

ELECTROSTEEL CASTINGS LIMITED

Srikalahasthi Works

Rachagunneri 517641, Srikalahasthi Mandal, Tirupati District, A.P.

Tel: +91 08578-286650 – 55. Fax: +91 08578 286657/88

CIN: L27310OR1955PLC000310

Web: www.electrosteel.com; E-mail: swaccounts@electrosteel.com



31.05.2023

To,

The Inspector General of Forest
Ministry of Environment, Forests and Climate change
Government of India
Integrated Regional Office,
Vijayawada Green House Complex,
Vijayawada – 520010.

Dear Sir,

Sub: Six monthly compliance report for the period of October'22 to March'23 - Expansion of Ductile Iron Pipes Plant by installing 4x100 TPD Sponge Iron (1,30,000 TPA), Steel making facility (1,25,000 TPA), 4x9 MVA Ferro Alloy (Fe-Si:25,000 TPA or Si-Mn: 60,000 TPA or Fe-Mn: 75,000 TPA) along with 12 MW Captive power Plant (8 MW WHRB and 4 MW FBC) at Villages Merlapaka & Rachagunneri, Mandal Yerpedu & Srikalahasthi, District Chittoor, Andhra Pradesh from M/s Srikalahasthi Pipes to M/s Electrosteel Castings Ltd .

Please find enclosed Six-monthly compliance report for the period of October'22 to March'23 for Environment Clearance no J-11011/158/2011 –1A, II (1) dated 21.02.2022 (transfer of EC) for conditions stipulated in Environment clearance to Electrosteel Castings Ltd, Srikalahasthi works.

The copy of the compliance report is sent to you as soft copy through mail (ecompliance-ap@gov.in) and same will be uploaded to the ECL website for your kind perusal.

Thanking you,

Yours faithfully

For ELECTROSTEEL CASTINGS LTD.

 31/05/2023
Siva Prasad Dontala

Assistant General Manager (Environment)

Cc : CPCB, Régional office / APPCB, Régional office

Introduction:

Electrosteel Castings Ltd - Srikalahasthi works is one of the leading players in the DI pipe industry in India and it was established in 1991 by M/S Lanco Industries Limited. In the year 2002 Electrosteel Castings Ltd entered into a strategic alliance with LIL. On 29.09.14 Company name has been changed to Srikalahasthi Pipes Ltd (SPL) from M/S Lanco Industries Ltd. Srikalahasthi pipes Ltd has been amalgamated with ECL on 1st January 2022.

ECL, Srikalahasthi works plant is located at Rachagunneri, Srikalahasthi, Chittoor District, Andra Pradesh near Tirupathi and its key products include Pig Iron, Ductile Iron Pipes, Portland Slag Cement, Coke, Ferro Silicon and Captive power generation. Electrosteel Castings Ltd (SW) has a backward integration manufacturing facility which includes a Blast furnace, Ductile Iron pipe plant, Cement plant, sinter plant, coke oven plant, power plant and a sewage treatment facility in the same complex spread over 288.27 acres, giving the company a significant competitive advantage.

The company supplies DI pipes to various water Boards, Municipal Corporations and Turnkey Contractors across the country for their water infrastructure Projects which is the thrust area of the Government of India.

CFE obtained from APPCB on 03.08.2022 under Change of product mix for increasing the production capacity without any increase in pollution load:

CFE (Consent for Establishment) order reference and products capacities:

Order No. 391 /APPCB/CFE/RO-TPT/HO/2005 dated 03/08/2022 and valid up to 02.08.2029.

SN O	Products	Existing CFE and EC Capacities (TPA)	Existing CFO capacities (TPA)	Proposed CPM (TPA)	Total after CPM CFE (TPA)
1	Ductile Iron Pipes	4,00,000 TPA	4,00,000 TPA	2,00,000 TPA increased	6,00,000 TPA
2	Pig Iron/Liquid Metal	5,25,000 TPA	5,25,000 TPA	75,000 TPA increased	6,00,000 TPA
3	Low Ash Metallurgical Coke	4,62,000 TPA	2,80,000 TPA	No Change	4,62,000 TPA
4	Captive Power Generation	58.5 MW	22.0 MW	18 MW dropping	40.5 MW
5	Slag Cement (PSC/OPC/SRC/PPC/ CC/ GGBS)	3,90,000 TPA (PSC/OP C/ SRC)	2,00,000 TPA (PSC/OP C/ SRC)	1,95,000 TPA * increased (PSC/OPC/SR C/ PPC/CC/ GGBS) * Quantity not approved. Only	3,90,000 TPA (PSC/OP C/ SRC/ PPC/CC/ GGBS

				product mix approved	
6	Sponge Iron (4 x 100 TPD)	1,30,000 TPA**	Not yet started the production	The industry has dropped the proposal	Nil
7	Steel Products (SMS and wire rod mill/ Section mill/ Rolling mill to produce wire rods/Roundels/ Angels /Channels /Flats/TMT Bars/Steel/Spring Steel/ Alloy Steel/Special steel)	1,25,000 TPA	Not yet started the production	No Change	1,25,000 TPA
8	Ferro Alloy				
	Ferro Silicon	25,000 TPA	16,000 TPA	No Change	25,000 TPA
	Silico Manganese	60,000 TPA	32,000 TPA	No Change	60,000 TPA
	Ferro Manganese	75,000 TPA	42,000 TPA	No Change	75,000 TPA

CFO (Consent for Operation) status and validity:

Consent Ref: 306687/APPCB/KNL/TPT/CTO&HWA/HO/2023-31/03/2023 and valid up to 30.04.2028

Products	UOM	Production capacity as per Consent Order	Production 2022-23
Molten Metal/Pig Iron	TPA	5,25,000	437823
Ductile Iron Spun Pipe	TPA	5,00,000	399021
Cement (PSC/OPC/SRC/)	TPA	2,00,000	55848
LAM Coke	TPA	2,80,000	206798
Electricity Captive Power	Units	25 MW	134677125
Ferro Silicon	TPA	16,000	15798
STP	KL	7 MLD	1446522 KL

**ELECTROSTEEL CASTINGS LTD
(SRIKALAHASTHI WORKS)**

Name of the Project: Expansion of Ductile Iron Pipes Plant by installing 4x100 TPD Sponge Iron (1,30,000 TPA), Steel making facility (1,25,000 TPA), 4x9 MVA Ferro Alloy (Fe-Si:25,000 TPA or Si-Mn: 60,000 TPA or Fe-Mn: 75,000 TPA) along with 12 MW Captive power Plant (8 MW WHRB and 4 MW FBC) at Villages Merlapaka & Rahagunneri, Mandal Yerpedu & Srikalahasthi, District Chittoor, Andhra Pradesh – reg.

EC clearance letter with date. J-11011/158/2011-IA. II (I) dated 11.01.2013, EC transfer dt 17.10.2016, validity extension dt 28.02.2020, Amendment dt 01.10.2020, EC transfer dated 21.2.2022.

CFE obtained under NIPL and CFE reference: Order No. 391 /APPCB/CFE/RO-TPT/HO/2005 dated 03/08/2022

Combined CFO obtained on 31.03.23 and CFO reference: 306687/APPCB/KNL/TPT/CTO &HWA/HO/2023 dated 31/03/2023 and valid up to 30.04.2028

Period of Compliance: October '22 to March -2023

Present Status of the project:

S No	Product	UOM	Capacity as per EC dt.11.01.2013	Capacity Obtained in CFE under NIPL after CPM dt 03.08.22	Capacity already installed and CFO Obtained	Balance capacity to be set up
1	Ductile Iron Pipes	TPA	4,00,000	6,00,000	5,00,000	1,00,000
2	Pig Iron Liquid Metal	TPA	5,25,000	6,00,000	5,25,000	75,000
3	LAM Coke	TPA	4,62,000	4,62,000	2,80,000	1,82,000
4	Captive Power Generation	MW	58.5	40.5 (Dropped 18 MW)	25	15.5
5	Slag Cement (PSC/OPC/ SRC PPC / GGBS	TPA	3,90,000	3,90,000	2,00,000	1,90,000
6	Sponge (4X 100 TPD)	TPA	1,30,000	Dropped	-----	-----
7	Steel Products	TPA	1,25,000	1,25,000	Yet to be implemented	1,25,000
8	Ferro alloys unit	TPA	FeSi-25,000 SiMn-60,000 FeMn-75,000 (4x9 MVA)	FeSi-25,000 SiMn-60,000 FeMn-75,000 (4x9 MVA)	FeSi-16,000TPA SiMn-32,000TPA FeMn-42,000TPA (2x9 MVA)	FeSi-9,000 SiMn-28,000 FeMn-33,000 (2x9 MVA)

A. SPECIFIC CONDITIONS

S. No	Specific conditions	Compliance Status
i.	On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks should be provide and sufficient air pollution control devices viz. electrostatic precipitator (ESP), and bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm ³ by installing energy efficient technology.	<p>Three online real time continuous Ambient Air Quality Monitoring (CAAQM) stations installed in upwind, crosswind & download direction in consultation with APPCB and the online real time monitoring data is being transmitted to APPCB server for the parameters PM 10, PM 2.5, SO₂ and NO_x.</p> <p>Online continuous stack monitoring facility (PM & Gas measurement) have been provided to all the process stacks and data are being submitted to the APPCB and CPCB.</p> <p>MOEF authorized 3rd party monitoring of Ambient and Stack also being carried out and report submitted to the regional office of APPCB.</p> <p>Online Stack monitoring data from Oct'22 to Mar'23 and 3rd party monitoring data of Mar'23 are attached as Annexure</p> <p>Air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. have been provided to keep the emission level below the std limits. Necessary similar arrangements will be provided during set up of balance capacity also.</p>
ii.	The National ambient air, quality standards issued by the ministry vide G.S.R. No. 826 (E) dated 16 th November, 2009 should be followed.	<p>Noted and being complied.</p> <p>3rd party monitoring data of Feb'23 are attached as Annexure</p>
iii.	Gaseous emission levels including secondary fugitive emissions from the all the sources should be controlled within the latest permissible limits issued by the ministry vide G.S.R. 41(E) dated 30 th May, 2008 and regularly monitored. Guidelines / code of practice issued by the CPCB	<p>Gaseous emission levels including secondary fugitive emission from all the sources are being controlled within the latest permissible limits. Online stack gas monitors have fixed in all the process area and the data is being uploaded to the APPCB and CPCB.</p>

S. No	Specific conditions	Compliance Status
	should be followed.	Necessary similar arrangements will be provided during set up of balance capacity also.
iv.	As per the commitment submitted, charcoal produced from patta lands only should be used. The requisite documents in this regard, shall be submitted to the ministry's regional office at Bangalore on regular basis.	Noted and being complied. 25% Coke fines is used along with Charcoal (75%) . Charcoal is being used in our Ferro alloy plant which is being produced from Patta Land only.
v.	Dust suppression system and bag filters shall be installed to control the fugitive dust emissions at conveyor and transfer points, product handling, loading and unloading points.	Water spray dust suppression system has provided at conveyer fugitive emission sources. Material transfer points, material storage bunkers. Product handling areas were connected to the bag filter to control fugitive dust emission. Water sprinkling arrangements have made in loading and unloading points to control fugitive dust emission. Similar arrangements will be arranged during the set up of balance capacity also.
vi.	Hot gases from the DRI kiln shall be passed thorough 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 dispersion into the atmosphere through ID fan stack, ESP shall be installed to control the particulate emissions from the WHRB.	Sponge Iron Project has been dropped during CFE expansion. CFE obtained through change of product mix under NIPL dated 03.08.22. Hence this condition is not applicable. Ref: Order No. 391 /APPCB/CFE/RO-TPT/HO/2005 dated 03/08/2022.
vii.	Total water requirement shall not exceed 1,920 m ³ /day. Efforts shall further be made to use maximum water from the rain water harvesting sources if needed capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources. Use of air-cooled condensers shall be explored and closed-circuit system shall be provided to reduce water consumption and water requirement shall be modified accordingly.	The total water permitted quantity in CFE under change of product mix (NIPL) is 13326 KLD. Fresh water is 11290KLD and recycle water is 2036 KLD. Year 2022-23 half yearly (Oct'22 to Mar'23) average water consumption per day was 4536 KLD. Tirupathi municipality primary treated sewage water is being used for plant process requirement. Roof top Rain water harvesting structures established and rain water being soaked in the ground to increase the ground water table. Already 26600 m ³ reservoir is available to store the rain water. Additional 280 KLD collection pit arranged to collect the storm water from drains. All the process area has been established closed circuit cooling system to reduce the water

S. No	Specific conditions	Compliance Status
		consumption.
viii.	All the effluent shall be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero discharge shall be adopted; sanitary sewage shall be treated in septic tank followed by soak pit.	Effluent generated in Ductile Iron pipe plant and MBF are utilized for BF slag granulation, Sinter plant process, BF Gas cleaning plant, Pig Cast machine cooling, MBF yard spray and road spray. If effluent is excess it is sent to ETP at STP-2 for reuse. Effluent generated in Captive power plant is neutralized in neutralization pit then used for Coke quenching, coal yard and road spray. The average effluent generation between Oct'22 to Mar'23 was 1801 KLD. No effluent is discharged outside and Zero liquid discharge is being maintained. Sanitary sewage is being sent to STP for treatment and then used for process.
ix.	Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated waste water shall meet the norms prescribed by the state pollution control board or described under the environment (protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's regional office at Bangalore, SPCB and CPCB.	Influent and effluent are monitoring regularly and recorded. Effluent is not discharged outside and zero liquid discharge is being maintained. Generating effluent is fully used for BF slag granulation, Gas cleaning plant make up, Coke quenching, Raw material yard and road spray. Effluent water gets fully evaporated in the above reuse process. Effluent water analysis is being done regularly, MOEF & CC authorized 3 rd party monitoring also being done and report submitted to regional office of MOEF and CPCB every six month.
x.	All the char from DRI plant shall be utilized in FBC boiler of power plant and no char shall be disposed off anywhere else, FBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from the beginning.	Sponge Iron Project has been dropped during CFE expansion. CFE obtained through change of product mix under NIPL dated 03.08.22. Hence this condition is not applicable.
xi.	Slag produced in Ferro Manganese (Fe-Mn) production shall be used in manufacture of silico Manganese (Si-Mn). All the other ferro alloy slag shall be used in the preparation of building materials/laying of roads.	Ferro silicon slag is being used in Induction furnace and also sold to foundries. No production of Ferro Manganese and Silico manganese hence no generation of Ferro Manganese and Silico Manganese slag.
xii.	No Ferro chrome shall be manufactured without prior approval from the Ministry of Environment & Forests.	Noted and will be complied

S. No	Specific conditions	Compliance Status
xiii.	Proper utilization of fly ash shall be ensured as per fly ash notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash should be provided to cement and brick manufactures for further utilization and memorandum of understanding should be submitted to the Ministry's regional office at Bangalore.	Sponge Iron and coal-based power plant project dropped hence no generation of fly ash in the plant.
xiv.	Risk and disaster management plan along with mitigation measures should be prepared and a copy submitted to the ministry's regional office at Bangalore, SPCB and CPCB within 3 months of issue of environment clearance letter.	Emergency preparedness schemes are available and it is being implemented regularly through mock drill which is in line with Risk and disaster management plan. The same has been submitted to the regional office of MOEF, APPCB and CPCB.
xv.	As proposed, green belt shall be developed in 33% of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	53.7 acres I green belt had been developed as per EC amendment letter dated 1 st October'20. 5 acres green belt has been developed in additional land added in CFE -CPM dated 03.08.2022 and remaining area green belt development is under progress. The selection of plant species are as per the CPCB guidelines and in consultation with DFO. During the period 2966 saplings have been planted in the factory premises.
xvi.	All the recommendations made in the charter on corporate responsibility for environment protection (CREP) for the sponge iron plants and steel plants should be implemented.	Sponge Iron project dropped hence CREP for the steel plants will be implemented during implementation of the project.
xvii.	All the commitments made to the public during the public hearing / public consultation meeting held on 15 th September, 2011 shall be satisfactorily implemented and a separate budget for implementing the same be allocated and information submitted to the Ministry's regional office at Bangalore.	Providing Employment to the local people, Free Medical Camps to the nearby villages and Supplying of Drinking water to the nearby villages are the important commitments made during the public hearing and the same is being fulfilled regularly. Skill development on tailoring and embroidery for local women. Employment opportunity have been given to around 875 competent local people. Daily 18 KL drinking is being supplied to Rachagunneri village. First Aid Center established at near Rachagunneri village. Daily doctor is available 2 hrs to serve surrounding village people.
xviii.	At least 5% of the total cost of the project should be earmarked towards the enterprise social commitment (ESC)	CSR committee is in place and CSR policy has been established, accordingly activities are being taken

S. No	Specific conditions	Compliance Status
	based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the ministry's regional office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.	<p>up and completed.</p> <p>Rs 4.74 Cr has spent for the financial year 2022-2023 under CSR, considering the public hearing issues, infrastructure development, skill development, Education and health.</p> <p>Medical camp conducted on 15.04.22 at Chindepalli village and Total 170 people have benefited in the camp.</p> <p>Medical camp for eye checkup conducted at Rachagunneri village on 16.09.22 and total 151 people have benefited in the camp.</p>
xix.	The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, 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.	Noted and being complied.
xx.	The company shall submit within three months their policy towards corporate environment responsibility which should 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.	<p>Environmental Cell has been established in the company. Environmental head is responsible to highlight the Environmental issues, deviations, required improvements, objective and targets to all divisional heads and plant heads. In daily meeting, this will be discussed and division head will direct the concern sections representative to resolve the issue. It will be reviewed periodically to ensure implementation. If not implemented it will be brought to the notice of plant head and he will conduct the meeting along with division heads for necessary action.</p> <p>An Internal audit system is existence in the company. The internal auditor periodically conducts audit and their report would include any non-compliance/violations if any and submitted to the audit committee of the board of directors. This will be followed by reporting of action taken on the non-compliance.</p>

B. General Conditions

S.No	General conditions	Compliance status
i.	The project authorities shall strictly adhere to the stipulations made by the Andhra Pradesh Pollution Control Board (APPCB) and State Govt.	ECL has been adhering all the stipulations made by the APPCB. Consent for Operation (CFO) renewal and Expansion CFOs have been obtained from the Andhra Pradesh Pollution Control Board and the same is valid up to 30.04.2028
ii.	At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	Efforts are being taken to control the emissions within the prescribed limits and assured that in the event of failure of any pollution control system adopted in the unit, will be immediately put out of operation and will not be restarted until the desired efficiency has been achieved.
iii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	As per MoEFCC notification vide S.O. 980 (E) dt. 02.03.2021 ECL has been proposed capacity expansion under change of product mix and no increase in pollution load category and obtained CFE CPM. Details have been given in MOEFCC Parvesh portal and obtained acknowledgement.
iv.	The gaseous emissions from various process units shall conform to the load/mass-based standards notified by this Ministry on 19 th May, 1993 and standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	The gaseous emissions from various processes are within the standards prescribed from time to time by authorities.
v.	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000. Authorization from the APPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes.	Hazardous waste like Used oil/waste lubricating oil, Zinc dust and used batteries are stored and disposed to the authorized recyclers as per HWM Rules-2016. HW authorizations were obtained from APPCB for collection, storage, reuse and disposal. The HWM validity is valid up to 30.04.2028
vi.	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes	Hazardous waste like Used oil/waste lubricating oil, Zinc dust and used batteries are stored and disposed to the authorized

	(Management and Handling) Rules, 2003. Authorization from the A. P. Pollution Control Board must be obtained for collection / treatment / storage / disposal of hazardous wastes.	recyclers as per HWM Rules-2016. HW authorizations were obtained from APPCB for collection, storage, reuse and disposal. The HWM validity is valid up to 30.04.2028
vii.	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 Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	The overall noise levels in and around the plant area are being kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures on all sources of noise generation. The noise levels (day time and night time) is being monitored by MoEF & CC recognized laboratory at Six locations and the levels are within the limits. Personal protective equipments such as earplugs and mufflers are being provided to the workmen. The Noise level reports are being submitted to the Regional offices of MOEF&CC and APPCB and the same arrangements will be implemented in the expansion project also.
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.	<p>1) 26,000m³ rain water harvesting pit developed near colony to collect rain water from colony houses and utilized for plant process.</p> <p>2) Roof top rain water harvesting system have implemented in MBF office (25 KL) and MBF Coal shed (32KL) to increase the ground water table.</p> <p>3) 200 KL Sump constructed in CPP to collect Rain water through drain.</p> <p>4) 4 Nos Rain water soaking pit developed in Canteen, SPP and DIP pipe storage yard area to collect rain water from the drain.</p> <p>5) 25 KL roof top rain water harvesting system implemented in Ferro alloy plant.</p> <p>6) 25 KL roof top rain water harvesting structure established in Gasket godown.</p> <p>Rain water harvesting structure will be implemented to the other expansion project also.</p>

ix.	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	<p>Occupational health surveillance (OHS) of the works is regularly carried out and records are maintained as per the factories act. OHS centre is equipped with doctor, supporting staffs and facilities. The workers are provided with earmuffs/earplugs those who are in the noise generating areas and undergoing periodic tests. Also, the workers especially working in the area of furnaces are wearing protective clothing to protect from the high level of heat radiation. First Aid trainings are being organized by experts to selected team members, so as to maintain First Aiders availability round the clock in various divisions. OHS facilities will be extended to the expansion unit also.</p> <p>Health surveillance of the employee and worker have done on 17.02.22 to 10.03.22 and total 3863 participated in the surveillance programme.</p> <p>On 31.05.22 health checkup carried out through Tata Cancer Institute and total 137 people (workmen and employees) have benefited (Male – 59, Female-78).</p> <p>On 04.08.22 Cardio and Ortho health check have been done by Amara hospital. Total 73 employees have been benefited.</p> <p>On 18.08.22 Apollo has conducted health camp and 49 employees have benefited.</p> <p>On 10.02.2023 Aravind eye hospital has conducted a free eye camp for employees. Total 280 employees have been benefited.</p>
x.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report	As per EIA recommendations the environmental protection measures are being implemented regularly to improve the environment. EMP is being taken yearly with target and being implemented regularly.
xi.	A separate Environmental Management Cell equipped with full fledged laboratory facilities	Separate Environmental Management Cell (EMC) with the

	shall be set up to carry out the environmental management and monitoring functions.	<p>following composition has been established:</p> <ul style="list-style-type: none"> i. Chief Operating Officer. ii Sr. Vice President (Operations) iii Vice President iv All Divisional Heads v AGM - Environment v. Sr. Manager – Environment; vi. All Functional heads and Environment assistants. <p>EMC meets once in a month and reviews existing environment management system. Summary of the review meetings is prepared once in six months. Full-fledged environment Laboratory is established for the analysis of domestic and effluent water samples. Further environmental monitoring is also being carried out by third party recognized by MoEF & CC.</p>
xii.	As proposed, Rs. 12 crore and 1.20 crore shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures shall be judiciously used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. A time bound implementation schedule shall be submitted to the Ministry and its Regional Office at Bangalore to implement all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	As of March, '2023 the total Capital cost has spent for the pollution control measures are Rs 86.08 Cr and the Recurring cost for the period October'22 to March 2023 is Rs 8.42 Cr. Environment pollution control measures are being judiciously used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.
xiii.	A copy of clearance letter shall be sent by the proponent to concerned panchayat zilaparishad / Municipal corporation, Urban local body and the local NGO, if any from whom suggestion/representations. If any were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied.
xiv.	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	<p>Complied at regular interval.</p> <p>Ambient and Stack emission report are being displayed at</p>

	update the same periodically. It shall simultaneously be sent to the Regional Office of CPCB and the APPCB. The criteria pollutant levels namely; RSPM (PM2.5 and PM10) SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at convenient location near the main gate of the company in the public domain.	main gate. It is uploaded to the company website as part of six-monthly compliance report
xv.	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 office of MoEF, the respective zonal office of CPCB and the APPCB. The regional office of this ministry / CPCB / APPCB shall monitor the stipulated conditions.	Being complied
xvi.	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 environment (protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall be also be sent to the respective regional offices of the MoEF by e-mail.	Is being complied
Xvii	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 APPCB and may also be seen at website of the ministry of environment and forests and 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 news papers 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.	Advertisements were given in two local newspapers namely Indian Express and vartha on 24.1.2013 and advertisement copies were submitted to the Regional Office of the MoEF& CC
xviii	The authorities shall inform the regional office as well as the Ministry, the date of financial closure and final approval of the project by the concern authorities and the date of commencing the land development work.	Is being complied
11	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted for compliance
12	The Ministry reserves the right to stipulate	Noted for compliance

	additional conditions if found necessary. The Company in a time bound manner will implement these conditions.	
13	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.	Noted for compliance

TEST REPORT

ISSUE TO:

M/s. Electrosteel Castings Ltd.
Rachagunneri (V), Srikalahasti (M),

Issue Date: 31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Sample Particulars: NOISE LEVELS

Sample Registration Date: 24.03.2023

Lab Ref: CL/N/4948/03/23-007/23

TEST RESULTS

S.No	Name of the location	Day Time in LeqDb(A)	Night Time in LeqDb(A)	CPCB Standards Day(dB)	CPCB Standards Night(dB)
1.	Cow Shed	68.4	39.9	< 75	< 70
2.	Near SPP	62.5	46.5		
3.	Near Main Gate	63.9	50.1		
4.	3 rd Gate	64.1	53.2		
5.	Coke Oven 2 nd Gate	59.3	49.9		
6.	Near Old STP	62.5	44.4		
7.	Near STP	66.8	48.6		

Note: As per CPCB Standard: Day Time: (6am-10pm) < 75, Night Time: (10pm-6am) < 70.

Instrument Details:-

Instrument : Digital Sound Level meter
Make : Lutron
Model / SI No : SL-4001N(30-130Db)/176755
Calibration Due : 16.02.2024

Checked By



Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. EelectrosteelCastingsLtd ,
(Pig Iron Division)
Rachagunneri (V), Srikalahasti (M),

Issue Date: 31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date: 24.03.2023

Sample Particulars: STACK EMISSION

Sampling location-4: Stack Attached to Sinter Head ESP

Sample Registration Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Lab Ref: CL/SK/4948/03/23-004/23

TEST RESULTS

Diameter of Stack (m) : 2.50

Cross Sectional Area (m²) : 4.90

Flue Gas Temperature (°C) : 86

Velocity (m/sec) : 12.4

Flow Rate (m³/hr) : 1,90,640

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1) - 2019	mg/Nm ³	39.4	< 100

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90WITH DGM/060307
Calibration Due : 16.02.2024


Checked By




Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Eelectro SteelCastings Ltd ,
(Pig Iron Division)
Rachagunneri (V), Srikalahasti (M),

Issue Date:31.03.2023

Sample Registration No: 4948/03/23	Sample Registration Date: 24.03.2023
Sample Collection Date: 24.03.2023	Analysis Completed Date: 31.03.2023
Analysis Starting Date:24.03.2023	Lab Ref: CL/SK/4948/03/23-001/23
Sample Particulars: STACK EMISSION	
Sampling location-1:Stack Attached to the 1 x 3 Stoves	

TEST RESULTS

Diameter of Stack(m) : 1.53
Cross SectiinalArea(m²) : 1.837
Flue Gas Temparature(°C) : 110
Velocity (m/sec) : 8.10
Flow Rate (m³/hr) : 52,410

TEST REPORT

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1)- 2019	mg/Nm ³	36	< 50
2.	Sulphur Di oxide	IS 11255 (Part 2)- 2019	mg/Nm ³	45	<250
3.	Oxides of Nitrogen (NO _x)	IS 11255 (Part 7)- 2017	mg/Nm ³	60	<150
4.	Carbon Monoxide (CO)	CPCB Guidelines	ppm	118	--

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90WITH DGM/060307
Calibration Due : 16.02.2024


Checked By




Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. EelectrosteelCastingsLtd ,
(Pig Iron Division)
Rachagunneri (V), Srikalahasti (M),

Issue Date: 31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date: 24.03.2023

Sample Particulars: STACK EMISSION

Sampling location-1: Stack Attached to the 15TPH Power Plant Boiler

Sample Registration Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Lab Ref: CL/SK/4948/03/23-010/23

TEST RESULTS

Diameter of Stack(m) : 1.07
Cross Sectional Area(m²) : 0.90
Flue Gas Temperature(°C) : 130
Velocity (m/sec) : 6.50
Flow Rate (m³/hr) : 19,540

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1) - 2019	mg/Nm ³	32.0	< 100
2.	Sulphur Di oxide	IS 11255 (Part 2)- 2019	mg/Nm ³	26.5	<250
3.	Oxides of Nitrogen (NO _x)	IS 11255 (Part VII)- 2017	mg/Nm ³	35.6	<150
4.	Carbon Monoxide (CO)	CPCB Guidelines	ppm	15	--

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90WITH DGM/060307
Calibration Due : 16.02.2024

Checked By



Authorized Signatory



Recognized by Ministry of Environment Forest &
Climate Change, Govt. of India
An NABL Accredited Laboratory in Chemical & Biological.
Food Safety Standards Authority of India, Govt. of India
An ISO 45001 : 2018 Certified Laboratory

Corp. off. : # 3-11-482/2, Plot No.1, 3rd Floor,
Sai Sadan Complex, Above Punjab National Bank,
Shiva Ganga Colony, L.B. Nagar, Hyd-500 074.
Office Contact : +91 98854 36529
Mobile : +91 98853 33368
E-mail : mail2carelabs@gmail.com
Web : www.carelabs.in



TEST REPORT

ISSUE TO:

M/s. EelectrosteelCastingsLtd ,
(Pig Iron Division)
Rachagunneri (V), Srikalahasti (M),

Issue Date: 31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date: 24.03.2023

Sample Particulars: STACK EMISSION

Sampling location-6: Stack Attached to the Fuel Crushing de-dusting system

Sample Registration Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Lab Ref: CL/SK/4948/03/23-006/23

TEST RESULTS

Diameter of Stack (m) : 0.80
Cross Sectional Area (m²) : 0.502
Flue Gas Temperature (°C) : 78
Velocity (m/sec) : 8.9
Flow Rate (m³/hr) : 14,520

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1) - 2019	mg/Nm ³	38.6	<100

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90WITH DGM/060307
Calibration Due : 16.02.2024

Checked By



Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Eelectro SteelCastings Ltd.,
(Spun Pipe Division)
Rachagunneri (V), Srikalahasti (M),

Issue Date:31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date:24.03.2023

Sample Particulars: STACK EMISSION

Sampling location-6:Stack Attached to Annealing furnace -I

Sample Registration Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Lab Ref: CL/SK/4948/03/23-006/23

TEST RESULTS

Diameter of Stack (m) : 1.20
Cross Sectional Area (m²) : 1.13
Flue Gas Temperature (°C) : 130
Velocity (m/sec) : 6.50
Flow Rate (m³/hr) : 23,820

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1) - 2019	mg/Nm ³	26.1	< 100

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90WITH DGM/060307
Calibration Due : 16.02.2024


Checked By




Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Eelectro SteelCastings Ltd ,
(Spun Pipe Division)
Rachagunneri (V), Srikalahasti (M),

Issue Date:31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date:24.03.2023

Sample Particulars: STACK EMISSION

Sampling location-5:Stack Attached to Induction Furnace de-dusting system

Sample Registration Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Lab Ref: CL/SK/4948/03/23-005/23

TEST RESULTS

Diameter of Stack (m) : 1.70
Cross Sectiinal Area (m²) : 2.27
Flue Gas Temperature (°C) : 44
Velocity (m/sec) : 8.2
Flow Rate (m³/hr) : 60,240

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1) - 2019	mg/Nm ³	26.1	<50

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90WITH DGM/060307
Calibration Due :16.02.2024


Checked By




Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Eelectro SteelCastings Ltd ,
(Spun Pipe Division)
Rachagunneri (V), Srikalahasti (M),

Issue Date:31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date:24.03.2023

Sample Particulars: STACK EMISSION

Sampling location-3:Stack Attached to Zinc Coating de-dusting system - I

Sample Registration Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Lab Ref: CL/SK/4948/03/23-003/23

TEST RESULTS

Diameter of Stack (m) : 1.35
Cross-Sectional Area (m²) : 1.46
Flue Gas Temperature (°C) : 36
Velocity (m/sec) : 6.90
Flow Rate (m³/hr) : 30,510

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1) - 2019	mg/Nm ³	28.1	< 100

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90WITH DGM/060307
Calibration Due :16.02.2024

Checked By



Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Eelectro SteelCastings Ltd.,
(Spun Pipe Division)
Rachagunneri (V), Srikalahasti (M),

Issue Date:31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date:24.03.2023

Sample Particulars: STACK EMISSION

Sampling location-1:Stack Attached to Magnesium Converter de-dusting system - I

Sample Registration Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Lab Ref: CL/SK/4948/03/23-001/23

TEST RESULTS

Diameter of Stack(m) :0.80
Cross SectionalArea(m²) :0.50
Flue Gas Temperature(°C) :38
Velocity (m/sec) :15.20
Flow Rate (m³/hr) :26,240

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1)- 2019	mg/Nm ³	38.9	< 100

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90WITH DGM/060307
Calibration Due : 16.02.2024


Checked By




Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Electro Steel Castings Ltd.
Rachagunneri (V), Srikalahasti (M),

Issue Date: 31.03.2023

Sample Registration No: 4948/03/23	Sample Registration Date: 24.03.2023
Sample Collection Date: 24.03.2023	Analysis Completed Date: 31.03.2023
Analysis Starting Date: 24.03.2023	
Sample Particulars: AMBIENT AIR QUALITY	
Sampling location- 6 : Near Coke oven 2 nd Gate	Lab Ref: CL/AAQ/4948/03/23-005/23

TEST RESULTS

S.No	PARAMETERS	TEST METHOD	UNITS	RESULTS	NAAQ STANDARDS
1.	Average Flow Rate	--	m ³ /min	1.10	--
2.	Particulate matter (pm _{2.5})	IS:5182 (Part-24)2019	µg/m ³	22	< 60
3.	Particulate matter (pm ₁₀)	IS:5182 (Part-23)2017	µg/m ³	43	< 100
4.	Sulphur dioxide	IS:5182 (Part-2) 2017	µg/m ³	12	< 80
5.	Oxides of nitrogen	IS:5182 (Part-6) 2017	µg/m ³	19	< 80

NOTE:NAAQS: National AMBIENT AIR QUALITY Standards.

Instrument Details:-

Instrument : PM 2.5/PM 10 sampler
Model / SI No :APM 154/42-DTB-2013
Make :LataEnvirotech
Calibration Due:16.02.2024

Checked By



Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Electro Steel Castings Ltd.
Rachagunneri (V), Srikalahasti (M),

Issue Date: 31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date: 24.03.2023

Sample Particulars: AMBIENT AIR QUALITY

Sampling location-5: Near SPP

Sample Registration Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Lab Ref: CL/AAQ/4948/03/23-006/23

TEST RESULTS

S.No	PARAMETERS	TEST METHOD	UNITS	RESULTS	NAAQ STANDARDS
1.	Average Flow Rate	--	m ³ /min	1.14	--
2.	Particulate matter (pm _{2.5})	IS:5182 (Part-24)2019	µg/m ³	30	< 60
3.	Particulate matter (pm ₁₀)	IS:5182 (Part-23)2017	µg/m ³	52	< 100
4.	Sulphur dioxide	IS:5182 (Part-2) 2017	µg/m ³	8.0	< 80
5.	Oxides of nitrogen	IS:5182 (Part-6) 2017	µg/m ³	12	< 80

NOTE:NAAQS: National AMBIENT AIR QUALITY Standards.

Instrument Details:-

Instrument : PM 2.5/PM 10 sampler
Model / SI No : APM 154/41-DTB-2013
Make :LataEnvirotech
Calibration Due : 16.02.2024


Checked By




Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Electro Steel Castings Ltd.
Rachagunneri (V), Srikalahasti (M),

Issue Date: 31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date: 24.03.2023

Sample Particulars: AMBIENT AIR QUALITY

Sampling location-4: Near Cow Shed

Sample Registration Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Lab Ref: CL/AAQ/4948/03/23-001/23

TEST RESULTS

S.No	PARAMETERS	TEST METHOD	UNITS	RESULTS	NAAQ STANDARDS
1.	Average Flow Rate	--	m ³ /min	1.10	--
2.	Particulate matter (pm _{2.5})	IS:5182 (Part-24)2019	µg/m ³	29	< 60
3.	Particulate matter (pm ₁₀)	IS:5182 (Part-23)2017	µg/m ³	46	< 100
4.	Sulphur dioxide	IS:5182 (Part-2) 2017	µg/m ³	18	< 80
5.	Oxides of nitrogen	IS:5182 (Part-6) 2017	µg/m ³	25	< 80

NOTE:NAAQS: National AMBIENT AIR QUALITY Standards.

Instrument Details:-

Instrument : PM 2.5/PM 10 sampler
Model / SI No : APM 154/42-DTB-2013
Make : LataEnvirotech
Calibration Due : 16.02.2024

Checked By



Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Electro Steel Castings Ltd.
Rachagunneri (V), Srikalahasti (M),

Issue Date: 31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date: 24.03.2023

Sample Particulars: AMBIENT AIR QUALITY

Sampling location-3: Near Old STP

Sample Registration Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Lab Ref: CL/AAQ/4948/03/23-002/23

TEST RESULTS

S.No	PARAMETERS	TEST METHOD	UNITS	RESULTS	NAAQ STANDARDS
1.	Average Flow Rate	--	m ³ /min	1.14	--
2.	Particulate matter (pm _{2.5})	IS:5182 (Part-24)2019	µg/m ³	20	< 60
3.	Particulate matter (pm ₁₀)	IS:5182 (Part-23)2017	µg/m ³	38	< 100
4.	Sulphur dioxide	IS:5182 (Part-2) 2017	µg/m ³	10	< 80
5.	Oxides of nitrogen	IS:5182 (Part-6) 2017	µg/m ³	17	< 80

NOTE:NAAQS: National AMBIENT AIR QUALITY Standards.

Instrument Details:-

Instrument : PM 2.5/PM 10 sampler

Model / SI No : APM 154/41-DTB-2013

Make :LataEnvirotech

Calibration Due :16.02.2024

Checked By



Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Electro Steel Castings Ltd.
Rachaguneri (V), Srikalahasti (M),

Issue Date: 31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date: 24.03.2023

Sample Particulars: AMBIENT AIR QUALITY

Sampling location- 2: Near STP

Sample Registration Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Lab Ref: CL/AAQ/4948/03/23-004/23

TEST RESULTS

S.No	PARAMETERS	TEST METHOD	UNITS	RESULTS	NAAQ STANDARDS
1.	Average Flow Rate	--	m ³ /min	1.02	--
2.	Particulate matter (pm _{2.5})	IS:5182 (Part-24)2019	µg/m ³	28	< 60
3.	Particulate matter (pm ₁₀)	IS:5182 (Part-23)2017	µg/m ³	41	< 100
4.	Sulphur dioxide	IS:5182 (Part-2) 2017	µg/m ³	17	< 80
5.	Oxides of nitrogen	IS:5182 (Part-6) 2017	µg/m ³	30	< 80

NOTE:NAAQS: National AMBIENT AIR QUALITY Standards.

Instrument Details:-

Instrument : PM 2.5/PM 10 sampler
Model / SI No : APM 154/41-DTB-2013
Make : LataEnvirotech
Calibration Due :16.02.2024

Checked By



Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Electro Steel Castings Ltd.
Rachagunneri (V), Srikalahasti (M),

Issue Date: 31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Sample Registration Date: 24.03.2023

Analysis Starting Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Sample Particulars: AMBIENT AIR QUALITY

Sampling location-1: Near Main Gate

Lab Ref: CL/AAQ/4948/03/23-003/23

TEST RESULTS

S.No	PARAMETERS	TEST METHOD	UNITS	RESULTS	NAAQ STANDARDS
1.	Average Flow Rate	--	m ³ /min	1.12	--
2.	Particulate matter (pm _{2.5})	IS:5182 (Part-24)2019	µg/m ³	48	< 60
3.	Particulate matter (pm ₁₀)	IS:5182 (Part-23)2017	µg/m ³	62	< 100
4.	Sulphur dioxide	IS:5182 (Part-2) 2017	µg/m ³	24	< 80
5.	Oxides of nitrogen	IS:5182 (Part-6) 2017	µg/m ³	35	< 80

NOTE:NAAQS: National AMBIENT AIR QUALITY Standards.

Instrument Details:-

Instrument : PM 2.5/PM 10 sampler
Model / SI No :APM 154/42-DTB-2013
Make :LataEnvirotech
Calibration Due :16.02.2024

Checked By



Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Eelectro SteelCastings Ltd.,
(Cement Division)
Rachagunneri (V), Srikalahasti (M),

Issue Date:31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date:24.03.2023

Sample Particulars: STACK EMISSION

Sampling location-1:Stack Attached to the Cement mill

Sample Registration Date: 24.03.2023

Analysis Completed Date:31.03.2023

Lab Ref: CL/SK/4948/03/23-001/23

TEST RESULTS

Diameter of Stack(m) : 0.60
Cross Sectional Area(m²) : 0.283
Flue Gas Temperature(°C) : 70
Velocity (m/sec) : 9.10
Flow Rate (m³/hr) : 10,310

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1) - 2019	mg/Nm ³	26.8	< 100

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90WITH DGM/060307
Calibration Due : 16.02.2024


Checked By




Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Eelectro SteelCastings Ltd ,
(Cement Division)
Rachagunneri (V), Srikalahasti (M).

Issue Date:31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date:24.03.2023

Sample Particulars: STACK EMISSION

Sampling location-2: Stack Attached to Slag Dryer

Sample Registration Date: 24.03.2023

Analysis Completed Date:31.03.2023

Lab Ref: CL/SK/4948/03/23-002/23

TEST RESULTS

Diameter of Stack (m) : 0.7
Cross Sectional Area (m²) : 0.385
Flue Gas Temperature (°C) : 80
Velocity (m/sec) : 12.40
Flow Rate (m³/hr) : 15,410

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1) - 2019	mg/Nm ³	32.5	< 100

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90WITH DGM/060307
Calibration Due : 16.02.2024


Checked By




Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Eelectro SteelCastings Ltd.,
(Cement Division)
Rachagunneri (V), Srikalahasti (M),

Issue Date:31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date:24.03.2023

Sample Particulars: STACK EMISSION

Sampling location-2: Stack Attached to Raw Mill

Sample Registration Date: 24.03.2023

Analysis Completed Date:31.03.2023

Lab Ref: CL/SK/4948/03/23-003/23

TEST RESULTS

Diameter of Stack (m) : 0.60
Cross Sectional Area (m²) : 0.28
Flue Gas Temperature (°C) : 68
Velocity (m/sec) : 4.90
Flow Rate (m³/hr) : 4,740

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1) - 2019	mg/Nm ³	35.3	< 100

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90WITH DGM/060307
Calibration Date : 16.02.2024


Checked By




Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. ElectroSteel Castings Ltd.,
(Power Plant Division)
Rachagunneri (V), Srikalahasti (M),

Issue Date: 31.03.2023

Sample Registration No: 4948/03/23	Sample Registration Date: 24.03.2023
Sample Collection Date: 24.03.2023	Analysis Completed Date: 31.03.2023
Analysis Starting Date: 24.03.2023	Lab Ref: CL/SK/4948/03/23-001/23
Sample Particulars: STACK EMISSION	
Sampling location-1: Stack Attached to the 12 M.W. Power plant Boiler 1 & 2 (2 x 23.7 TPH) (For Coke Oven Battery I&II)	

TEST RESULTS

Diameter of Stack(m) : 2.20
Cross Sectional Area(m²) : 3.8
Flue Gas Temperature(°C) : 120
Velocity (m/sec) : 8.20
Flow Rate (m³/hr) : 1,08,104

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1)- 2019	mg/Nm ³	32	< 100
2.	Carbon Monoxide (CO)	CPCB Guidelines	ppm	15	--
3.	Sulphur Di oxide	IS 11255 (Part 2)- 2019	mg/Nm ³	172	< 800
4.	Oxides of Nitrogen (NO _x)	IS 11255 (Part 7) - 2017	mg/Nm ³	50.3	< 500

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90 WITH DGM/060307
Calibration Due : 16.02.2024


Checked By




Authorized Signatory

TEST REPORT

ISSUE TO:

M/s. Electro Steel Castings Ltd.,
(Ferro Alloy Plant)
Rachagunneri (V), Srikalahasti (M),

Issue Date: 31.03.2023

Sample Registration No: 4948/03/23

Sample Collection Date: 24.03.2023

Analysis Starting Date: 24.03.2023

Sample Particulars: STACK EMISSION

Sampling location-1: Stack Attached to Submerged Arc furnace

Sample Registration Date: 24.03.2023

Analysis Completed Date: 31.03.2023

Lab Ref: CL/SK/4948/03/23-001/23

TEST RESULTS

Diameter of Stack (m) : 2.5
Cross Sectional Area (m²) : 4.91
Flue Gas Temperature (°C) : 70
Velocity (m/sec) : 10.90
Flow Rate (m³/hr) : 2,10,240

S.NO	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	CPCB STANDARDS
1.	Particulate Matter (PM)	IS 11255 (Part 1)- 2019	mg/Nm ³	36.5	< 50

Instrument Details:

Instrument : Stack Monitoring Kit
Make : Aero Vironment
Model / SI No : SEA C 90WITH DGM/060307
Calibration Due : 16.02.2024


Checked By




Authorized Signatory

TEST REPORT

ISSUE TO:

M/s, Electro Steel Castings Ltd.
Rachaguneri (V), Srikalahasti (M),

Sample Registration No: 1048/03/23-002

Sample Collection Date: 24.03.2023

Analysis Starting Date: 24.03.2023

Sample Description:

Discipline: Chemical

Group: Waste Water

Sample Particulars: ETP Outlet Water

Sample Quantity & Condition: 500ml x1 No & Intact

Sample Collected By: Care Labs Representative (Hari Babu)

Issue Date: 31.03.2023

ULR : TC806723000001758F

Sample Registration Date: 24.03.2023

Analysis Completion Date: 31.03.2023

Lab Ref: CLW/4948/03/23-002/23

TEST RESULTS

S.No	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	As Per APPCB STANDARDS
1.	pH	APHA-4500-B	--	7.8	5.5-9.0
2.	Total Dissolved Solids	APHA-2540-C	mg/l	1,640	Max 2100
3.	Total Suspended Solids	APHA-2540-D	mg/l	32	Max 100
4.	Chemical oxygen demand	APHA-5220.B	mg/l	60	Max 250
5.	Biochemical oxygen demand (3 days at 27°C)	IS:3025(Pt-44)	mg/l	14	Max 30
6.	Chlorides as Cl	APHA-4500-Cl-B	mg/l	190	Max 1000
7.	Sulphates as SO ₄	IS:3025(Pt-24)	mg/l	74.5	Max 1000
8.	Oil & Grease	APHA-5520.B	mg/l	2.0	Max 10

IS-Indian Standard, APHA-American Public Health Association.
Sample not drawn by us.

Reviewed by
(T.Jyothi)

Authorized Signatory
(P.Mamatha)
Technical Manager

~ END OF THE REPORT ~

Page No 01 of 01

TEST REPORT

ISSUE TO:

M/s. Electro steel Castings Ltd.

Rachagunneri (V), Srikalahasti (M).

Issue Date: 31.03.2023

Sample Registration No:4948/03/23-004

ULR : TC806723000001760F

Sample Collection Date: 24.03.2023

Sample Registration Date: 24.03.2023

Analysis Starting Date: 24.03.2023

Analysis Completion Date: 31.03.2023

Sample Description:

Discipline: Chemical

Group: Waste Water

Sample Particulars: STP Outlet Water

Sample Quantity & Condition: 500ml x1 No & Intact

Sample Collected By: Care Labs Representative (Hari Babu)

Lab Ref: CLW/4948/03/23-004/23

TEST RESULTS

S.No	TEST PARAMETERS	TEST METHOD	UNITS	RESULTS	As Per APPCB STANDARDS
1.	pH	APHA-4500-B	---	7.4	5.5-9.0
2.	Total Dissolved Solids	APHA-2540-C	mg/l	1120	Max 2100
3.	Total Suspended Solids	APHA-2540-D	mg/l	40	Max 100
4.	Chemical oxygen demand	APHA-5220.B	mg/l	80	Max 250
5.	Biochemical oxygen demand (3 days at 27°C)	IS:3025(Pt-44)	mg/l	18	Max 30
6.	Chlorides as Cl	APHA-4500-Cl-B	mg/l	126	Max 1000
7.	Sulphates as SO ₄	IS:3025(Pt-24)	mg/l	48.9	Max 1000
8.	Oil & Grease	APHA-5520.B	mg/l	2.0	Max 10

IS-Indian Standard, APHA-American Public Health Association.

Sample not drawn by us.

Reviewed by

(T.Jyothi)

Authorized Signatory

(P.Mamatha)

Technical Manager

~ END OF THE REPORT ~

Page No 01 of 01

Electrosteel Castings Limited

CREP Compliance for the period of October'22 to March'23

Sl. No	Action point	Compliance Status/action taken
1. Coke Oven		
A	To meet the parameters PLL, PLD & PLO as notified under EPA by Dec'06	Not Applicable since ours is Non recovery type coke oven plant.
B	To re-build at least 40% of Coke Oven Batteries by 2012	Not Applicable since ours is Non recovery type coke oven plant
2. Blast furnace		
A	Direct injection of reducing agents by June, 2013	Complied. PCI coal is injected as reducing agents.
3. Solid waste / Hazardous waste management		
1	SMS & BF slag utilization 70% by '04, 80% by '06 and 100% by '08 – CREP	BF slag 45% being utilized in our Cement plant. Balance quantity is being sold to other Cement Industries.
2	Charge of tar sludge / ETP sludge in coke oven by June'03	There is no Tar Sludge generation in our plant. Hence Tar sludge is not charged to the Coke oven. ETP Sludge is being used in Sinter plant.
3	Inventorization of hazardous wastes	Hazardous waste generation and disposal are being recorded as and when. Monthly consolidated report is being maintained. Annual return is being submitted in form-4 regularly to the APPCB.
4	Water conservation & water pollution : reduce specific water consumption to 5 m3/tls	Complied
5	To operate COBP effluent treatment plant efficiently to achieve the standards by July'04	Effluents are treated in ETP and reused in Slag Granulation
6	Installation of continuous stack monitoring equipment by Jun'05	Complied. Major process stacks were provided with continuous stack monitoring equipment and connected to APPCB & CPCB.
7	Setting up of 3 nos. on-line ambient air quality monitoring stations by Jun '05	3 Nos Continuous Ambient Air Quality Monitoring stations were installed and connected to APPCB on Dec-2014 onwards. (Downwind, up wind and Cross wind)
8	To operate existing pollution control eqpt.& keep proper records	Complied
9	To implement the recommendations of LCA Study <ul style="list-style-type: none"> Battery 1, 2, 3 repaired. In good health Coke dry quenching, BF top gas recovery, LD gas recovery and 100% continuous casting. Dog house- SMS: PCI in BF 1&2: Sp. Water Consumption Specific Energy consumption 	NA

10	Energy recovery from BF top gas pressure	BF gas is being utilized in MBF Stove, 2.5 MW gas based power plant, Annealing furnaces and Sinter plant.
11	Use of tar free runners / BF	NA
12	De-dusting in cast house	Complied
13	Suppression of fugitive emission using N ₂	NA
14	Processing of waste containing flux & ferrous wastes through waste recycling plant	Recycle in the sinter plant
15	To implement rain water harvesting measures	Complied
16	Reduction of green house gasses by: a. Reduction in power consumption	In heat treatment furnace HSD is replaced with BF gas.
17	b. Use of by-products gases for power generation	BF gas and Coke oven waste heat being used to produce power
18	c. Promotion of Energy Optimization Technology incl. energy audit	Energy conservation process is being implemented
19	To set targets for Resource Conservation such as raw material, energy and water consumption	<p>a) To conserve the resources 70% of Iron ore lumps along with Lime stone and Dolomite are replaced with Sinter product. This sinter product is being produced from fines of Iron ore, limestone and dolomite. Thus conserving 70% of Raw material like Iron ore lumps, Lime stone and Dolomite.</p> <p>b) To conserve Ground water, daily around 4500 - 5000 KLD of primary treated Sewage water from 'Tirupathi municipality is being drawn and treated in 7 MLD STPs at plant premises. Treated water is being used for plant process. Thus, conserving daily around 4500 - 5000 KLD ground water.</p> <p>c) To conserve the energy, 25 MW Captive power established to produce power from BF gas and Waste heat from Coke oven.</p>
20	Up-gradation of the monitoring and analysis facilities for air and water pollutants. Also impart elaborate training to the manpower	Online monitoring facility provided for stacks and Ambient Air. Regular awareness programme on environmental aspects and impacts are being conducted for employees.
21	Power Plants should provide dry fly ash free of cost to the users	NA
22	Good housekeeping	5s Practice and TPM are being initiated and monitored to improve the house keeping.
Cement plant		
	Cement Plants, which are not complying with notified standards, 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	<p>ECL Cement plant is based on VSK (Vertical shaft kilns) technology and complying the notified standards G.S.R. 612(E) dated 25.08.2014.</p> <p>Pollution control equipment's were provided in all process locations to meet the standard as per CFO. Air pollution control equipment's bag filter were replaced as and when and regular maintenance is being carried out.</p>

	Cement Plants located in critically polluted or urban areas (including 5 km distance outside urban boundary) will meet 100 mg/ Nm ³ limit or particulate matter by December 2004 and continue working to reduce the emission of particulate matter to 50 mg/Nm ³ .	We are 11 KM away from urban boundary. The emission level of particulate matter is less than 100 mg/Nm ³ as per CFO for Vertical shaft kiln cement plant.
	The new cement kilns to be accorded NOC/Environmental Clearance w.e.f 01.04.2003 will meet the limit of 50 mg/Nm ³ for particulate matter emissions.	Obtained Environment Clearance for the cement plant vide reference - . J-11011/914/2007-IA. II (I) dated 25.07.2008
	CPCB will evolve load based standards by December 2003.	NA
	CPCB and NCBM will evolve SO ₂ and NO _x emission standards by June 2004.	SO ₂ and NO _x are well below the standard as notified by MOEF.
	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 from limestone and coal storage areas will be decided by the National Task Force (NTF). The NTF shall submit its recommendations within three months.	All conveyer belts, transfer points are covered by hood. Shed provided for some of the raw materials. Open area stock piles are covered with Tarpaulin. Regular water sprinkling on roads is being carried out to avoid fugitive emission.
	CPCB, NCBM, BIS and Oil refineries will jointly prepare the policy on use of petroleum cokes as fuel in cement kiln by July 2003.	NA
	After performance evaluation of various types of continuous monitoring equipment and feedback from 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	All process stacks of the plant were installed online CEMS and data are connected to the APPCB and CPCB site.
	Tripping in kiln ESP to be minimized by July 2003 as per the recommendations of NTF.	NA
	Industries will submit the target date to enhance the utilization of waste material by April, 2003.	As such our cement plant is operating to consume blast furnace slag generated in MBF operation.40% to 50% of the slag used for cement manufacturing. Waste material will be utilized after commencement of Rotary cement plant .
	NCBM will carry out a study on hazardous waste utilization in cement kiln by December 2003.	NA
	Cement industries will carry out feasibility study and submit target dates to CPCB for co-generation of power by July 2003.	NA

CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	CTL/CH/N-32285/2022-23 & 22.02.2023
Sample Number	N-32285/22-23
Name of the Customer	M/s. Electrosteel Castings Limited,
Address	Rachaguneri Village, Srikalahasthi Mandal Chittoor Dist, A.P- 517641.
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	Ambient Air Quality
Sampling Location	NEAR COW SHED
Sample Drawn on	15.02.2023 & 08.25 to 16.02.2023 & 08.25
Sample Received on	16.02.2023
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Sample Quantity	1 No
Equipment used for Sampling	Respirable Dust Sampler S.No:2935 DTL 2020
Analysis Started on	17.02.2023
Analysis Completed on	22.02.2023

ENVIRONMENTAL CONDITION:

Relative Humidity	60%
Ambient Temperature	34°C
Wind Direction	E to W
Weather Condition	Clear Sky

Test Results:


The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER (PM _{2.5})	CTL/SOP/AIR/03 - 2016	µg/m ³	42.1	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006	µg/m ³	84.5	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001	µg/m ³	17.2	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006	µg/m ³	31.0	80
5	OZONE (O ₃)	CTL/SOP/AIR/08 - 2016	µg/m ³	35.6	180
6	LEAD (Pb)	IS 5182 PART 22 - 2004	µg/m ³	BDL(DL:0.1)	1
7	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 - 2016	mg/m ³	BDL(DL:1.15)	4
8	AMMONIA (NH ₃)	CTL/SOP/AIR/07- 2016 (INDOPHENOL METHOD)	µg/m ³	24.4	400
9	ARSENIC (As)	CTL/SOP/AIR/06 - 2016	ng/m ³	BDL(DL:1.0)	6
10	NICKEL (Ni)	CTL/SOP/AIR/06 - 2016	ng/m ³	BDL(DL:5.0)	20
11	BENZENE (C ₆ H ₆)	IS 5182 PART 11 - 2006	µg/m ³	BDL(DL:1.0)	5
12	BENZO(a)PYRENE	IS 5182 PART 12 - 2004	ng/m ³	BDL(DL:0.5)	1


*National Ambient Air Quality Standards - CPCB

BDL - Below Detection Limit(D.L - Detection Limit)

END OF REPORT


Verified by

For Chennai Testing Laboratory Pvt Ltd


Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

Page 1 of 1

The Report shall not be used to malign, defame and for any malicious purpose.
The Report is meant only for sole use of the addressee to promote his/her own business.

A - Super 19 | T.V.K. Industrial Estate | Guindy | E-mail : chennaiestinglab@gmail.com
Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	CTL/CH/N-32286/2022-23 & 22.02.2023
Sample Number	N-32286/22-23
Name of the Customer	M/s. Electrosteel Castings Limited,
Address	Rachagunneri Village, Srikalahasthi Mandal Chittoor Dist, A.P- 517641.
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	Ambient Air Quality
Sampling Location	NEAR MAIN GATE
Sample Drawn on	15.02.2023 & 08.35 to 16.02.2023 & 08.35
Sample Received on	16.02.2023
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Sample Quantity	1 No
Equipment used for Sampling	Respirable Dust Sampler S.No:2937 DTL 2020
Analysis Started on	17.02.2023
Analysis Completed on	22.02.2023

ENVIRONMENTAL CONDITION:

Relative Humidity	60%
Ambient Temperature	34°C
Wind Direction	E to W
Weather Condition	Clear Sky

Test Results:

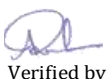
The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER (PM _{2.5})	CTL/SOP/AIR/03 - 2016	µg/m ³	36.2	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006	µg/m ³	78.7	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001	µg/m ³	16.0	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006	µg/m ³	30.0	80
5	OZONE (O ₃)	CTL/SOP/AIR/08 - 2016	µg/m ³	41.2	180
6	LEAD (Pb)	IS 5182 PART 22 - 2004	µg/m ³	BDL(DL:0.1)	1
7	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 - 2016	mg/m ³	BDL(DL:1.15)	4
8	AMMONIA (NH ₃)	CTL/SOP/AIR/07- 2016 (INDOPHENOL METHOD)	µg/m ³	27.6	400
9	ARSENIC (As)	CTL/SOP/AIR/06 - 2016	ng/m ³	BDL(DL:1.0)	6
10	NICKEL (Ni)	CTL/SOP/AIR/06 - 2016	ng/m ³	BDL(DL:5.0)	20
11	BENZENE (C ₆ H ₆)	IS 5182 PART 11 - 2006	µg/m ³	BDL(DL:1.0)	5
12	BENZO(a)PYRENE	IS 5182 PART 12 - 2004	ng/m ³	BDL(DL:0.5)	1

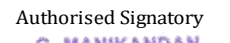
*National Ambient Air Quality Standards - CPCB

BDL - Below Detection Limit(D.L - Detection Limit)

END OF REPORT


Verified by

For Chennai Testing Laboratory Pvt Ltd


Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

Page 1 of 1

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Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date CTL/CH/N-32287/2022-23 & 22.02.2023
Sample Number N-32287/22-23
Name of the Customer M/s. Electrosteel Castings Limited,
Address Rachagunneri Village, Srikalahasthi Mandal
 Chittoor Dist, A.P- 517641.

Sample Drawn by Laboratory
Sample Name Ambient Air
Sample Description Ambient Air Quality
Sampling Location NEAR STP AREA
Sample Drawn on 15.02.2023 & 08.45 to 16.02.2023 & 08.45
Sample Received on 16.02.2023
Sampling Plan & Procedure CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Sample Quantity 1 No
Equipment used for Sampling Respirable Dust Sampler S.No:2932 DTL 2020
Analysis Started on 17.02.2023
Analysis Completed on 22.02.2023

ENVIRONMENTAL CONDITION:

Relative Humidity 60%
 Ambient Temperature 34°C
 Wind Direction E to W
 Weather Condition Clear Sky

Test Results:

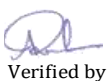
The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER (PM _{2.5})	CTL/SOP/AIR/03 - 2016	µg/m ³	34.2	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006	µg/m ³	70.0	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001	µg/m ³	12.4	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006	µg/m ³	26.5	80
5	OZONE (O ₃)	CTL/SOP/AIR/08 - 2016	µg/m ³	29.0	180
6	LEAD (Pb)	IS 5182 PART 22 - 2004	µg/m ³	BDL(DL:0.1)	1
7	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 - 2016	mg/m ³	BDL(DL:1.15)	4
8	AMMONIA (NH ₃)	CTL/SOP/AIR/07- 2016 (INDOPHENOL METHOD)	µg/m ³	35.1	400
9	ARSENIC (As)	CTL/SOP/AIR/06 - 2016	ng/m ³	BDL(DL:1.0)	6
10	NICKEL (Ni)	CTL/SOP/AIR/06 - 2016	ng/m ³	BDL(DL:5.0)	20
11	BENZENE (C ₆ H ₆)	IS 5182 PART 11 - 2006	µg/m ³	BDL(DL:1.0)	5
12	BENZO(a)PYRENE	IS 5182 PART 12 - 2004	ng/m ³	BDL(DL:0.5)	1

*National Ambient Air Quality Standards - CPCB

BDL - Below Detection Limit(D.L - Detection Limit)

END OF REPORT


 Verified by

For Chennai Testing Laboratory Pvt Ltd


 Authorised Signatory
G. MANIKANDAN
 Head - Environment Division
 (CHEMICAL)

Page 1 of 1

TEST REPORT

Test Report No & Date CTL/CH/N-32288/2022-23 & 22.02.2023
Sample Number N-32288/22-23
Name of the Customer M/s. Electrosteel Castings Limited,
Address Rachaguneri Village, Srikalahasthi Mandal
 Chittoor Dist, A.P- 517641.

Sample Drawn by Laboratory
Sample Name Ambient Air
Sample Description Ambient Air Quality
Sampling Location NEAR ECL QUARTERS RACHAGUNNARI VILLAGE
Sample Drawn on 15.02.2023 & 08.55 to 16.02.2023 & 08.55
Sample Received on 16.02.2023
Sampling Plan & Procedure CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Sample Quantity 1 No
Equipment used for Sampling Respirable Dust Sampler S.No:2938 DTL 2020
Analysis Started on 17.02.2023
Analysis Completed on 22.02.2023

ENVIRONMENTAL CONDITION:

Relative Humidity 60%
 Ambient Temperature 34°C
 Wind Direction E to W
 Weather Condition Clear Sky

Test Results:


The above sample tested as received, and results are as follows:


SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER (PM _{2.5})	CTL/SOP/AIR/03 - 2016	µg/m ³	31.0	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006	µg/m ³	65.0	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001	µg/m ³	9.4	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006	µg/m ³	20.0	80
5	OZONE (O ₃)	CTL/SOP/AIR/08 - 2016	µg/m ³	25.1	180
6	LEAD (Pb)	IS 5182 PART 22 - 2004	µg/m ³	BDL(DL:0.1)	1
7	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 - 2016	mg/m ³	BDL(DL:1.15)	4
8	AMMONIA (NH ₃)	CTL/SOP/AIR/07- 2016 (INDOPHENOL METHOD)	µg/m ³	17.0	400
9	ARSENIC (As)	CTL/SOP/AIR/06 - 2016	ng/m ³	BDL(DL:1.0)	6
10	NICKEL (Ni)	CTL/SOP/AIR/06 - 2016	ng/m ³	BDL(DL:5.0)	20
11	BENZENE (C ₆ H ₆)	IS 5182 PART 11 - 2006	µg/m ³	BDL(DL:1.0)	5
12	BENZO(a)PYRENE	IS 5182 PART 12 - 2004	ng/m ³	BDL(DL:0.5)	1

*National Ambient Air Quality Standards - CPCB
 BDL - Below Detection Limit(D.L - Detection Limit)

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd


 Verified by


 Authorised Signatory
G. MANIKANDAN
 Head - Environment Division
 (CHEMICAL)

ANNAMALAI FOREST DEPARTMENT CERTIFICATE OF ORIGIN FOR THE MOVEMENT OF CHARCOAL FROM TAMILNADU

(1) Issued Under Go. Ms.No.6 Dt.: 10-1-86
& F(FrXIII) Department

No 7084

(2) G.O. Ms. No. 721 dated : 18-12-1991 of the Environment and
Forests (FR. XIII) Department

District Forest Officer Sivaganga
Proceeding No. K. Dis No A2 / 2570 / 2023 Date: 04.05.2023

CERTIFICATE OF ORIGIN

1. Name of the Merchant :

M. ANNAMALAI REFRACTORIES AND CERAMICS
No:13, Sundhanandha Bharathi Street
Tambaram East, CHENNAI-600 059

Vehicle no.: TN-52-C-7884

Bags :- 550

Weight :- 19.840 MT

2. Product Transported :

CHARCOAL

3. Quantity

One Lorry / Wagon / Load

4. Place of Origin

Manamadurai / S.S. Kottai

5. Destination

Svi Kalahasti.

6. Route

Via

7. Time allowed

Valid up to 24.07.2023

8. Remarks

Within India

Place : Sivagangai

Date :

Signature Of Authority Granting
the Certificate

FOREST RANGE OFFICER
SIVAGANGAI RANGE
SIVAGANGAI.

vivo V25 Pro - Ram Goud
May 31, 2023, 14:25

For CHAR COAL ONLY

ORIGINAL

R.P.K. - 33/24-12-2019, - 2000 Books.

FORM-II

(See rule 5 of the Andhra Pradesh Forest Produce Transit Rules, 1970)

Permit No. 866478

Book No. 17330

Ref. To INVOICE No. & Date

TRANSPORT BY

VEHICLE No. AP39UB

9699

1. By whom issued

i. Name

T. Seetha Ramaiah

ii. Designation

Forest Section Officer

2. To whom issued

i. Name

K. Rami Reddy

ii. Father's Name

K. Venkateswara Reddy

iii. Village

Uppalapadu

iv. Mandal

Nuzendla

v. District

Palmaduru

3. Description of Forest Produce

(Detailed measurement to be given in the invoice enclosed)

i. Type of Produce

PJ Charcoal Bags

TIMBER/POLES/FIRE WOOD/BAMBOO
CHARCOAL/MINOR FOREST PRODUCE

ii. Species

Probaphis Julibore

iii. Numbers

450 Nos

450 Nos

in Words

Four hundred
and fifty only

iv. Quantity

21036 kgs

21036 kgs

in words

Twenty one thousands
(and thirty) Six kgs only.

v. Govt. transit mark / Private property mark

(KRR)

4. Place of consignment

i. Locality

Sy No: 41-21-3A ob Uppalapadu patta lands.

ii. Village

Uppalapadu

iii. Mandal

Nuzendla

iv. District

Palmaduru

5. Destination

i. Locality

Electro Steel Casting Ltd

ii. Village

Rachagunnexi

iii. Mandal

Srikalahasthi

iv. District

Chittoor

6. Route of Transport

(Via) Vinubonda; Santhamagullu X-Road; Medaximilla,
ongole, Nellore, Gudur; Nudupeta; Srikalahasthi

7. Date & Time of issue of permit

i. Time

11:50 AM

ii. Date

28-5-23

8. Permit valid upto

i. Time

02:00 AM

ii. Date

29-5-23

9. Obligatory check points

All Forest check posts in en-route.

Note: i. The Permit holder is advised to note that validity of permit is subject to Andhra Pradesh Forest Produce Transit Rules, 1970

ii. On reaching destination, the forest produce should be got verified by nearest Forest Officer and attested.

iii. Any column in the permit, if left blank, permit is treated as invalid.

Place:

Uppalapadu

Date:

28-5-23

Seal of the
Office of Divisional
Forest Officer

Signature and
Designation of
Issuing authority
Forest Section Officer
Vinukonda East Section

at 29.04.97 for entering the validity of time on the

M/S Electrosteel Castings Ltd
Online OCEMS data Oct.22- Mar.23

Sl No.	Time	ZCD_1- PM_U	ZCD_2- PM_U	MCD_1- PM_U	MCD_2- PM_U	IFDDS- PM_U	MBF_STOV ES-PM_U	MBF_STOV ES-SO2_U	MBF_STOV ES-NOx_U	MBF_SINTE R_H-PM_U	MBF_SINTE R_T-PM_U	MBF_CHDS- PM_U	FCDS-PM_U
1	Oct-22	17.83	4.7	25.38	8.82	8.24	12.48	6.1	6.68	0.15	15.12	11.17	1.28
2	Nov-22	20.5	4.05	29.16	8.93	5.48	11.51	5.5	5.45	3.52	22.4	10.78	2.82
3	Dec-22	27.79	4.66	18.86	12.95	6.41	10.14	2.33	2.41	5.67	8.19	10.76	3.21
4	Jan-23	24.71	3.09	22	12.43	4.63	9.52	2.68	1.99	4.27	7.86	10.66	3.12
5	Feb-23	25.85	5.13	18.38	12.45	3.61	14.63	3.12	4.67	3.55	7.86	9.64	3.62
6	Mar-23	17.15	7.43	22.73	12.43	3.55	12.32	1.62	2.7	5.61	17.65	10.06	2.76

Sl No.	Time	CEMENT_M ILL-PM_U	CEMENT_R MILL- PM_U	SDDS- PM_U	TPH_BOILE R-PM_U	TPH_BOILE R-SO2_U	TPH_BOILE R-NOx_U	Stack_22_Zi nc_Coating dedusting _III-PM_U	Stack_18_A mmealing_F urnace_I- PM_U	Stack_19_A mmealing_F urnace_II- PM_U	Stack_29_Pi pe_Cooling _AirVentSys tem-PM_U	Stack_13_1 STPH_Bulle r_2_5MW- PM_U	Stack_13_1 STPH_Bulle r_2_5MW- SO2_U
1	Oct-22	15.64	10.03	9.76	17.35	255.26	81.77	13.01	21.54	13.44	10.68	10.04	45.09
2	Nov-22	13.77	8.05	14.16	20.58	270.65	81.95	11.93	18.97	7.7	4.98	10.16	45.99
3	Dec-22	10.4	5.4	15.48	21.73	268.05	81.6	10.38	22.63	7.76	4.91	10.14	45.03
4	Jan-23	11.27	7.36	13.62	18.16	267.36	81.6	9.63	18.98	7.66	3.9	10.16	45.34
5	Feb-23	8.35	15.39	15.97	7.67	271.42	81.5	10.42	20.47	7.63	4.24	9.94	41.99
6	Mar-23	10.6	13.46	17.61	6.43	216.59	79.78	19.95	20.58	7.18	10.94	10	41.84

Sl No.	Time	Stack_13_1 STPH_Bulle r_2_5MW- NOx_U	Stack_37_C oke_Oven_ 3_Battery_ CPP_3_Boil er-PM_U	Stack_37_C oke_Oven_ 3_Battery_ CPP_3_Boil er-SO2_U	Stack_37_C oke_Oven_ 3_Battery_ CPP_3_Boil er-NOx_U	Stack_42_C oke_Oven_ 4_Battery_ CPP_4_Boil er-PM_U	Stack_42_C oke_Oven_ 4_Battery_ CPP_4_Boil er-SO2_U	Stack_42_C oke_Oven_ 4_Battery_ CPP_4_Boil er-NOx_U	Stack_43_S ubmerged_ Arc_Furnac e-PM_U
1	Oct-22	19.55	9.91	26.99	108.97	6.51	33.02	51.09	9.76
2	Nov-22	21.05	9.74	26.97	79.96	6.01	40.18	90.38	4.91
3	Dec-22	5.05	9.7	28.18	122.17	6.38	36.37	82.24	4.68
4	Jan-23	3.47	10.45	30.09	109.32	6.39	28.98	38.42	7.9
5	Feb-23	18.28	10.89	30.55	53.01	6.09	21.01	47.47	11.27
6	Mar-23	24.79	6.61	41.52	28.67	7.33	25.91	38.76	8.59

[Handwritten Signature]
31/5/23



M/S Electrosteel Castings Ltd
Online AAQMS data Oct.22- Mar.23

Sl No.	Time	STATION_1- PM10_U	STATION_1- PM2.5_U	STATION_1- SO2_U	STATION_1- NOx_U	STATION_2- PM10_U	STATION_2- PM2.5_U	STATION_3- PM10_U	STATION_3- PM2.5_U
1	Oct-22	3.07	2.3	23.49	3.82	6.9	2.93	0.4	7.25
2	Nov-22	5.04	5.66	23.92	3.84	6.83	4.07	0.4	10.81
3	Dec-22	10.05	8.32	25.65	3.74	7.73	4.61	NA	12.98
4	Jan-23	11.97	11.94	19.65	3.41	9.74	5.76	30.42	15.64
5	Feb-23	21.86	17.29	6.82	2.5	29.59	18.87	22.15	16.61
6	Mar-23	10.86	7.59	7.88	2.49	23.66	13.09	10.02	8.2

[Handwritten Signature]
31/5/23



Noise level in plant boundary and inside plant for the year 2022 - 23 (Oct'22 to Mar'23) - Electrosteel Castings Ltd-SW.													
S.No	Location	Oct-22		Nov-22		Dec-22		Jan-23		Feb-23		Mar-23	
		Day time (dba)	Night time (dba)	Day time (dba)	Night time (dba)	Day time (dba)	Night time (dba)	Day time (dba)	Night time (dba)	Day time (dba)	Night time (dba)	Day time (dba)	Night time (dba)
	Plant Boundary (STD)	75	70	75	70	75	70	75	70	75	70	75	70
1	Near Security Main Gate	67.1	61.5	65.8	62.3	64.7	60.5	65.8	61.2	66	64	67	62
2	Near Brick plant	68.7	62.5	67.5	61.2	71.3	69.3	70.2	68.4	61.2	60.5	67.1	63.5
3	Near Railway Track (Rly. gate)	65.3	60.5	67.0	63.4	66.5	63.5	67	63	69	64	72	68
4	Rachaguneri village	57.4	55.2	62.5	60.8	64.2	59.6	66	64	67	62	69	61
5	Coke Oven 2nd Gate	74.0	71.0	73.0	70.0	72	69	72	64	70	69	66	62
6	Cow Shed	60.0	52.0	57.0	56.0	66	64	67.8	60.2	66.4	59	66.8	61
7	Near 3 rd gate	67.0	61.0	66.0	65.0	68	61	67	62	68	66.4	70.5	66.9
8	Near STP	69.5	62.0	63.8	62.0	69.8	66	67	62	67.9	66.5	69.8	62.5
9	Railway track opp MBF office	70.1	69.7	69.8	64.1	67.9	62.5	67.8	64.5	69.8	65.2	70.4	67.5
	Plant Inside (STD)	85dba		85dba		85dba		85dba		85dba		85dba	
1	DIP Mould shop road side	83	81.4	82	80.6	82.6	79.5	77.9	80.2	83.6	80.1	83	82
2	Cold Zone office-DIP	82.4	78.5	81.0	77.5	82.7	77.3	80.6	79.5	81.4	80.7	84	79.8
3	MBF lab	70.2	68.5	77.5	71.6	78.6	71.4	74.6	72.5	82.1	79.8	80	79
4	Sinter plant control room building	74.6	72.3	80.1	79.5	73	76	78.4	80.2	74.5	78.6	81.6	78.7
5	Near Cement plant office	85	82	84	83	84	81	78.5	77.6	80.6	79.5	80.2	80.1
6	COP- Near Lab	69.8	70.2	77.5	72.5	76.5	74.1	72	71	79	72	74.6	70.5
7	Near CPP office Building	79.8	80.4	84.6	77.8	79.5	74.6	77.1	76.2	77.4	71.5	79	78.5

31/5/23



M/S Electrosteel Castings Ltd-SW

Ground water analysis report	
Location: Solid waste storage area	
Date of Sampling: 10.01.2023	
Parameters	Result
PH	7.8
Total Dissolved Solids (mg/l)	1069
Total Hardness (mg/l)	254
Sulphates (mg/l)	26
Chlorides(mg/l)	219
Iron (mg/l)	0.04
Turbidity (mg/l)	0.12
Oil & Grease (mg/l)	0.1


31/5/23



Electrosteel Castings Limited-SW				
Plant Fugitive emission status from October.2022 to March.2023				
SNO	Division	Location	Fugitive Emission	
			Dec-22	Mar-23
			µgm/m3	µgm/m3
1	Spun pipe	Between Induction furnace & Spinning machine-Hot Zone	1678	1755
2		Near Zn coating machines-Cold Zone	1153	1645
3	Pig Iron Div	MBF Cast house	1475	1632
3		infront of MBF Lab	1374	1466
4		Near Sinter plant Control room	1756	1877
5		Raw Material Yard	1425	1669
6	Cement Div	Near Cement Plant Office	1123	1248
		Raw Material Yard	1898	1785
7	COP	Coke oven Main Gate	1065	1158
8		Coal piles Yard	1955	1864
9	12MW CPP	Near 12 CPP building	1088	1142

[Signature]
31/5/23

