

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



Ref: ECL/MOEFCC/FA/Haldia/01/19-20

Date: 30/05/2019

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



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

Sub: Half Yearly 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 Oct-18 to March-19.

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 Oct-18 to March-19 for your perusal.

Thanking you,
Yours faithfully,
For **ELECTROSTEEL CASTINGS LIMITED,**

(A. K. Dey)
Sr. Vice President

- Enco: a) EC Compliance Report-(Annexure-1).
b) Report of Ambient noise (Annexure-2).
c) Report of AAQ for the month of March, 2019 (Annexure-3).

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) The Environmental Engineer,
West Bengal Pollution Control Board,
Haldia Regional Office, Super Market Building,
Durgachak, Medinipur (East)-721602.

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



ENVIRONMENT CLEARANCE SIX MONTHLY COMPLIANCE REPORT

(FROM OCTOBER-2018 TO MARCH -2019)

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

| SL No. | 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 | One Opacity meter has been installed in one stack which is connected with Submerged Electric Arc Furnace to monitor 24x7 air emission from the stack. It will start working after commissioning of the plant. |
| 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 report will be submitted after commissioning of the plant. |
| 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. | Will be complied from the starting of the plant operation. |
| 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) Stationary sprinklers & mobile water sprinkler have been deployed for dust suppression. ii) Installed two stacks of adequate height & diameter with continuous stack monitoring facility in one stack which is connected with SEAF. 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 | Adequate dust extraction system comprising of required equipment has |



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| | lock valves etc. should be installed to control the primary and secondary emission | been installed to control the primary and secondary emission. |
| 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. |
| 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. | Work for development of green belt has already been started along the boundary wall of the plant in consultation with Forest Range Office at Balughata under Nandakumar forest range office and local communities. Already many saplings have been planted and work is continuing. Entire plantation will be completed in time. |
| x. | All the Ferro alloy slag shall be used in the preparation of building materials. | Will be complied after starting of the operation. |
| 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, ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders. | Environmental policy has been already Submitted to MoEFCC on 10.01.2018. Standard operating procedure will be followed as stated in EMP. Already Submitted on 10.01.2018. 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 |
| xii. | An amount equal to Rs. 125 Lakhs, which is 2.5% of the total project cost (Rs. 50 Crores) shall be earmarked | (1) An amount of Rs. 25500/- handed over to 10 BPL students on Feb 19 & |



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| | 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. | this will be continued on quarterly basis. (2) Work for construction of Dispensary at Kismatshivramnagar has been started on April'2019. (3) Dismantling work at Basudevpur Paschim Pally Primary School started on April 2019 and under progress. Construction of sanitary Block will start soon. (4) Construction of Community Hall is under progress at Kashberia village. (5) Submergible Pump is being set up for providing drinking water facility at Kashberia village and expected to be completed in 1 st half of june. |
| xiii. | 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. | Solar street lights have been installed within project site with all necessary arrangements. More solar street lights will be provided within project site in the next 6 months. Solar lighting arrangement in the villages will be started after completion of road repairing work around August'19. |
| xiv. | The project proponent shall fully provide for LED lights in their offices and residential areas. | LED light has been installed throughout the plant. |
| xv. | 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. | All facilities & infrastructures has been provided as per the requirement. |

PART B – General Conditions

| | | |
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| i. | The project authorities must strictly adhere to the stipulations made by the West Bengal Pollution Control Board and the State Government. | Following all stipulated guideline of WBPCB & the state Government. |
| 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. | 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 |



| | | |
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| | 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. | March 19 onward & the results are attached 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 19 th May ,1993 and 31 st December ,1993 or as amended from time to time . The treated waste water shall be utilized for plantation purpose. | Industrial waste water will be properly collected and utilized for plantation purpose after commissioning of the plant. |
| 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). | We have started ambient noise monitoring internally in four locations along the boundary wall in day & night time on monthly basis. We have also started ambient noise monitoring by approved 3rd party on quarterly basis. Results are attached in Annexure-2. |
| 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 are maintained as per Factories Act .Details of health examination report will be submitted in next six monthly compliance report. |
| 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 will be collected in the pond through surface drain and will be utilized 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 the Ministry at Bhubaneswar. The funds so provide shall not be diverted for any other purpose. | Complied as per documents already submitted on 10.01.2018. |



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| 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 31 st 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. | Will be complied after commissioning. |
| 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. |



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| 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. Received NOC from WBPCB valid up to 31.08.2024. Applied for Consent To Operate. Started on 02.04.2018. |
|-----|---|---|



| Annexure-2 | | | | | | | | | | | |
|--|--|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| INTERNAL MONITORING REPORT IN FERRO ALLOY PLANT (Day Time) | | | | | | | | | | | |
| Sl No | LOCATION | AMBIENT NOISE LEVEL -db(A) | | | | | | | | | |
| | | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | Dec-18 | Jan-19 | Feb-19 | Mar-19 |
| 1 | Main Gate (West Side) | 60.1 | 62 | 64 | 64.5 | 66.00 | 68.5 | 69.5 | 70 | 69.5 | 71 |
| 2 | East side Boundary wall | 50.5 | 54.5 | 56.5 | 56 | 58.00 | 62.5 | 65.3 | 67 | 68 | 70 |
| 3 | Near Furnace building (West side boundary wall) | 60 | 61 | 64 | 66 | 67.50 | 70.5 | 70.8 | 72 | 72 | 72.3 |
| 4 | North Side Boundary wall (Towards Pattern Shop) | 55 | 58 | 57 | 63 | 65.00 | 70.5 | 71 | 69 | 71 | 72 |
| 6 | LIMIT | 75 | | | | | | | | | |

| INTERNAL MONITORING IN FERRO ALLOY PLANT (Night Time) | | | | | | | | | | | |
|---|--|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sl No | LOCATION | AMBIENT NOISE LEVEL -db(A) | | | | | | | | | |
| | | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | Dec-18 | Jan-19 | Feb-19 | Mar-19 |
| 1 | Main Gate (West Side) | 50 | 57 | 55 | 58 | 60 | 61 | 64 | 65 | 66 | 65.8 |
| 2 | East side Boundary wall | 48 | 48 | 50 | 53 | 52 | 57 | 60 | 61 | 62 | 63.5 |
| 3 | Near Furnace building (West side boundary wall) | 56 | 55 | 58 | 60 | 61 | 64 | 67 | 67 | 68 | 68.3 |
| 4 | North Side Boundary wall (Towards Pattern Shop) | 50 | 52 | 51 | 61 | 60 | 63 | 65 | 66 | 67 | 67.8 |
| 6 | LIMIT | 70 | | | | | | | | | |



| Sl No | LOCATION | AMBIENT NOISE LEVEL -Leq dB(A) | | | |
|-------|--|---|------------------------------|---|------------------------------|
| | | (DAY TIME) | | (NIGHT TIME) | |
| | | M/s-Indicative consultant india on 12.12.18 | M/s-Envirocheck on 11.03.19. | M/s-Indicative consultant india on 12.12.18 | M/s-Envirocheck on 11.03.19. |
| 1 | Main Gate (West Side) | 63.44 | 66.92 | 59.56 | 64.35 |
| 2 | East side (Boundary wall) | 66.68 | 71.4 | 59.33 | 67.01 |
| 3 | South side (Towards COP Coal shed) | 67.37 | 72.84 | 58.46 | 66.65 |
| 4 | North Side Boundary wall (Towards Pattern Shop) | 65.87 | 73.01 | 61.34 | 66.01 |
| 5 | LIMIT | 75 | | 70 | |





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SUMMARY REPORT FOR THE MONTH OF MARCH, 2019

1. Name of the Industry : M/S. Electrosteel Castings Limited (Ferro Alloy Plant)
2. Address : Haldia, Kasberia, P.O. – Shivramnagar,
Pin - 721635

LOCATION: Dakshin Kashberia- South side of the Factory (Outside Factory Premises)-

| Parameters | Sampling Date | | | | | | Limit as per NAAQ Standards (24 hours) (Schedule VII) |
|--|---------------|------------|------------|------------|------------|------------|---|
| | 11.03.2019 | 14.03.2019 | 18.03.2019 | 22.03.2019 | 25.03.2019 | 28.03.2019 | |
| PM ₁₀ (µg/m ³) | 81.50 | 86.20 | 82.30 | 80.10 | 82.50 | 80.10 | 100 |
| PM _{2.5} (µg/m ³) | 42.80 | 46.80 | 35.0 | 36.50 | 38.20 | 34.20 | 60 |
| SO ₂ (µg/m ³) | 6.80 | 7.50 | 6.80 | 6.50 | 7.20 | 6.80 | 80 |
| NO _x (µg/m ³) | 25.00 | 26.50 | 25.0 | 28.50 | 31.80 | 30.0 | 80 |

Average PM₁₀ = 82.11 (µg/m³), PM_{2.5} = 38.91 (µg/m³), SO₂ = 6.93 (µg/m³), NO_x = 27.80 (µg/m³),

Continued.... Page 2

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LOCATION: Main Gate of Ferro Alloy Plant (Inside Factory Premises)

| Parameters | Sampling Date | | | | | | Limit as per NAAQ Standards (24 hours) (Schedule VII) |
|--|---------------|------------|------------|------------|------------|------------|---|
| | 11.03.2019 | 14.03.2019 | 18.03.2019 | 22.03.2019 | 25.03.2019 | 28.03.2019 | |
| PM ₁₀ (µg/m ³) | 92.80 | 94.10 | 81.50 | 84.50 | 83.50 | 81.50 | 100 |
| PM _{2.5} (µg/m ³) | 53.20 | 56.20 | 38.70 | 35.20 | 35.80 | 37.50 | 60 |
| SO ₂ (µg/m ³) | 8.50 | 9.10 | 8.50 | 7.60 | 7.20 | 8.50 | 80 |
| NO _x (µg/m ³) | 32.50 | 35.0 | 32.50 | 28.50 | 20.0 | 28.50 | 80 |

Average PM₁₀ = 86.31 (µg/m³), PM_{2.5} = 42.76 (µg/m³), SO₂ = 8.23 (µg/m³), NO_x = 29.50 (µg/m³),

Continued.... Page 3

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LOCATION: Kashberia Uttarpally (North Side) (Outside Factory Premises)

| Parameters | Sampling Date | | | | | | Limit as per NAAQ Standards (24 hours) (Schedule VII) |
|--|---------------|------------|------------|------------|------------|------------|---|
| | 11.03.2019 | 14.03.2019 | 18.03.2019 | 22.03.2019 | 25.03.2019 | 28.03.2019 | |
| PM ₁₀ (µg/m ³) | 83.50 | 80.12 | 82.60 | 81.20 | 81.80 | 78.20 | 100 |
| PM _{2.5} (µg/m ³) | 51.80 | 53.20 | 51.80 | 48.20 | 43.50 | 48.10 | 60 |
| SO ₂ (µg/m ³) | 7.80 | 8.50 | 7.80 | 7.10 | 7.50 | 6.50 | 80 |
| NO _x (µg/m ³) | 30.00 | 32.50 | 30.0 | 28.50 | 25.0 | 23.50 | 80 |

Average PM₁₀ = 81.23 (µg/m³), PM_{2.5} = 49.43 (µg/m³), SO₂ = 7.53 (µg/m³), NO_x = 28.25 (µg/m³),

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Certified by ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007



LOCATION: Kishmat Shibramnagar (West Side)(Outside Factory Premises)

| Parameters | Sampling Date | | | | Limit as per NAAQ Standards (24 hours) (Schedule VII) |
|---|---------------|------------|------------|------------|--|
| | 18.03.2019 | 22.03.2019 | 25.03.2019 | 28.03.2019 | |
| PM ₁₀ ($\mu\text{g}/\text{m}^3$) | 81.90 | 81.50 | 86.20 | 80.10 | 100 |
| PM _{2.5} ($\mu\text{g}/\text{m}^3$) | 34.25 | 49.20 | 45.10 | 45.20 | 60 |
| SO ₂ ($\mu\text{g}/\text{m}^3$) | 6.50 | 7.20 | 6.80 | 7.80 | 80 |
| NO _x ($\mu\text{g}/\text{m}^3$) | 23.50 | 26.50 | 25.0 | 28.50 | 80 |

Average PM₁₀ = 82.42 ($\mu\text{g}/\text{m}^3$), PM_{2.5} = 43.43 ($\mu\text{g}/\text{m}^3$), SO₂ = 7.07 ($\mu\text{g}/\text{m}^3$), NO_x = 25.87 ($\mu\text{g}/\text{m}^3$)

Date: 30.03.2019

Authorized Signatory :

Dr. SUMIT CHOWDHURY
Scientist

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