	Height of sampling port (mtr.) (from G.L.)	: 12.18

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS : 11255 (Part 1)	39.0
2.	Barometric Pressure	mm of Hg.	--	753.0
3.	Velocity of Gas flow	m/s	IS : 11255 (Part 3)	21.32
4.	Quantity of Gas flow	Nm ³ /hr.	IS : 11255 (Part III)	21226.38
5.	Concentration of Particulate Matter	mg/Nm ³	IS 11255 (Part - 1) : 2019 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol.11.07) : 2017	19.17

Remarks : Result relates only to the sample tested.

Reviewed By :

Indrani Bhattacharya

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Authorised Signatory :

A. Joy Paul
Dr. AJAY PAUL
Quality Manager



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TC-6014

TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Industry	: Electro Steel Castings Ltd. (Ferro Alloy Plant)	Type of Industry	: Ferro Alloy Plant		
Address	: Kashberia, P.O. - Shibram Nagar, Haldia, Purba Medinipur - 721635	Sampling Date & Time	: 18.07.2024 (10:45 a.m. - 12:30 p.m.)		
		Period of Analysis	: 20.07.2024 - 20.07.2024		
		Date of Issue	: 22.07.2024		
Sampling Plan & Procedure	: ENV/SOP/01	Deviation from the Sampling Method and Plan	: No	Type of Sample	: Stack Emission
Sample Condition	: Sealed	Sample ID No.	: ENV/37/July/A/VI	Report No.	: ENV/37/July/TR(A)/VI/24-25

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	: SEAF - I	
Shape of Stack	: Circular	
Materials of Construction	: M.S.	
	Height of Stack (mtr.) (from G.L.)	: 35.0
Capacity	: Rated - 9.0 MVA [Running - 9.0 MVA]	
	Stack I.D. at sampling point (mtr.)	: 1.80
Emission Due to	: Melting of Coke, Coal, Mn-Ore, Quartz & Dolomite	
Fuel Used	: Electrically Operated	
Working Fuel Consumption	: N.A.	
Pollution Control Device	: Bag Filter	
	Permanent Platform & Ladder	: Yes
	Height of sampling port (mtr.) (from G.L.)	: 30.0

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS : 11255 (Part 1)	94.0
2.	Barometric Pressure	mm of Hg.	--	753.0
3.	Velocity of Gas flow	m/s	IS : 11255 (Part 3)	14.22
4.	Quantity of Gas flow	Nm ³ /hr.	IS : 11255 (Part III)	103079.12
5.	Concentration of SO ₂	mg/Nm ³	IS 11255 (Part 2) : 2019	123.14
6.	Concentration of NO _x	mg/Nm ³	IS 11255 (Part 7) : 2017 / ASTM D 1608-98, Sec. 11 (Vol. 11.07) : 2017	76.46
7.	Concentration of CO ₂	% (v/v)	IS 13270 : 2019	1.8
8.	Concentration of CO	% (v/v)	IS 13270 : 2019	<1.0
9.	Concentration of O ₂	% (v/v)	EPA Method 3 : 2017	17.2
	Moisture	%	Emission Control Part - III, CPCB	1.68
11.	Concentration of Particulate Matter	mg/Nm ³	IS 11255 (Part - 1) : 2019 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol.11.07) : 2017	25.50

Remarks : Result relates only to the sample tested.

Reviewed By :

Indrani Bhattacharya

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Authorised Signatory :

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Quality Manager

<End of Report>



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AMBIENT AIR QUALITY

SUMMARY REPORT

April - 2024 to September- 2024

Electrosteel Castings Ltd.
Ferro Alloy Plant
Haldia, Kasberia, P.O. -
Shivramnagar, Pin - 721635



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SUMMARY REPORT – April, 2024

Parameters	Dakshin Kashberia- South side of the Factory (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	04.04.2024	06.04.2024	08.04.2024	10.04.2024	14.04.2024	16.04.2024	23.04.2024	26.04.2024		
PM2.5 ($\mu\text{g}/\text{m}^3$)	32.5	36.2	37.5	30.1	31.6	32.8	38.5	31.8	33.87	60
PM10 ($\mu\text{g}/\text{m}^3$)	61.5	64.8	71.2	60.1	63.5	64.7	68.2	65.2	64.9	100
SO2 ($\mu\text{g}/\text{m}^3$)	6.5	7.2	6.8	7.8	6.5	7.2	6.5	6.2	6.83	80
NOx ($\mu\text{g}/\text{m}^3$)	26.5	30.0	28.5	32.5	25.0	31.5	30.0	25.0	28.62	80
Parameters	Main Gate of Ferro Alloy Plant (Inside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	04.04.2024	06.04.2024	08.04.2024	10.04.2024	14.04.2024	16.04.2024	23.04.2024	26.04.2024		
PM2.5 ($\mu\text{g}/\text{m}^3$)	36.5	39.2	34.5	31.8	32.5	38.1	31.8	33.8	34.77	60
PM10 ($\mu\text{g}/\text{m}^3$)	71.2	78.5	67.2	62.5	69.5	74.5	72.6	73.8	71.22	100
SO2 ($\mu\text{g}/\text{m}^3$)	6.8	7.5	8.2	7.2	6.2	7.2	6.5	6.8	7.05	80
NOx ($\mu\text{g}/\text{m}^3$)	26.5	30.0	32.5	30.0	28.5	31.8	25.0	26.5	28.85	80
Parameters	Kashberia Uttarpally (North Side) (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	04.04.2024	06.04.2024	08.04.2024	10.04.2024	14.04.2024	16.04.2024	23.04.2024	26.04.2024		
PM2.5 ($\mu\text{g}/\text{m}^3$)	34.5	39.2	35.2	37.2	31.5	32.8	31.6	37.2	34.9	60
PM10 ($\mu\text{g}/\text{m}^3$)	68.2	71.5	73.2	78.5	71.2	68.5	64.2	71.6	70.86	100
SO2 ($\mu\text{g}/\text{m}^3$)	6.5	6.8	7.2	7.5	7.8	6.8	6.5	6.2	6.91	80
NOx ($\mu\text{g}/\text{m}^3$)	25.0	28.5	30.0	26.5	30.0	25.0	26.5	25.0	27.06	80
Parameters	Kishmat Shibrarnagar West side (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	04.04.2024	06.04.2024	08.04.2024	10.04.2024	14.04.2024	16.04.2024	23.04.2024	26.04.2024		
PM2.5 ($\mu\text{g}/\text{m}^3$)	36.2	37.5	34.2	38.5	32.6	33.6	39.5	37.5	36.2	60
PM10 ($\mu\text{g}/\text{m}^3$)	67.2	71.2	69.2	75.1	64.2	69.2	73.2	78.5	70.97	100
SO2 ($\mu\text{g}/\text{m}^3$)	6.5	7.2	6.8	7.8	6.2	6.5	7.6	7.2	6.97	80
NOx ($\mu\text{g}/\text{m}^3$)	30.0	28.5	26.5	32.5	25.0	23.5	31.5	26.8	28.03	80





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SUMMARY REPORT - May, 2024

Parameters	Dakshin Kashberia- South side of the Factory (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	06.05.2024	09.05.2024	15.05.2024	17.05.2024	19.05.2024	21.05.2024	27.05.2024	29.05.2024		
PM2.5 (µg/m3)	32.5	33.8	37.2	30.1	34.9	33.2	26.8	29.5	32.25	60
PM10 (µg/m3)	61.2	64.8	71.5	62.9	67.5	63.2	42.5	58.6	61.52	100
SO2 (µg/m3)	6.2	5.8	8.2	5.8	6.2	5.2	4.8	5.6	5.97	80
NOx (µg/m3)	25.0	23.5	28.5	25.0	23.5	20.0	18.5	25.0	23.62	80
Parameters	Main Gate of Ferro Alloy Plant (Inside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	06.05.2024	09.05.2024	15.05.2024	17.05.2024	19.05.2024	21.05.2024	27.05.2024	29.05.2024		
PM2.5 (µg/m3)	38.2	32.6	31.5	33.8	34.6	42.8	21.5	23.8	32.35	60
PM10 (µg/m3)	72.5	67.2	61.5	63.2	65.7	73.5	49.2	51.8	63.07	100
SO2 (µg/m3)	8.2	6.2	5.8	6.2	7.2	8.6	4.8	5.2	6.52	80
NOx (µg/m3)	26.5	25.0	21.5	25.0	28.5	30.0	18.5	20.0	24.37	80
Parameters	Kashberia Uttarpally (North Side) (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	06.05.2024	09.05.2024	15.05.2024	17.05.2024	19.05.2024	21.05.2024	27.05.2024	29.05.2024		
PM2.5 (µg/m3)	33.6	29.5	31.5	34.6	42.5	43.1	23.5	30.2	33.56	60
PM10 (µg/m3)	62.5	59.1	67.2	65.8	71.2	74.5	53.8	64.5	64.82	100
SO2 (µg/m3)	6.2	5.8	6.8	7.2	7.8	6.8	5.2	5.8	6.45	80
NOx (µg/m3)	25.0	23.5	30.0	32.5	31.8	26.5	25.0	26.0	27.53	80
Parameters	Kishmat Shibrarnagar West side (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	06.05.2024	09.05.2024	15.05.2024	17.05.2024	19.05.2024	21.05.2024	27.05.2024	29.05.2024		
PM2.5 (µg/m3)	32.6	34.8	31.5	39.2	38.5	37.2	26.5	35.2	34.43	60
PM10 (µg/m3)	61.8	71.5	69.2	78.2	73.6	74.5	52.6	72.5	69.23	100
SO2 (µg/m3)	6.2	8.5	6.8	7.2	6.5	7.8	4.8	5.6	6.67	80
NOx (µg/m3)	25.0	31.5	26.5	28.2	26.5	30.0	16.5	28.2	26.55	80

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SUMMARY REPORT – June, 2024

Parameters	Dakshin Kashberia- South side of the Factory (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	05.06.2024	07.06.2024	10.06.2024	15.06.2024	18.06.2024	20.06.2024	26.06.2024	28.06.2024		
PM2.5 (µg/m3)	32.5	22.8	28.2	26.3	34.8	19.20	34.5	26.8	28.13	60
PM10 (µg/m3)	61.2	54.3	58.3	52.8	69.2	36.5	68.2	53.8	58.78	100
SO2 (µg/m3)	6.50	4.80	5.20	5.80	8.20	4.80	7.20	5.20	5.96	80
NOx (µg/m3)	25.0	23.50	26.50	28.50	30.0	20.0	32.50	26.50	26.56	80
Parameters	Main Gate of Ferro Alloy Plant (Inside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	05.06.2024	07.06.2024	10.06.2024	15.06.2024	18.06.2024	20.06.2024	26.06.2024	28.06.2024		
PM2.5 (µg/m3)	33.8	31.5	29.5	25.2	34.8	23.5	35.1	26.3	29.96	60
PM10 (µg/m3)	67.5	63.8	60.1	52.6	68.2	48.2	68.2	57.2	60.72	100
SO2 (µg/m3)	6.80	5.20	6.20	4.80	6.50	5.20	8.50	7.50	6.33	80
NOx (µg/m3)	25.0	26.50	21.50	20.0	28.50	21.50	26.50	30.0	24.93	80
Parameters	Kashberia Uttarpally (North Side) (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	05.06.2024	07.06.2024	10.06.2024	15.06.2024	18.06.2024	20.06.2024	26.06.2024	28.06.2024		
PM2.5 (µg/m3)	26.5	31.8	35.2	31.6	41.6	12.8	32.6	28.2	30.03	60
PM10 (µg/m3)	54.2	62.3	74.5	63.5	76.2	28.5	61.2	59.1	59.93	100
SO2 (µg/m3)	6.5	5.8	8.2	5.2	6.5	4.8	10.0	8.5	6.93	80
NOx (µg/m3)	25.0	20.0	28.5	21.5	23.5	15.0	30.0	25.0	23.56	80
Parameters	Kishmat Shibrarnagar West side (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	05.06.2024	07.06.2024	10.06.2024	15.06.2024	18.06.2024	20.06.2024	26.06.2024	28.06.2024		
PM2.5 (µg/m3)	23.5	32.8	36.5	25.1	26.8	15.2	30.2	31.8	27.73	60
PM10 (µg/m3)	51.6	62.8	65.3	49.5	57.2	31.8	64.5	63.2	55.73	100
SO2 (µg/m3)	6.5	7.2	6.8	5.2	6.8	4.5	7.8	6.5	6.41	80
NOx (µg/m3)	25.0	26.5	20.0	18.5	23.5	12.5	30.0	26.5	22.81	80

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SUMMARY REPORT - July, 2024

Parameters	Dakshin Kashberia- South side of the Factory (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	01.07.2024	03.07.2024	11.07.2024	13.07.2024	16.07.2024	19.07.2024	22.07.2024	24.07.2024		
PM2.5 (µg/m3)	31.6	16.5	18.2	26.2	21.5	15.2	12.8	28.5	21.31	60
PM10 (µg/m3)	62.5	36.2	38.5	57.2	52.8	29.5	25.2	57.6	44.93	100
SO2 (µg/m3)	6.20	<4.0	<4.0	7.50	8.20	<4.0	4.80	9.20	5.98	80
NOx (µg/m3)	20.0	15.0	10.0	26.50	30.0	15.0	10.0	25.0	18.93	80
Parameters	Main Gate of Ferro Alloy Plant (Inside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	01.07.2024	03.07.2024	11.07.2024	13.07.2024	16.07.2024	19.07.2024	22.07.2024	24.07.2024		
PM2.5 (µg/m3)	32.5	26.8	28.1	25.3	23.6	28.5	24.1	28.1	27.12	60
PM10 (µg/m3)	60.2	49.2	53.5	50.6	54.8	49.2	53.6	57.8	53.61	100
SO2 (µg/m3)	6.2	4.8	<4.0	8.5	6.2	<4.0	<4.0	6.5	5.52	80
NOx (µg/m3)	20.0	18.5	15.0	20.0	28.5	15.0	12.5	30.0	19.93	80
Parameters	Kashberia Uttarpally (North Side) (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	01.07.2024	03.07.2024	11.07.2024	13.07.2024	16.07.2024	19.07.2024	22.07.2024	24.07.2024		
PM2.5 (µg/m3)	31.5	23.8	18.5	24.1	31.8	15.2	14.1	21.8	22.6	60
PM10 (µg/m3)	64.2	41.8	29.5	54.2	61.5	32.8	28.5	54.8	45.91	100
SO2 (µg/m3)	6.2	<4.0	<4.0	5.8	6.2	<4.0	<4.0	6.80	5.12	80
NOx (µg/m3)	25.0	10.0	12.5	18.5	15.0	10.0	12.5	15.0	14.81	80
Parameters	Kishmat Shibrannagar West side (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	01.07.2024	03.07.2024	11.07.2024	13.07.2024	16.07.2024	19.07.2024	22.07.2024	24.07.2024		
PM2.5 (µg/m3)	34.8	24.5	26.2	23.8	24.5	19.1	15.2	28.5	24.57	60
PM10 (µg/m3)	68.2	31.5	28.3	54.8	58.2	36.5	30.1	53.6	45.15	100
SO2 (µg/m3)	7.2	<4.0	<4.0	8.2	6.5	<4.0	<4.0	7.6	5.68	80
NOx (µg/m3)	25.0	10.0	12.5	31.50	25.0	12.50	8.0	16.50	17.62	80

H.O. : 63/B, Rastraguru Avenue, Kolkata -700028 ■ Ph. 033 25792891/ 25497490

Laboratory : 51, 185, 186, 189, 190 & 192, Rastraguru Avenue, Kolkata -700028

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SUMMARY REPORT -August, 2024

Parameters	Dakshin Kashberia- South side of the Factory (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	02.08.2024	06.08.2024	08.08.2024	12.08.2024	14.08.2024	22.08.2024	24.08.2024	26.08.2024		
PM2.5 (µg/m3)	11.5	18.2	23.5	28.1	31.6	23.5	15.2	18.5	21.26	60
PM10 (µg/m3)	16.5	36.2	45.1	57.2	61.5	50.8	25.1	31.5	40.48	100
SO2 (µg/m3)	<4.0	<4.0	8.20	12.5	9.50	10.0	<4.0	<4.0	7.02	80
NOx (µg/m3)	12.5	15.0	19.2	15.0	16.50	10.0	12.5	15.0	14.46	80
Parameters	Main Gate of Ferro Alloy Plant (Inside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	02.08.2024	06.08.2024	08.08.2024	12.08.2024	14.08.2024	22.08.2024	24.08.2024	26.08.2024		
PM2.5 (µg/m3)	14.2	23.5	31.6	36.5	39.2	33.6	21.5	22.8	27.86	60
PM10 (µg/m3)	28.5	48.2	64.5	71.2	76.5	67.2	49.5	42.8	56.05	100
SO2 (µg/m3)	5.2	6.5	7.2	7.8	6.5	6.2	5.2	4.8	6.17	80
NOx (µg/m3)	12.5	15.0	18.5	16.2	15.0	12.5	10.0	8.50	13.52	80
Parameters	Kashberia Uttarpally (North Side) (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	02.08.2024	06.08.2024	08.08.2024	12.08.2024	14.08.2024	22.08.2024	24.08.2024	26.08.2024		
PM2.5 (µg/m3)	14.2	21.5	23.6	32.5	28.1	30.1	33.6	25.1	26.08	60
PM10 (µg/m3)	21.5	39.2	46.5	65.8	57.2	61.8	38.5	42.8	46.66	100
SO2 (µg/m3)	<4.0	<4.0	<4.0	8.2	9.5	6.4	5.6	<4.0	5.71	80
NOx (µg/m3)	18.5	15.0	16.5	20.0	16.5	21.2	15.0	10.0	16.58	80
Parameters	Kishmat Shibramnagar West side (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	02.08.2024	06.08.2024	08.08.2024	12.08.2024	14.08.2024	22.08.2024	24.08.2024	26.08.2024		
PM2.5 (µg/m3)	14.2	16.5	18.2	31.5	36.2	31.8	25.1	23.5	24.62	60
PM10 (µg/m3)	23.5	29.6	37.2	65.1	71.6	64.1	43.6	51.8	48.31	100
SO2 (µg/m3)	<4.0	<4.0	4.8	6.5	9.2	8.5	<4.0	4.8	5.72	80
NOx (µg/m3)	12.5	15.0	16.5	18.2	20.0	18.5	15.0	16.5	16.52	80



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SUMMARY REPORT - September, 2024

Parameters	Dakshin Kashberia- South side of the Factory (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	03.09.2024	05.09.2024	12.09.2024	14.09.2024	16.09.2024	18.09.2024	25.09.2024	27.09.2024		
PM2.5 (µg/m3)	32.5	30.5	26.2	12.5	16.8	23.5	14.5	25.9	22.8	60
PM10 (µg/m3)	60.2	57.5	49.2	23.5	31.5	54.2	21.5	55.8	44.17	100
SO2 (µg/m3)	6.5	4.8	8.5	<4.0	5.20	6.80	<4.0	7.20	5.8	80
NOx (µg/m3)	12.50	10.0	15.0	10.0	11.80	16.50	9.0	18.50	12.91	80
Parameters	Main Gate of Ferro Alloy Plant (Inside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	03.09.2024	05.09.2024	12.09.2024	14.09.2024	16.09.2024	18.09.2024	25.09.2024	27.09.2024		
PM2.5 (µg/m3)	31.5	26.8	30.5	16.5	24.5	38.2	19.5	26.2	26.71	60
PM10 (µg/m3)	68.2	55.9	62.5	38.2	45.2	69.2	39.2	64.1	55.31	100
SO2 (µg/m3)	16.5	6.5	12.8	6.5	7.2	6.2	4.8	7.20	8.46	80
NOx (µg/m3)	23.5	15.0	20.0	14.50	19.5	15.0	12.50	21.50	17.68	80
Parameters	Kashberia Uttarpally (North Side) (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	03.09.2024	05.09.2024	12.09.2024	14.09.2024	16.09.2024	18.09.2024	25.09.2024	27.09.2024		
PM2.5 (µg/m3)	32.5	22.8	21.5	14.2	19.5	34.5	19.2	18.2	22.8	60
PM10 (µg/m3)	61.5	54.2	51.8	21.5	38.5	65.2	31.8	33.50	44.75	100
SO2 (µg/m3)	6.50	8.50	6.20	10.0	15.0	18.50	12.80	16.50	11.75	80
NOx (µg/m3)	20.0	26.50	18.50	15.0	18.50	25.0	23.50	28.50	21.93	80
Parameters	Kishmat Shibramnagar West side (Outside Factory Premises)								Avg	Limit as per NAAQ Standards (24 hours) (Schedule VII)
	03.09.2024	05.09.2024	12.09.2024	14.09.2024	16.09.2024	18.09.2024	25.09.2024	27.09.2024		
PM2.5 (µg/m3)	23.5	21.8	24.5	14.5	19.2	35.1	12.8	18.5	21.23	60
PM10 (µg/m3)	55.8	49.2	57.2	29.5	35.1	68.2	25.1	39.5	44.95	100
SO2 (µg/m3)	8.2	9.5	6.2	4.8	6.50	9.20	8.50	11.80	8.08	80
NOx (µg/m3)	19.2	25.0	23.50	14.50	20.0	25.0	19.50	25.0	21.46	80

Date : 10.10.2024



Authorized Signatory:

DR. AJAY PAUL
DR. AJAY PAUL
Scientist





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JUNE-2024 (FAD)

Annexure-4



TEST REPORT

I. Name of the Industry/Factory/Company	:	Electro Steel Castings Limited (Ferro Alloy Plant)
II. Address	:	Works - Kashberia, P.O - Shivramnagar, Halda, District - PurbaMedinipore, Pin - 721635
III. Date of Sampling	:	06/06/2024
IV. Reporting Date	:	13/06/2024
V. Report No	:	ENV/01/June/(TR)/24-25
VI. Method No	:	IS 15575 (Part 2), 2022
VII. Time of Duration of Noise	:	20 Minutes
VIII. Height from Ground Level	:	4feet
IX. Distance of Source	:	3 Meter
X. Type of Industry	:	Ferro Alloy Plant
XI. Sample Monitoring by	:	Mr. Kaushik Podder

RESULT OF AMBIENT NOISE LEVEL STUDY

Sl. No.	Location	MONITORING IN FERRO-ALLOY PLANT [DAY TIME]										Min dB(A)	Max dB(A)	Average dB(A)	Leq dB(A)
		S1 7:00 A.M	S2 9:00 A.M	S3 11:00 A.M	S4 1:00 P.M	S5 3:00 P.M	S6 5:00 P.M	S7 7:00 P.M	S8 9:00 P.M	S9 11:00 P.M	S10 1:00 P.M				
1.	Main Gate (West Side)	63.1	65.9	60.5	61.6	62.3	63.0	64.8	64.5	65.2	61.9	60.5	65.9	63.26	63.57
2.	East Side Boundary Wall	66.2	70.1	67.5	68.0	65.3	66.1	67.4	66.2	69.4	71.5	65.3	71.5	67.86	68.31
3.	South Side Boundary Wall (Towards COP Coal Shed)	66.0	70.2	67.8	69.4	67.2	70.0	67.5	66.4	63.9	67.8	62.5	70.2	67.09	67.68
4.	North Side Boundary Wall (Towards Pattern Shop)	66.1	68.2	64.3	62.8	67.5	65.2	64.8	63.9	62.4	63.8	62.4	68.2	64.90	65.29
5.	Limit	75													



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RESULT OF NOISE LEVEL STUDY

Sl. No.	Location	MONITORING IN FERRO-ALLOY PLANT (NIGHT TIME)										Min dB(A)	Max dB(A)	Average dB(A)	Leq dB(A)
		S1 10:00 P.M	S2 10:30 P.M	S3 11:00 P.M	S4 11:30 P.M	S5 12:00 P.M	S6 12:30 A.M	S7 1:00 A.M	S8 1:30 A.M	S9 2:00 A.M	S10 2:30 A.M				
1.	Main Gate (West Side)	60.5	59.4	58.5	57.5	56.4	60.2	56.2	57.0	55.6	54.4	54.4	60.5	57.78	58.17
2.	East Side Boundary Wall	61.4	62.3	63.8	60.9	62.6	63.5	64.6	64.0	61.9	61.5	60.9	64.6	62.69	62.82
3.	South Side Boundary Wall (Towards COP Coal Shed)	59.2	59.0	60.5	61.4	62.3	61.5	62.3	57.7	56.5	58.1	56.5	62.3	59.85	60.26
4.	North Side Boundary Wall (Towards Pattern Shop)	55.3	56.4	60.5	61.5	63.8	64.6	59.1	60.2	61.8	61.0	55.3	64.6	60.62	61.30
5.	Limit	70													

** Mean of Leq - Equivalent to Sound Energy
Limit in Leq dB(A)

Category Area	Day Time dB(A)	Night Time dB(A)
A. Industrial Area	75	70
B. Commercial Area	65	55
C. Residential Area	55	45
D. Silence Zone	50	40

** Day Time is reckoned in between
6:00 A.M & 10:00 P.M

** Night Time is reckoned in between
10:00 P.M & 6:00 A.M

(Central Pollution Control Board, Ministry of Environment & Forests Government of India) &
(Department of Environment, Government of West Bengal)

Report Print Date: 13/06/2024

>End of Report<



Authorized Signatory with Stamp



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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

(Sep-2024)



TEST REPORT

I. Name of the Industry/Factory/Company	: Electro Steel Castings Limited- (Ferro Alloy Plant)
II. Address	: Works - Kashberia, P.O - Shivrannagar, Haldia, District - PurbaMedinipore, Pin - 721635
III. Date of Sampling	: 03/09/2024
IV. Reporting Date	: 12/09/2024
V. Report No	: ENV/01/Sep/(TR)/24-25
VI. Method No	: IS 15575 (Part 2), 2022
VII. Time of Duration of Noise	: 20 Minutes
VIII. Height from Ground Level	: 4feet
IX. Distance of Source	: 3 Meter
X. Type of Industry	: Ferro Alloy Plant
XI. Sample Monitoring by	: Mr. Kaushik Podder

RESULT OF AMBIENT NOISE LEVEL STUDY

Sl. No.	Location	MONITORING IN FERRO-ALLOY PLANT (DAY TIME)										Min db(A)	Max db(A)	Average db(A)	Leq db(A)
		S1 7:00 A.M	S2 9:00 A.M	S3 11:00 A.M	S4 1:00 P.M	S5 3:00 P.M	S6 5:00 P.M	S7 6:00 P.M	S8 7:00 P.M	S9 8:00 P.M	S10 9:00 P.M				
1.	Main Gate (West Side)	60.2	61.2	62.4	63.4	64.5	61.6	60.8	61.9	60.8	61.4	60.2	64.5	61.02	62.24
2.	East Side Boundary Wall	68.5	69.7	64.8	63.8	67.7	68.2	66.3	69.7	70.3	69.4	63.8	70.3	67.84	68.28
3.	South Side Boundary Wall (Towards COP Coal Shed)	62.8	63.5	64.9	60.2	65.9	67.7	66.2	65.1	62.8	61.7	60.2	67.7	64.08	64.60
4.	North Side Boundary Wall (Towards Pattern Shop)	62.5	61.8	63.4	63.8	62.8	62.5	63.2	63.8	63.4	64.6	61.8	64.6	63.18	63.25
5.	Limit	75													



H.O. : 63/B, Rashtarguru Avenue, Kolkata - 700028 Phone [033-25792891/25497480
 Laboratory : 51, 185, 180, 189, 190, 192 & 326/3 Rashtarguru Avenue, Kolkata - 700028
 Email : envirocheck50@gmail.com / info@envirocheck.in / Website : www.envirocheck.in





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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



RESULT OF NOISE LEVEL STUDY

Sl. No.	Location	MONITORING IN FERRO-ALLOY PLANT (NIGHT TIME)										Min dB(A)	Max dB(A)	Average dB(A)	Leq dB(A)
		51 10:00 P.M	52 10:30 P.M	53 11:00 P.M	54 11:30 P.M	55 12:00 P.M	56 12:30 A.M	57 1:00 A.M	58 1:30 A.M	59 2:00 A.M	510 2:30 A.M				
1.	Main Gate (West Side)	52.2	52.8	53.4	52.8	52.6	52.8	52.5	56.5	52.6	55.8	52.2	56.5	53.40	53.66
2.	East Side Boundary Wall	63.3	62.4	63.6	62.8	63.4	64.8	63.8	62.7	63.6	64.0	62.4	64.8	63.44	63.49
3.	South Side Boundary Wall (Towards CDP Coal Shed)	53.2	52.8	53.4	52.4	52.6	52.8	52.5	55.5	52.6	56.4	52.4	56.4	53.42	53.65
4.	North Side Boundary Wall (Towards Pattern Shop)	60.2	62.2	63.6	63.2	63.1	63.6	63.2	63.4	62.6	62.9	60.2	63.6	62.70	62.80
5.	Limit	70													
** Mean of Leq - Equivalent to Sound Energy Limit in Leq dB(A)															
Category Area															
A. Industrial Area															
B. Commercial Area															
C. Residential Area															
D. Silence Zone															
**Day Time is reckoned in between 6:00 A.M & 10:00 P.M															
**Night Time is reckoned in between 10:00 P.M & 6:00 A.M															
(Central Pollution Control Board, Ministry of Environment & Forests Government of India) & (Department of Environment, Government of West Bengal)															

Report Print Date: 12/09/2024

>End of Reporte



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NOISE MONITORING

Annexure-4

INTERNAL AMBIENT NOISE MONITORING IN FERRO-ALLOY PLANT (Day Time)

Sl. No.	AMBIENT NOISE LEVEL - db(A)							
1	Month	April-24	May-24	June-24	July-24	Aug-24	Sep-24	
2	Date & Time	16.04.2024 (09.30am -10.30am)	21.05.2024 (10.30am -11.30am)	06.06.2024 (11.00am -11.30am)	16.07.2024 (11.00am -11.30am)	14.08.2024 (10.00am -10.30am)	03.09.2024 (10.00am -10.30am)	
3	LOCATION							
A	Main Gate (West Side)	65	69	66	68	67	64	
B	East side Boundary wall	68	67	69	69	70	68	
C	Near Furnace building (south side boundary wall)	66	68	68	67	69	65	
D	North Side Boundary wall (Towards Pattern Shop)	67	66	66	68	70	65	
4	LIMIT	75						

INTERNAL AMBIENT NOISE MONITORING IN FERRO-ALLOY PLANT (Night Time)

Sl. No.	AMBIENT NOISE LEVEL - db(A)							
1	Month	April-24	May-24	June-24	July-24	Aug-24	Sep-24	
2	Date & Time	16.04.2024 (10.30pm -11.30pm)	21.05.2024 (10.30pm -11.30pm)	06.06.2024 (10.30pm -11.30pm)	16.07.2024 (10.30pm -11.30pm)	14.08.2024 (10.30pm -11.30pm)	03.09.2024 (10.30pm -11.30am)	
3	LOCATION							
A	Main Gate (West Side)	62	65	63	65	66	60	
B	East side Boundary wall	66	66	64	66	67	62	
C	Near Furnace building (south side boundary wall)	63	64	62	64	65	55	
D	North Side Boundary wall (Towards Pattern Shop)	62	63	63	65	66	63	
4	LIMIT	70						



(Annexure-6)

ELECTROSTEEL CASTINGS LIMITED

Vill : Kashberia, P. O. : Shibramnagar, Haldia, Dist. : Purba Medinipur 721 635, India
Tel : 03224 277 721, Fax : 03224 278107
CIN : L27310OR1955PLC000310
Web : www.electrosteelcastings.com

PIONEERING



Ref: ECL/PCB/FAP/04



Date: 19.09.2024

To OSD
The Chief Engineer (O & E Cell),
West Bengal Pollution Control Board,
Paribesh Bhawan, Bldg.10A, Block- LA,
Sector III, Salt Lake,
Kolkata 700 098.

Sub: Environmental Statement Report for the financial year ending 2023-2024.

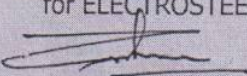
Dear Sir,

Enclosed please find the Annual Statement Report of our **Ferro Alloy Plant** in form-V for the financial year 2023-2024 as per the provisions of Environment Protection Rules' 86.

Thanking You,

Yours faithfully,

for ELECTROSTEEL CASTINGS LIMITED,


(R. Roshan)
A V P

Cc: The Environmental Engineer & In charge.
West Bengal Pollution Control Board,
Haldia Regional Office,
Raghunathchak, P.O:-Barghasipur,
P.S:- Bhabanipur
Medinipur (East)-721657.

Encl: 1) Environmental Statement Report (Form-V).
2) Stack Monitoring Report (Jan-24).

Follow the Electrosteel Group on



H.O. : 19, Camac Street, Kolkata 700 017
Tel : 91 33 7103 4400, 2283 9990, Fax : 91 33 2289 4340
Regd. Office : Rathod Colony, Rajgangpur, Sundergarh, Odisha 770 017



Form-V
Environmental Statement
Electrosteel Castings Ltd. (Ferro Alloy Plant)

Environmental Statement for the financial year ending 31st March, 2024

Part-A

i) Name and address of the owner/occupier of the industry operation or process:

Mr. Sunil Harbans Lal Katial
30, B. T. Road, Khardah, P. O- Sukchar,
Dist- 24 Parganas (N)
Pin- 700115

ii) Industry category: Primary (STC Codes) : *Large Scale Industry*
Secondary (STC codes)

iii) Production capacity : 1) *Ferro Manganese- 22890 TPA.*
2) *Ferro Silicon- 6258 TPA.*
3) *Silico Manganese- 16260 TPA.*

iv) Year of Establishment : *June-2019.*

iv) Date of last environmental statement submitted: *20/09/2023.*

Part-B

Water and Raw material consumption

i) Water consumption, m³/day: 123
Process: - Nil
Cooling: - 113 m³/day.
Domestic:- 10 m³/day.

Name of products	Process water consumption per unit of product output, m ³ /mt	
	(1) During the previous Financial year	(2) during the current financial year
<i>Not applicable</i>		



//2//

ii) Raw material consumption

*Name of Raw material	Name of the products	Consumption of raw material per unit of output (mt. /mt.)	
		During the previous Financial year	During the current Financial year (23-24)
i) Manganese ore	Silico Manganese	2.11 MT/MT of Si-Mn.	2.10 MT/MT of Si-Mn.
ii) Coal		0.79 MT/MT of Si-Mn	0.69 MT/MT of Si-Mn.
iii) Coke		0.35 MT/MT of Si-Mn	0.38 MT/MT of Si-Mn.
iv) Quartz		0.31 MT/MT of Si-Mn	0.29 MT/MT of Si-Mn.
v) Dolomite		0.09MT/MT of Si-Mn	0.09 MT/MT of Si-Mn

* Industry may use codes if disclosing of raw material list would violate contractual obligations, otherwise all industries have to name the raw materials used.

Part-C

Pollution discharged to environment/unit of output
(Parameters as specified in the consent issued)

Pollutants	Quantity of pollutants Discharged (mass/day) (Kg/day)	Concentrations of Pollutants discharges (Mass/volm)	Percentage of variation from prescribed standards with reasons
(a) Water	No discharge		
(b) Air(SPM & Gas)			
1) Bag filter Stack attached with 9MVA Submerge Arc Furnace			
a) SPM	a) 32.24 kg/day	a) 16.19 mg/Nm ³	-----
b) SO ₂	b) 280.50 kg/day	b) 140.85 mg/Nm ³	-----
c) NO _x	c) 144.78 kg/day	c) 72.70 mg/Nm ³	-----
2) Bag filter stack connected with raw material handling System.			
a) SPM	a) 9.85 kg/day	a) 20.21 mg/Nm ³	-----
3) Stack connected with 250 KVA D.G Set.			
a) SPM	a) 0.28 kg/day	a) 19.2 mg/Nm ³	-----

(Ref; Report of approved laboratory: January-2024)



11311

Part-D
Hazardous Waste

As specified under Hazardous waste (Management and Handling) Amended Rules'16

Hazardous waste	Total quantity (Kg)	
	During the previous Financial year	During the current financial year (23-24)
a) From Process	1) Oil contaminated cotton waste-30 kg 2) Used oil:-60kg 3) Empty Paint Drum:-60kg	1) Oil contamination cotton waste-50kg. 2) Used Oil:-1561 Lit.
b) From Pollution Control Facilities	1) Gas cleaning residue- 98450 kg	4) Gas cleaning residue: - 112760kg.

Part-E
Solid waste

Waste	Total quantity (Kg)	
	During the previous Financial year	During the current year (23-24)

(a) from process	16897 MT	11815 MT
(b) from pollution control facilities	Nil	805MT (Bag filter dust)
(c) (i) Quantity recycled or re-utilized Within the unit	Nil	805MT (Bag filter dust)
(ii) Sold	10589 MT	3959 MT (Slag)
(iii) Disposed		
a) from process	2808 MT (Land filling for construction purpose) & 3500MT (Stock in hand)	6400 MT-Slag (Land filling for construction purpose) & 4955 MT-Slag (Stock in Hand)
b) from pollution control facilities	Nil	Nil



//4//

Part-F

Please specify the characteristics (in terms of composition and quantum) of hazardous as well as solid wastes and indicate the disposal practice adopted for both these categories of wastes;

HAZARDOUS WASTE;

<u>Chemical Composition</u>	<u>Qty (Lit/Kg)</u>	<u>Disposal</u>
i) From Process		
a) Gas cleaning residue	112760 kg	Dispose to PCB authorize agency.
b) Used oil	1561 lit	Dispose to PCB authorized Recycler.
ii) From Maintenance .		
a) Oil contaminated cotton waste	50 kg	Dispose to PCB authorize agency.

NON-HAZARDOUS:

<u>Chemical Composition</u>	<u>Qty (kg)</u>	<u>Disposal</u>
Silico Manganese Slag		
i) From Process	10359 MT/year	Use in road construction and Pavement making.

Part-G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production: -

- 1) One concrete vat with water sprinkling arrangement has been constructed to control fugitive emission during disposal of Furnace bag filter dust.
- 2) We have implemented mechanized start-delta conversion instead of manual conversion to avoid heat loss in furnace due to long stoppage of Ferro-Alloy Plant. Total energy saving of 82.20 MWh Per year.
- 3) Implemented Hybridization system in cooling water pump's drive to avoid stoppage of Sub Merged Arc Furnace due to tripping of cooling water pump during heavy voltage surge from Grid. Resulting saving of loss of heat energy equivalent to approx. 103 MWh to restart the Furnace.



1/5/11

Part-H

Additional measures /investment proposals for environmental protection including abatement of pollution, prevention of pollution: -

The plant is always sincerely striving for improving of working atmosphere with innovative approaches to maintain sustainable development in the surrounding areas.

Part-I

Any other particular for improving the quality of the environment:-

- a) Observation of "National Safety Day" & "World Environment Day" on 4th March & 5th June respectively to create awareness among the staffs, workmen, local community & also planted 156 saplings in new land area during this financial year (2023-24) to abate pollution.
 - b) In this financial year (23-24), 4.9 MT Plastic- waste has been disposed through M/s-KGN Enterprise. (Haldia) from our processes.
 - c) Organize regular in-house training/counseling programme on "House Keeping, Safety & environment" to improve awareness level among all employees.
-



JAN-2024 (FAP)



ENVIROCHECK

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TEST REPORT

FORMAT NO: ENV/FM/38

Name of the Industry	: Electro Steel Castings Ltd. (Ferro Alloy Plant)	Type of Industry	: Ferro Alloy Plant
Address	: Kashberia, P.O. - Shivram Nagar, Haldia, Purba Medinipur - 721635	Sampling Date & Time	: 08.01.2024 (12:00 noon - 12:25 p.m.)
		Period of Analysis	: 13.01.2024 - 13.01.2024
		Date of Issue	: 15.01.2024
Sampling Plan & Procedure	: ENV/SOP/01	Deviation from the Sampling Method and Plan	: No
Sample Condition	: Sealed	Sample ID No.	: ENV/40/Jan./A/1
		Report No.	: ENV/40/Jan./TR(A)/1/23-24
		Type of Sample	: Stack Emission

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	: SEAF - I
Shape of Stack	: Circular
Materials of Construction	: M.S.
Capacity	: Rated - 9.0 MVA (Running - 6.5 MVA)
Emission Due to	: Melting of Coke, Coal, Mn-Ore, Quartz & Dolomite
Fuel Used	: Electrically Operated
Working Fuel Consumption	: N.A.
Pollution Control Device	: Bag Filter
Height of Stack (mtr.) (from G. L.)	: 35.0
Stack I.D. at sampling point (mtr.)	: 1.80
Height of sampling port (mtr.) (from G.L.)	: 30.0
Permanent Platform & Ladder	: Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS: 11255 (Part 1)	91.0
2.	Barometric Pressure	mm of Hg.	--	759.0
3.	Velocity of Gas flow	m/s	IS: 11255 (Part 3)	11.26
4.	Quantity of Gas flow	Nm ³ /hr.	IS: 11255 (Part III)	82978.76
5.	Concentration of SO ₂	mg/Nm ³	IS 11255 (Part 2): 2019	140.85
6.	Concentration of NO _x	mg/Nm ³	IS 11255 (Part 7): 2017 / ASTM D 1608-98, Sec. 11 (Vol. 11.07): 2017	72.7
7.	Concentration of CO ₂	% (v/v)	IS 13270: 2019	2.0
8.	Concentration of O ₂	% (v/v)	EPA Method 3: 2017	16.8
9.	Concentration of CO	% (v/v)	IS 13270: 2019	<1.0
10.	Moisture	%	Emission Control Part - III, CPCB	1.61
11.	Concentration of Particulate Matter	mg/Nm ³	IS 11255 (Part - 1): 2019 & ASTM D 3685/D 3685M-98 (reapproved 2005): Sec. 11 (Vol.11.07): 2017	16.19

Remarks : Result relates only to the sample tested.

Reviewed By:

Indrani Bhattacharyya

(Indrani Bhattacharyya)
(Dy. Technical Manager)

Authorised Signatory:

Dr. Sumit Chowdhury

(Dr. Sumit Chowdhury)
(Technical Manager)

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TEST REPORT

FORMAT NO: ENV/FM/38

Name of the Industry	: Electro Steel Castings Ltd. (Ferro Alloy Plant)	Type of Industry	: Ferro Alloy Plant		
Address	: Kashberia, P.O. - Shivram Nagar, Haldia, Purba Medinipur - 721635	Sampling Date & Time	: 08.01.2024 (12:35 p.m. - 01:00 p.m.)		
		Period of Analysis	: 13.01.2024 - 13.01.2024		
		Date of Issue	: 15.01.2024		
Sampling Plan & Procedure	: ENV/SOP/01	Deviation from the Sampling Method and Plan	: No	Type of Sample	: Stack Emission
Sample Condition	: Sealed	Sample ID No.	: ENV/40/Jan./A/II	Report No.	: ENV/40/Jan./TR(A)/II/23-24

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	: Raw Material Handling System		
Shape of Stack	: Circular	Height of Stack (mtr.) (from G. L.)	: 30.0
Materials of Construction	: M.S.	Stack I.D. at sampling point (mtr.)	: 0.6096
Capacity	: --	Height of sampling port (mtr.) (from G.L.)	: 12.18
Emission Due to	: Process Activity (Feeding & Handling of Raw Materials)		
Fuel Used	: N.A.	Permanent Platform & Ladder	: Yes
Working Fuel Consumption	: Nil		
Pollution Control Device	: Bag Filter		

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS: 11255 (Part 1)	: 39.7
2.	Barometric Pressure	mm of Hg.	--	: 759.0
3.	Velocity of Gas flow	m/s	IS: 11255 (Part 3)	: 20.28
4.	Quantity of Gas flow	Nm ³ /hr.	IS: 11255 (Part III)	: 20301.97
5.	Concentration of Particulate Matter	mg/Nm ³	IS 11255 (Part - 1) : 2019 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol.11.07) : 2017	: 20.21

Remarks : Result relates only to the sample tested.

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TEST REPORT

FORMAT NO: ENV/FM/38

Name of the Industry	: Electro Steel Castings Ltd. (Ferro Alloy Plant)	Type of Industry	: Ferro Alloy Plant		
Address	: Kashberia, P.O. - Shivram Nagar, Haldia, Purba Medinipur - 721635	Sampling Date & Time	: 08.01.2024 (12:35 p.m. - 01:00 p.m.)		
		Period of Analysis	: 13.01.2024 - 13.01.2024		
		Date of Issue	: 15.01.2024		
Sampling Plan & Procedure	: ENV/SOP/01	Deviation from the Sampling Method and Plan	: No	Type of Sample	: Stack Emission
Sample Condition	: Sealed	Sample ID No.	: ENV/40/Jan./A/II	Report No.	: ENV/40/Jan./TR(A)/II/23-24

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	: Raw Material Handling System		
Shape of Stack	: Circular	Height of Stack (mtr.) (from G. L.)	: 30.0
Materials of Construction	: M.S.	Stack I.D. at sampling point (mtr.)	: 0.6096
Capacity	: --	Height of sampling port (mtr.) (from G.L.)	: 12.18
Emission Due to	: Process Activity (Feeding & Handling of Raw Materials)		
Fuel Used	: N.A.	Permanent Platform & Ladder	: Yes
Working Fuel Consumption	: Nil		
Pollution Control Device	: Bag Filter		

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS: 11255 (Part 1)	: 39.7
2.	Barometric Pressure	mm of Hg.	--	: 759.0
3.	Velocity of Gas flow	m/s	IS: 11255 (Part 3)	: 20.28
4.	Quantity of Gas flow	Nm ³ /hr.	IS: 11255 (Part III)	: 20301.97
5.	Concentration of Particulate Matter	mg/Nm ³	IS 11255 (Part - 1) : 2019 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol.11.07) : 2017	: 20.21

Remarks : Result relates only to the sample tested.

Reviewed By:

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TEST REPORT

FORMAT NO.: ENV/FM/38

Name of the Industry	: Electro Steel Castings Ltd. (Ferro Alloy Plant)	Type of Industry	: Ferro Alloy Plant
Address	: Kashberia, P.O. - Shivram Nagar, Haldia, Purba Medinipur - 721635	Sampling Date & Time	: 08.01.2024 (01:10 p.m. - 01:35 p.m.)
		Period of Analysis	: 13.01.2024 - 13.01.2024
		Date of Issue	: 15.01.2024
Sampling Plan & Procedure	: ENV/SOP/01	Deviation from the Sampling Method and Plan	: No
Sample Condition	: Sealed	Sample ID No.	: ENV/40/Jan./A/III
		Report No.	: ENV/40/Jan./TR(A)/III/23-24
		Type of Sample	: Stack Emission

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	: D. G. - 250 KVA (Acoustic Enclosure attached)	
Shape of Stack	: Circular	
Materials of Construction	: M.S.	
	Height of Stack (mtr.) (from G. L.)	: 10.36
Capacity	: 250 KVA	
	Stack I.D. at sampling point (mtr.)	: 0.1524
Emission Due to	: Combustion of H.S.D	
	Height of sampling port (mtr.) (from G.L.)	: 7.92
Fuel Used	: H.S.D	
Working Fuel Consumption	: 57 liter./hr.	
Pollution Control Device	: Nil	
	Permanent Platform & Ladder	: Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS : 11255 (Part 1)	119.0
2.	Barometric Pressure	mm of Hg.	--	759.0
3.	Velocity of Gas flow	m/s	IS : 11255 (Part 3)	12.27
4.	Quantity of Gas flow	Nm ³ /hr.	IS : 11255 (Part III)	610.05
5.	Concentration of SO ₂	mg/Nm ³	IS 11255 (Part 2) : 2019	46.15
6.	Concentration of NO _x	mg/Nm ³	IS 11255 (Part 7) : 2017 / ASTM D 1608-98, Sec. 11 (Vol. 11.07) : 2017	51.84
7.	Concentration of CO ₂	% (v/v)	IS 13270 : 2019	7.2
8.	Concentration of O ₂	% (v/v)	EPA Method 3 : 2017	12.2
9.	Concentration of CO	% (v/v)	IS 13270 : 2019	<1.0
10.	Moisture	%	Emission Control Part - III, CPCB	Nil
11.	Concentration of Particulate Matter	mg/Nm ³	IS 11255 (Part - 1) : 2019 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol.11.07) : 2017	19.20

Remarks : Result relates only to the sample tested.

Reviewed By:

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<End of Report>

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