
**EC COMPLIANCE REPORT
&
ENVIRONMENTAL STATUS REPORT
(Oct- 2023 - Mar - 2024)**

of

SUNFLAG IRON & STEEL CO. LTD.

Located At

**Village – Eklari, Taluka – Mohadi,
Dist. – Bhandara.**

Project Proponent:



**M/S. SUNFLAG IRON & STEEL CO. LTD.
Village – Eklari, Taluka – Mohadi, Dist. – Bhandara, 441905**

SIX MONTHLY COMPLIANCE REPORT

PART I : DATA SHEET

1	Project Type: River-valley / Mining / Industry /Thermal / Nuclear / Other (Specify)	Integrated steel Plant
2	Name of the Project	M/s Sunflag Iron & Steel Co.Ltd, Located at Village Eklari, Warthi & Sirsi, Taluka : Mohadi, Bhandara, District of Maharashtra.
3	Clearance Letter (s) / OM No. and date	1) J-11011/355/2004- IA.II (I) dated 21.02.2006 2) J-11011/355/2004- IA.II (I) dated 02.05.2017 3) J-11011/355/2004- IA.II (I) dated 09.11.2020
4	Location	
	a. District (s)	Bhandara
	b. State (s)	Maharashtra
	c. Latitude	21°13'30" to 21°14'16" North
	d. Longitude	79°37'11" to 79°38'32" East
5	Address for correspondence, Address of concerned Project Chief Engineer (with Pin Code & Telephone / Telex / Fax Numbers) & Address of Executive Project Engineer / Manager (with pin code / fax numbers) :	Director-Technical M/s Sunflag Iron & Steel Co. Ltd., Village – Warthi, Tah.- Mohadi, District – Bhandara , Pin :441905 Maharashtra Ph. 07184 – 285551 to 285555 Fax – 07184 – 2520360 Email : environment@sunflagsteel.com
6	Salient features	

<p>a. Of the Project</p>	<p>M/s Sunflag Iron & Steel Co. Ltd. Is integrated Steel Plant having capacity @1.0 Million Tonnes per Annum of high quality special steel in the form of rolled steel products using iron ore. Coal & Coke as basic inputs. The plant has a Direct Reduction Plant (DRP) to produce sponge iron & Mini Blast Furnace (MBF) to produce hot metal for captive consumption in the Steel Melting Shop(SMS). Further liquid metal is converted to Steel Billets & Blooms at Continuous Casting Machine (CCM). The steel billets are taken to Bar & Section Mill (BSM) & Alloy Steel Mill (ASM) and steel Blooms are taken into Blooming mill to produce rolled steel products. The 30 MW Captive Power Plant (CPP) is also installed along with other ancillary/utility plants in the factory.</p> <p>Sunflag Steel caters to the demands of various core sector industries like Automobiles, Railway, Defence, Agriculture Engineering Industry etc.</p> <p>Sunflag Steel is located at 21°13'30" to 21°14'16" North latitude and 79°37'11" to 79°38'32" East longitude. The mean height of the plant site is 273 meters above MSL. Plant is located near Bhandara Road railway station at a distance of 53 km to the E-NE direction of Nagpur. More specifically it is located at about 7.5 km as crow flies from Bhandara in S-SE direction.</p> <p>The factory have is certified on ISO 9001:2015, IATF 16949:2016 and TUV-NORD on ISO-14001:2015 and BS OHSAS:45001:2018.</p>
<p>b. Of the Environmental Management Plan</p>	<p>At DRP air pollution control system provided for producing sponge iron from kiln comprises of 02 nos waste heat recovery boilers and 02 nos Electrostatic Precipitator. 07nos.of bag filters also have been provided to control secondary emission.</p> <p>At SMS combined fume/dust extraction and control system (i.e. The Primary and Secondary Fume Extraction System for SMS had been installed for improving the Dust & Fume extraction) comprising of Water cooled ducts, ACGC, reverse air bag house, pulse jet bag house have provided for electric arc furnace (EAF) and ladle heating furnace (LHF) and Stainless steel converter.</p> <p>At CPP, air pollution control system comprising of devices i.e. economizer, air pre heater, and electrostatic Precipitator have been provided.</p> <p>At MBF, adequate APC system has been provided. From MBF, the dust-laden gas after the dust catcher is cleaned in the GCP. There is two-stage venturi system, first stage provides the pre-cleaning of the gas and the second stage provides the final cleaning of the gas. The Blast Furnace gas after the venturi enters the moisture separator, where the finest water droplets are flung against the scrubber shell and run down into the sump and gas free particle leaves the GCP, the cleaned MBF gas is used at Sinter plant, Reheating furnaces of rolling mills and Hardening furnace.</p>

		<p>At Sinter plant. The system comprises of Suction Ducting, Dust Settling Chamber, Electrostatic Precipitator, ID Fan and Bag Filters.</p> <p>Online continuous ambient air quality monitoring system has been installed at three location.</p> <p>On line continuous monitoring system has been installed in stacks to monitor SPM & SO2 and connected to CPCB server.</p> <p>Online continuous effluent quality monitoring system has been installed and connected to CPCB server.</p>
7	Breakup of the Project area	
	a. Submergence Area: Forest & Non Forest	Project area is located in non forest land.
	b. Others	----
	a. Total Plot Area	200 Hectare
	b. Built- Up area (Including Road)	107.46 Hectare
	C. Open space available	20.54 Hectare
8	<p>Breakup of the Project affected population with enumeration of those losing houses/dwelling units only, agricultural land only, both dwelling units & both dwelling units & agricultural land & landless laborers/artisan</p> <p>a. SC, ST / Adivasis</p> <p>b. Others</p> <p>(Please indicate whether these figures are based on any scientific and systematic survey carried out on only provisional figures, if a survey carried out gives details and year of survey.</p>	<p>Not Applicable, as no population has been affected due to this project.</p> <p>The land required by project had been acquired by The State Industrial & Investment Corporation of Maharashtra (SICOM) and leased to M/s Sunflag Iron & Steel Co.Ltd, Village : Eklari, Tah : Mohadi, Dist : Bhandara, Maharashtra at inception stage, several decades ago.</p>
9	Financial Details	
	a. Project costs as originally planned & subsequent revised estimates and the year of price reference.	Rs.1510 Crores for expansion project, after getting EC vide No.J-11011/355/2004- IA.II (I) dated 02.05.2017. (Total expenditure on entire Sunflag Steel project is Rs.1326.22 crores for existing plant so far) Till date the expansion projects completed at cost of Rs.522.23 crores included production units of Pig Iron /Hot



		<p>Metal, Ingot /Billets, Rolled steel Products and Sinter Plant and Rs. 54.93 crores for Modernization and addition in configuration of integrated steel plant [Modernization-Cryogenic Oxygen plant replaced by VPSA oxygen plant ; Addition- Combustor installation 9.5 MW (as an alternate to 500 TPD DRI Kiln)] without any change in total production of steel, after getting EC vide No.J-11011/355/2004- IA.II (I) dated 09.11.2020, Total expenditure on completion of this Modernization & addition in configuration at cost of Rs.55.02 crores.</p>
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<p>b. Allocations made for Environmental Management Plan with item wise & year wise breakup.</p>	<p>At present under existing unit following expenditure has already been made towards environmental protection, the same are as follows.</p> <table border="1" data-bbox="619 436 1414 1736"> <thead> <tr> <th>S.N.</th> <th>Environmental Component</th> <th>Capital Cost incurred so far (Rs. in Lacs)</th> <th>Recurring Cost per annum (Rs. in Lacs)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Air Pollution Control (ESP's, Bag filters, water cooled ducts,GCP, ACGC,Silos, stacks,online monitoring system for ambient and stack)</td> <td>5651.0</td> <td>1273</td> </tr> <tr> <td>2.</td> <td>Water Pollution Control (ETP's, STP, WTP, Neutralization tanks and allied equipments, online effluent monitoring system)</td> <td>185.0</td> <td>1030</td> </tr> <tr> <td>4.</td> <td>Noise Pollution Control (acoustic enclosers,instruments for noise measurement & predictive maintenance, CBM instruments)</td> <td>25.0</td> <td>10</td> </tr> <tr> <td>5.</td> <td>Environment Monitoring and Management (regular monitoring of Environmental parameters as per statutory requirement)</td> <td>112.0</td> <td>84</td> </tr> <tr> <td>6</td> <td>Occupational Health</td> <td>45</td> <td>14.74</td> </tr> <tr> <td>7</td> <td>Green Belt</td> <td>50.0</td> <td>33</td> </tr> <tr> <td>8</td> <td>Online Stack Monitoring System</td> <td>39.0</td> <td>20</td> </tr> <tr> <td>9</td> <td>Online Effluent Monitoring system</td> <td>11.0</td> <td>14</td> </tr> <tr> <td>10</td> <td>Others (Pl. Specify)</td> <td>20.0</td> <td>20</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	S.N.	Environmental Component	Capital Cost incurred so far (Rs. in Lacs)	Recurring Cost per annum (Rs. in Lacs)	1.	Air Pollution Control (ESP's, Bag filters, water cooled ducts,GCP, ACGC,Silos, stacks,online monitoring system for ambient and stack)	5651.0	1273	2.	Water Pollution Control (ETP's, STP, WTP, Neutralization tanks and allied equipments, online effluent monitoring system)	185.0	1030	4.	Noise Pollution Control (acoustic enclosers,instruments for noise measurement & predictive maintenance, CBM instruments)	25.0	10	5.	Environment Monitoring and Management (regular monitoring of Environmental parameters as per statutory requirement)	112.0	84	6	Occupational Health	45	14.74	7	Green Belt	50.0	33	8	Online Stack Monitoring System	39.0	20	9	Online Effluent Monitoring system	11.0	14	10	Others (Pl. Specify)	20.0	20				
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<p>c. Benefit Cost Ratio / Internal rate of Return and the year of assessment.</p>	<p>Not Applicable.</p>																																												
<p>d. Whether (c) includes the cost of Environmental Management as</p>	<p>Not applicable</p>																																												

	shown in the above.	
	e. Actual expenditure incurred on the Project so far	Rs.1510 Crores approved for expansion project after getting EC vide No.J-11011/355/2004- IA.II (I) dated 02.05.2017. (Total expenditure on entire existing Sunflag Steel project is Rs. 1848.45 i.e.1326.22 crores for existing project + Rs.522.23 Crores for Expansion project included Pig Iron /Hot Metal, Ingot /Billets, Rolled steel Products and Sinter Plant so far)Till date expansion project completed at cost of Rs.522.23 crores and Rs. 54.93 crores approved for Modernization and addition in configuration of integrated steel plant [Modernization-Cryogenic Oxygen plant replaced by VPSA oxygen plant ; Addition- Combustor installation 9.5 MW (as in alternate to 500 TPD DRI Kiln)] without any change in total production of steel, after getting EC vide No.J-11011/355/2004- IA.II (I) dated 09.11.2020, Total expenditure on completion of this Modernization & addition in configuration at cost of Rs.55.02 crores.
	f. Actual expenditure incurred on the Environmental Management Plan so far	Rs. 66.98 Crores including EMP of expansion project.
10	Forest land requirement	Not Required
	a. The status of approval for diversion of Forestland for non-forestry use	Not Applicable
	b. The Status of clearing felling	Not Applicable
	c. The status of compensatory Afforestation programme in the light of actual field experience.	Not Applicable
11.	The status of clear felling in non-forest areas (such as submergence area of reservoir, Approach roads), if any with quantitative information.	Not Applicable
12.	Status of construction	
	a. Date of commencement (Actual and/or Planned)	After obtaining EC vide No.J-11011/355/2004- IA.II (I) dated 02.05.2017, start project activities of following units..Pig Iron/Hot Metal, Ingot/Billets, Rolled steel Products and Sinter Plant and after obtaining EC vide No.J-11011/355/2004- IA.II (I) dated 09.11.2020 for Modernization and addition in configuration of integrated steel plant, start project activities in March-2021.

	b. Date of completion (Actual and/or Planned)	Pig Iron/Hot Metal, Ingot/Billets, Rolled steel Products and Sinter Plant project completed in year 2018-19 and 2019-2020 for Modernization and addition in configuration of integrated steel plant, project activities has been completed in June-2021.
13.	Reasons for the delay if the project is yet to start	Not Applicable
14.	Dates of site visits a. The dates on which the Project was monitored by Regional Office on previous occasions, if any	05.12.2018 and 11.12.2020
	b. Date of site visit for this monitoring Report	24.03.2022
15.	Details of correspondence with project authorities for obtaining action plan / information on status of compliance to safeguards other than the routine letters for logistic support for site visit. (The monitoring report may obtain the details of all the letters issued so far but the letter reports may occur only the letters issued subsequently)	Scientist “C” of IRC, MoEFCC, Nagpur visited on 11.12.2020 for monitoring the status of compliance stipulated in Environment Clearance vide letter No.J-11011/355/2004- IA.II (I) dated 02.05.2017 and submitted report to The Member Secretary, IA Division, (Industry I), MoEFCC, Aligang, Jorbagh Road, NEW DELHI - 110003 and copy to M/s Sunflag Iron & Steel Co.Ltd, Village : Eklari, Bhandara and Scientist “E” & Scientist “D” of IRC, MoEFCC, Nagpur visited on 24.03.2022 for monitoring the status of compliance stipulated in Environment Clearance vide letter No.J-11011/355/2004- IA.II (I) dated 02.05.2017 & 09.11.2020.

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SUNFLAG IRON & STEEL CO. LTD.

Located At

**Village – Eklari, Taluka – Mohadi,
Dist. – Bhandara.**

Project Proponent:



**M/S. SUNFLAG IRON & STEEL CO. LTD.
Village – Eklari, Taluka – Mohadi, Dist. – Bhandara, 441905**

1.0 PREAMBLE

1.1 Introduction

Sunflag Iron & Steel Co. Ltd. (Sunflag Steel) has established state-of-the-art special Integrated Steel Plant in Bhandara District of Maharashtra State (India) in the year 1989 in technical collaboration with Mannesmann Demag and Krupp, West Germany. This factory is one of the most modern deploying state-of-the-art technologies which won acclaim in the International Exhibition of Steel Plant Equipment & Technology at Dusseldorf (West Germany). Pollution control systems installed for the various sources at the factory are also state-of-the-art. For the last several years, the factory is certified on ISO 9001:2015, IATF 16949:2016 and TUV-NORD on ISO-14001:2015 and BS OHSAS:45001:2018.

Sunflag Steel caters to the demands of various core sector industries like Automobiles, Railways, Defense, Agriculture, Engineering Industry etc.

Sunflag Steel is located at 21^o14'5" North latitude and 79^o37'50" East longitude. The mean height of the plant site is 273 meters above MSL. The Sunflag Iron & Steel Co. Ltd. is located near Bhandara Road railway station at a distance of 53 km to the E-NE direction of Nagpur. More specifically it is located at about 7.5 km as crow flies from Bhandara in S-SE direction. In the year 2006, MoEFCC has granted for the expansion of the existing integrated steel plant from existing 0.20 million TPA to 0.50 Million TPA. In the year 2017, MoEFCC has granted for the expansion of the existing integrated steel plant from existing 0.5 million TPA to 1.0 Million TPA

At present, this Integrated Steel Plant has a capacity to manufacture 1.0 Million TPA of high quality special steel in the form of rolled steel products using iron ore, coal & coke as basic inputs. The plant has a Direct Reduction Plant (DRP) to produce sponge iron & Mini Blast Furnace (MBF) to produce hot metal for captive consumption in the Steel Melting Shop (SMS). Further liquid metal is converted to steel billets at Continuous Casting Machine (CCM). The steel billets are taken to Bar & Section Mill (BSM), Alloy Steel Mill (ASM) and Blooming Mill to produce rolled steel products. The 30 MW Captive Power Plant (CPP) is existing along with other ancillary/utility plants in the factory.

The compliance status of the conditions of the MoEF, Govt. of India Environmental Clearances No. J-11011/355/2004-IAII (I) dated 21-02-2006 is given below :

COMPLIANCE STATUS OF CONDITIONS IMPOSED BY MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE VIDES THEIR LETTER NO. F No. J-11015/355/2004-I A II (I) dated 21-02-2006.

Period: From 1st Oct - 2023 to 31st Mar- 2024.

(A) SPECIFIC CONDITIONS:

Sr No	Conditions	Compliance
i)	<p>The gaseous emissions from various process units shall conform to the load / mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. At no time the emission level shall go beyond the prescribed standards. On line continuous monitoring system shall be installed in stacks to monitor SPM and Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit. Coke oven (non-recovery type) shall be used for power generation. Emissions from the Coke oven plant shall be within permissible limits of CPCB.</p>	<p>Adequate pollution control systems are provided at the existing sources which are in regular operation and modernization of the same is carried out from time to time. The gaseous emissions from various existing process units confirm the load/mass based standards notified by the Ministry from time to time. The emissions from the stacks meet the prescribed standards.</p> <p>Air pollution control system for the rotary kilns producing direct reduced iron comprises of waste heat recovery boilers and electrostatic precipitators. The cleaned gases after ESP are released to atmosphere through a 55 m & 60 m high forced draft chimney.</p> <p>Two separate fume/dust extraction and control system (i.e. The Primary and Secondary Fume Extraction System for SMS was installed & commissioned on July 2012 for further improving the Dust & Fume extraction) comprising of reverse air bag house, pulse jet bag house & common chimney of height 43 m are provided for 50 T capacity electric arc furnace (EAF) and ladle heating furnace (LHF).</p> <p>At CPP, air pollution control system comprising of devices i.e. economizer, air preheater, and electrostatic precipitator are designed for the full production capacity of FBC Boiler. The discharge of the electrostatic precipitator is through a stack of height 55 m with tops diameter 1.6 m. The discharge meets the norms. The waste heat recovered at WHRBs provided at DRI plant is also used for power generation at CPP.</p> <p>At coal washery, crushed coal is conveyed through conveyor belt for washing. Once the coal is mixed water there is no air pollution at the section. However the conveyor belts carrying crushed coal to coal washery section completely covered from top and both sides.</p>



The Mini Blast Furnace (MBF) (350 M3) is provided with adequate APC system. From MBF, the dust-laden gas after the dust catcher is cleaned in the GCP. There is two-stage venturi system, first stage provides the pre-cleaning of the gas and the second stage provides the final cleaning of the gas. The Blast Furnace gas after the venturi enters the moisture separator, where the finest water droplets are flung against the scrubber shell and run down into the sump and gas free particle leaves the GCP, the cleaned MBF gas is used at Sinter plant, Reheating furnaces of rolling mills and Hardening furnace.

There is an effective air pollution control systems at Sinter plant. The system comprises of Suction Ducting, Dust Settling Chamber, Electrostatic Precipitator, ID Fan and Stack. The cleaned gases after ESP are released to atmosphere through forced draft chimney.

Online continuous ambient air quality monitoring system has been installed at three locations.

On line continuous monitoring system has been installed in stacks to monitor SPM & SO₂.

The emissions from the stacks and various units meet the prescribed standards results.

Please refer **Annexure -1 (A)**



<p>ii)</p>	<p>In plant control measures for checking fugitive emission from all the vulnerable sources like spillage/raw materials/coal handling etc. shall be provided. Further, specific measures like provision of dust suppression system consisting of water sprinkling, suction hoods, fans and bag filters etc. shall be installed at material transfer points, blast furnace stock house and other enclosed raw material handling areas.</p> <p>Centralized De-dusting system i.e. collection of fugitive emission through suction hood and subsequent treatment through bag filter or any other device and finally emitted through a stack of appropriately designed height conforming to the standards for induction furnaces existing in the industry and proposed induction and are furnaces. Fugitive emissions shall be regularly monitored and records maintained.</p>	<p>At the vulnerable fugitive emission sources like spillage/raw materials/coal hand lings etc., in plant centralized de-dusting facility provided. The plant has provided dust suppression system consisting of water sprinklers, suction hood, Covered shed and conveyor, bag filters at various points such as material transfer points, and other enclosed raw material handling areas in the existing plant.</p> <p>Fugitive emissions are being regularly monitored and maintained the records as per guidelines.</p>
<p>iii)</p>	<p>The company shall install Waste Heat recovery Boilers (WHRB) to recover the waste heat and generate power from the steam produced by the WHRB. Char shall be used in the power plant. The particulate emissions from the WHRB and Direct Reduction Iron (DRI) plant shall be controlled by installation of ESP as per the CPCB specifications and particulate emissions shall not exceed 50 mg/Nm³. Further, the company shall install bag filters to control gaseous emissions form the coke oven, wet scrubbers, suction hoods, dust extraction devices and fume extraction system at appropriate places to control gaseous emissions.</p>	<p>At DRP 1 & DRP 2, Waste Heat Recovery Boilers (WHRSG) provided to recover the waste heat from rotary kilns for generation of power from the steam produced by WHRSG at the existing CPP. The exhaust gases from the kiln containing dust, hydrocarbons etc. are burnt in the waste heat recovery Boiler and heat of the gases is recovered in Boiler for steam generation. The gases still containing very fine particulate matter enter the electrostatic precipitator where most of the particulates settle on the electrodes and gases almost free of the dust particles are released to atmosphere at a height of 55 m & 60 m through a chimney.</p> <p>The emissions from various units are within prescribed standard.</p>



<p>iv)</p>	<p>Total requirement of water shall not exceed 12,000 m³/d as per agreement signed with the Govt. of Maharashtra. Out of 3,000 m³/d waste water generated. 2,400 m³/d treated waste water shall be recycled and reused in the process and excess shall be used for gardening and irrigation purpose. The domestic waste water after treatment in STP shall be used for green belt development.</p>	<p>The plant meets its water requirement from Wainganga River. The river flows at a distance of 7.0 Km from the plant. Maximum water requirement for the existing steel plant is 12,000 m³/day. SISCO has been granted permission to draw water from Wainganga River @ 15,098 m³/day.</p> <p>Industrial effluent generation from the existing plant at rated capacity is 2616.50 m³/day. Existing practice of Boiler blow down recycle, dilution of neutralized DM Plant effluent, cooling tower blow down effluent, disposal for 100 % reuse / recycled in the process; green belt development is continued for the additionally generated effluent as well.</p> <p>Domestic effluent from the plant is conveyed through drains to septic tanks followed by soak pits and sewage treatment plant. Treated domestic effluent is 100 % recycled for fire fighting, used for gardening and green belt development.</p>
<p>v)</p>	<p>The solid waste generated shall be in the form of ash, slag, mill scale, dust, sludge and iron scrap, Mill scale, coke breeze, iron ore fines, dust and sludge from Mini blast furnace (MBF), Gas cleaning plant (GCP) shall be reused in the Sinter plant. Iron sponge, iron scrap and grinder waste shall be recycled to SMS section for melting and reuse. DRP ash and dust collected from ESP of gas cleaning system of DRP shall be used in the Boiler of CPP whereas bed ash and MBF slag shall be either used for land filling or sold to cement plants. The entire quantity of fly ash, mill scale and DRP sludge from the scrubber shall be utilized for making brick in company's own brick manufacturing plant. Non-granulated slag shall be used for road making. Dust from dust extraction system shall be recycled to the Sinter plant for reuse. Dust collected from DRI plant shall be reused in sinter plant. Used / spent oil generated shall be used as anti-rusting agent and excess sold to authorized re processors.</p>	<p>The generated solid mill scale, dust, sludge and iron scrap, Mill scale, coke breeze, iron ore fines, dust and sludge from Mini blast furnace (MBF), Gas cleaning plant (GCP) is being reused in the Sinter plant. Sponge iron, iron scrap and grinder waste is being recycled to SMS section for melting and reuse DRP ash and dust collected from ESP of gas cleaning system being used in the FBC Boiler of CPP, whereas bed ash is being used for land filling and MBF slag is being sold to cement plants.</p> <p>The fly ash is being utilized for making brick /Paver blocks at brick manufacturing plant and if balance is used for filling low lying area. Non-granulated slag shall be used for road making and paver block manufacturing at brick plant. Dust from dust extraction system being recycled to the Sinter plant for reuse. Dust collected from DRI plant being reused in Sinter plant. Used / spent oil generated being used as anti-rusting agent and excess sold to authorize re processors.</p>



vi)	The solid waste shall be generated in the form of char, kiln accretions, fly ash from ESP and bottom ash etc. Char generated shall be used in FBC Boiler having sufficient capacity to utilize the char expected to be generated after the expansion. Kiln accretions generated presently and the quality further enhanced during expansion project, shall be utilized for filling low lying areas. ETP sludge shall be used in Sinter Plant.	S.N.	Type of Waste	Disposal/ Utilization
		1.	Fly Ash (CPP)	Brick manufacturer / sale to cement plant.
		2.	Bed Ash (CPP)	Brick manufacturer / sale to cement plant.
		3.	Dust from Bag Filter (DRP & SMS)	Reused at Sinter Plant.
		4.	DRP Sludge	Reuse as a fuel.
		5.	Mill Scale (Rolling Mill)	Reuse in Sinter Plant
		6.	EAF & SS Refining Converter Slag(SMS)	Brick manufacturer / Landfill.
		7.	Iron/Steel/Scrap/Rejects Billets (SMS/Rolling Mill)	Recycle in Steel Melt Shop.
		8.	Grinder Waste (SMS/Rolling Mill)	Recycle
		9.	Coal Rejected Stone & Shell (Coal Washer y)	Landfill
		10.	Granulated MBF Slag	Reuse / By sale
		11.	Granulated Residue at MBF Gas Cleaning plant	Reuse in Sinter plant.
		12.	Coke Fines (MBF Plant)	Reuse in Sinter plant.
		13.	Iron Ore Fines & Sinter (DRI & MBF Plant)	Reuse in Sinter plant
		14.	Dusts/Sludge (ETP & WTP)	Reuse
		15.	Hot returned ore (Sinter Plant)	Reuse in Sinter plant
		16.	Removed Dust (& Sinter Plant)	Reuse in Sinter plant
		17.	Sinter return fines from Sinter plant	Reuse in Sinter plant
		18.	Hot Scrap	Recycle in Steel Melt Shop
19.	DRI Ash / Char (By product)	Reuse in Captive Power plant.		



vii)	<p>Mill scale shall be reused in Sinter plant, ESP fly ash shall be made available to the cement plants and brick making plants whereas bottom ash shall be disposed off in a suitably designed landfill as per CPCB guidelines to prevent leaching to the sub-soil and underground aquifer. Solid waste generated in the form of Iron ore fines, blast furnace slag, BF scrap scales from slab caster and scales from steel mill will be sold to the scrap dealers except for BF slag which will be sold to the cement manufacturers.</p>	<p>Mill scale is used in the Sinter plant. Fly ash is used in brick making plants and bottom ash is disposed off at designated landfill. BF Slag is disposed off by sale to cement manufacturers. Iron ore fines, BF Scrap scales from slab caster and scales from steel mill are used at Sinter plant.</p>
viii)	<p>The company shall be developing surface water harvesting structure to harvest the rain water for utilization in the lean season besides recharging the ground water table.</p>	<p>Rain water harvesting ponds are existing in the plant premises and channels are provided for collection of rain water of the plant into the pond. The collected rain water is utilized for various plant activities in lean season. Also it helps in recharge of ground water table.</p>
ix)	<p>Green belt shall be developed in at least 71.5 ha area within and around the plant premises as per the CPCB guidelines in consultation with DFO.</p>	<p>Sunflag Iron & Steel Co. Ltd. has 200 Ha of land covering factory, colony and other amenities. Presently, land available for green belt is about 72 Ha and green belt has covered the maximum portion of land.</p> <p>From the last two decade, factory is regularly carrying out tree plantation and green belt development within the factory and colony premises as per CPCB guidelines. Till date, the factory has planted approx 6,34,758 trees covering various varieties such as Neem, Pipal, Casia, Mango, Gulmohor, Eucalyptus, Khair, Chichwa, Shisam, Ashoka, Karanj, Teak, Jamun, Palas, Hiwar, Dhaora, Bamboo, Royal Palm, Coconut, Guahava, etc. and the survival rate is about 90 %. The green belt is spread in and around the plant area.</p>
x)	<p>Occupational health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.</p>	<p>Medical examinations of workers are carried out regularly. A dispensary with regular medical practitioner and auxiliary nursing facility is available in the plant premises. Additionally, a panel of doctors regularly visits to the factory for checkup the health of workers & staff, the records of same is being maintained.</p>



xi)	The project authorities shall undertake eco-development measures including community welfare measures in and around the project site. An action plan indicating proposed activities under this shall be performed and submitted to the Maharashtra Pollution Control Board (MPCB) within three months from the date of issuing this letter.	Action plan for undertaking eco - development measures including community welfare measures in & around the plant indicating the activities to be performed and undertaken is submitted to Maharashtra Pollution Control Board.
xii)	Recommendations made in the corporate Responsibility for Environment Protection (CREP) for the steel plants shall be implemented and report submitted to the Ministry/CPCB/ MPCB.	M/s. Sun-flag Iron & Steel Co. Ltd. is one of the leading Corporate Houses in the country and always emphasizes on its Corporate Responsibility for Environment Protection (CREP) for steel plant. Recommendations made in the CREP for steel plant are implemented by the plant on priority basis and regularly submit the report to Ministry/CPCB/MPCB.

(B) General Conditions

SN	Conditions	Compliance
i	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board (MPCB) and the State Government.	Consent to Operate is obtained from Maharashtra Pollution Control Board for existing set-up and it is valid up to 31-05-2028. Compliance of the stipulations indicated in the MPCB Consent to Operate, are regularly complied.
ii	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	Factory will not carry out further expansion or modification in the plant without prior approval of Ministry of Environment and Forests.
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 SPM, SO ₂ and NO _x are anticipated in consultation with the MPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional office at Bhopal and MPCB/CPCB once in six months.	Factory has an established Four Ambient Air Quality Monitoring Stations in consultation with MPCB. Factory is regularly monitoring and analyzing pollution sources. The programme includes stack sampling, ambient air quality monitoring, noise level measurement , fugitive dust monitoring and treated effluent at various locations. The plant is regularly submitting the monitored data to MPCB. Please refer Annexure - 1 (A to E) .



<p>iv</p>	<p>Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended form time to time the treated waste water shall be utilized for plantation purpose.</p>	<p>For the treatment of industrial effluent generated from the existing plant activities, an ETP is provided with flash mixer, Clarifier, pH correction tank, sludge storage tank, sludge transfer pump, thickener, sludge drying beds, Vacuum filter etc is provided at steel plant.</p> <p>For CPP effluent, a neutralization pit is provided.</p> <p>At Centralized Pickling Plant, separate effluent treatment plant is provided with units as Collection cum neutralization Tank for Spent Acid, Collection cum Neutralization Tank for Rinse Water, Lime Solution Tank, Gravity Sand Filters, Filter press, Clariflocculator and treated Effluent Tank. Finally treated effluent is being recycle/reused for cleaning of pickling product.</p> <p>At MBF, water is sprayed in venture scrubbers used for cleaning MBF gases. The water from scrubbers is collected in thickener. The clear overflow from the thickener is recycled back for scrubbing. The thickened sludge from the bottom is dewatered in vacuum drier and the disposed water is sent back to the thickener. Dried Sludge is being use in the Sinter plant. Effluent discharge from MBF is nil.</p>
<p>v</p>	<p>The project authorities must strictly comply with the provisions made in Manufacture, storage and import of Hazardous chemicals Rules 1989 as amended in 2000 for handing of hazardous chemicals etc. the project authorities must also strictly comply with the rules and regulations with regards to handing and disposal of hazardous wastes in accordance with regard to handing and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handing) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collection/ treatment/ storage / disposal of hazardous wastes.</p>	<p>Hazardous Chemicals handled in the factory are the Liquid Nitrogen and Liquid Oxygen. Both the chemicals are listed in the List of Hazardous Chemicals of Manufacture, Storage and Import of Hazardous Chemicals (Amendment) Rules, 2000. Both chemicals are stored in separate isolated storage tanks & used through pipeline in the manufacturing process. The necessary permissions for storage of these chemicals from concerned department are taken by the factory. Safety Audit and On-site Emergency Plan are already prepared by the factory and follow it regularly.</p> <p>Oxygen & Nitrogen are stored as per Explosive Rules and all the conditions will be followed meticulously. As per Hazardous Waste (MH &TM) Rules, 2008 of the Environment Protection Act, 1986 and Amendments thereto, the steel plant complies with all the stipulated norms. Membership of Common Hazardous Waste Treatment Storage and Disposal Facility (CHWTSDF), Butibori has been taken, reuse & disposal of hazardous wastes generated at factory is carried as per MPCB directions.</p>



<p>vi</p>	<p>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 dBA (daytime) and 70 dBA (night time).</p>	<p>Plant has provided noise control measures including acoustic hoods, silencers, enclosures etc. on all noise generating sources to maintain the noise level within the prescribed standards under EPA Rules, 1989.</p> <p>The report of the monitored noise level data please refer Annexure – 1 C.</p>
<p>vii</p>	<p>The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. Further, the company must undertake socio- economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.</p>	<p>SISCO comply with the recommendations made by the Public Hearing Panel for expansion project. Compliance of the safeguards recommended in the EIA/EMP report is a regular feature of the plant.</p> <p>The company is undertaking socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, Skill development programmes for unemployed youth & women’s, drinking water supply, and health checkup camps.</p>
<p>viii</p>	<p>As committed, Project authorities shall provide funds of Rs. 20.54 Crores recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forest as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purpose.</p>	<p>In order to implement the conditions stipulated by the Ministry of Environment and Forests, Govt. of India as well as the Maharashtra Government, factory has carried out capital expenditure on pollution control facilities and providing adequate funds for capital & recurring expenditure.</p>
<p>ix</p>	<p>The regional office of this Ministry at Bhopal/ MPCB/ CPCB will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.</p>	<p>Noted.</p> <p>Six monthly EC compliance report is being submitted on regular basis.</p>



x	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 MPCB/ Committee and may also be seen at website of the Ministry of Environment and Forests at http://ensfor.nic.in . This should be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office.	Complied.
xi	Project authorities should inform the Regional Office as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	The factory has already informed the Regional Office as well as Ministry about the date of financial closure and final approval of the project and the date of commencing the land development work.
5.	The Ministry may revoke or suspend the clearance, if implementation of any of the above condition is not satisfactory	Noted.
6.	The Ministry reserve the right to stipulate additional conditions if found necessary. The company in a time bound manner will be implement these condition.	Noted.
7.	The above condition will be enforced, inter-alia under them provision 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 and Implemented.



COMPLIANCE STATUS OF CONDITIONS IMPOSED BY MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE VIDE THEIR LETTER NO. J-11011/355/2004-IAII (I) dated 02-05-2017

Period: From 1st Oct- 2023 to 31st Mar - 2024.

(A) SPECIFIC CONDITIONS :

Sr No	Conditions	Compliance
i)	The project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.	Complied.
ii)	The canal passing through the project site should be fenced on both the sides, leaving a passage for maintenance related activities by the concerned department. No effluent should be discharged into the canal. No water from the canal should be abstracted without permission.	Complied.
iii)	The natural drainage passing through the site should not be disturbed or diverted and no solid waste or liquid effluent should be discharged into the drain.	Complied.
iv)	A statement on carbon budgeting including the quantum of equivalent Co ₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent Co ₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.	Complied.



v)	For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves, eye protection etc.	Complied.
vi)	Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm ³ and installing energy efficient technology.	Complied.
vii)	Efforts shall further be made to use maximum water from the rain water harvesting sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent should be treated and used for ash handling, dust suppression and green belt development. A revised water balance statement should be submitted by the Project Proponent with the 6 monthly compliance report.	Complied.
viii)	All the coal fines and char shall be utilized within the plant and no char shall be used for briquette making or disposed off anywhere else. Scrap shall be used in steel melting shop (SMS) and SMS slag and kiln accretions shall be properly utilized. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner.	Complied .



ix)	All internal roads shall be black topped/Concretized/Paver blocked or shall be any other type of pucca road. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads. Facilities for parking of trucks carrying raw coal from the linked coalmines shall be created within the Unit.	Complied.
x)	The Standards issued by the Ministry vide G.S.R. No. 277(E) dated 31st March, 2012 regarding integrated iron and steel plant shall be followed.	Complied, Standard followed as per MoEFCC /SPCB Guidelines.
xi)	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.	Complied, Standard followed as per MoEFCC / SPCB Guidelines.
xii)	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.	Comp[lied], Emission level controlled within latest permissible limits as per MoEFCC /CPCB Guidelines.
xiii)	Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.	Complied, Arrangement has been made to control dust emission during loading & Unloading of trucks.
xiv)	'Zero' effluent discharge shall be strictly followed and no waste water shall be discharged outside the premises. The calculations to this effect shall be submitted.	Complied, Achieved zero effluent discharge.
xv)	Regular monitoring of in-fluent 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 (SPCB) or described under the E(P) Act whichever are more stringent.	Complied, Regular monitoring of effluent & water is carried out as per guidelines, treated waste water is within norms of prescribe standard of SPCB & reuse in the process of plant.



xvi)	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.	Complied.
xvii)	A time bound action plan shall be submitted to reduce solid waste generated due to the project related activities, its proper utilization and disposal.	Complied.
xviii)	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 shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Chennai.	Complied, At present there is no fly ash generation, as Power plant has not been installed against approval in EC 02.05.2017. Hence this condition will be full filled after installation & commissioning of new Captive Power Plant.
xix)	A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.	Complied.
xx)	Green belt shall be developed in at least 33% of the project area by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines.	Complied .
xxi)	At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.	Complied, Enterprise Social Commitment work has been taken based on local need as per requirement of Gram / Village panchayat and District administration.



xxii)	<p>The proponent shall prepare a detailed CSR Plan for every year for the next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the annual report of the company.</p>	<p>The Budget for spending under CSR activities for the year 2022-23 was approved by the Board of Directors of the Company at its meeting held on 21st Sep, 2023 of Rs. 5,20,49,328/- and budget for the year 2023-24 was Rs. 2,50,00,000/- as per the CSR Policy of the Company.</p> <p>The details of CSR expenditure incurred has been published in the Annual Report 2022-2023.</p> <p>As per Section 135 of the Companies Act, 2013, the amount required to be spent on Corporate Social Responsibility (CSR) activities for the financial year is derived by formula i.e. 2% of the average net profits of the Company for immediately three (3) preceding financial years.</p> <p>As per this clause xxii, the CSR budget for the future five (5) years is required, which at this point of time is neither possible nor permitted to be arrived at as this is a future event. However, the same can be furnished on the yearly basis after adoption of the Audited Annual Accounts by the Board of Directors of the Company, which may kindly be noted.</p> <p>Please refer Annexure 2</p>
xxiii)	<p>The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address</p> <p>(i) Standard operating process/procedure to being into focus any infringement/deviation/violation of environmental or forest norms/conditions,</p> <p>(ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and</p> <p>(iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.</p>	<p>Complied.</p>
xxiv)	<p>The project proponent shall provide for solar light system for all common areas, street lights,villages, parking around project area and maintain the same regularly.</p>	<p>Partly Complied .</p>

xxv)	The project proponent shall provide for LED lights in their offices and residential areas.	Complied.
xxvi)	The project proponent shall install bio gas plant for kitchen waste utilization generated in their plant canteen and township (If any). The generated gas shall be utilized in their canteen and manure shall be used in their garden.	Complied.
xxvii)	Provision shall be made for the housing of construction labours within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Complied.
xxviii)	Public health center of the factory should be strengthened and also extend medical facilities to the villagers inhabiting surrounding areas. A report in this regard to be submitted along with the 6 monthly compliance report.	Complied .

(B) General Conditions : -

S.No.	Conditions	Compliance
i)	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board and the State Government.	Noted and complied.
ii)	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests and Climate Change (MoEF & CC).	Noted
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 PM10,PM2.5 SO2 and NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional office at Nagpur and MPCB/CPCB once in six months.	Complied.



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.	Complied. Industrial waste water collected and treated at ETP, maintained parameters within permissible limit of CPCB & SPCB.
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 dBA (daytime) and 70 dBA (night time).	Complied.
vi)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Complied .
vii)	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.	Complied. Rain water harvesting ponds are made in the plant premises and channels are provided for collection of rain water of the plant into the pond. The collected rain water is utilized for various plant activities in lean season. Also it helps in recharge of ground water table.
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 socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	Complied, SISCO comply with the recommendations made by the Public Hearing Panel for expansion project. Compliance of the safeguards recommended in the EIA/EMP report is a regular feature of the plant. The company is undertaking socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, Skill development programmes for unemployed youth & women's, drinking water supply, and health checkup camps.
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 Nagpur. The funds so provided shall not be diverted for any other purpose.	Refer Annexure 2 .

<p>x)</p>	<p>A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/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.</p>	<p>Complied.</p>
<p>xi)</p>	<p>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 Office of the MOEFCC at Nagpur. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.</p>	<p>Complied.</p>
<p>xii)</p>	<p>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 MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Nagpur / CPCB / SPCB shall monitor the stipulated conditions.</p>	<p>Noted & Complied as per guidelines. Six monthly EC compliance report is being submitted on regular basis.</p>
<p>xiii)</p>	<p>The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEFCC at Nagpur by e-mail.</p>	<p>Complied.</p>



<p>xiv)</p>	<p>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 (MoEFCC) at http://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Nagpur.</p>	<p>Complied.</p>
<p>xv)</p>	<p>Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.</p>	<p>The company have approached prospective lenders for tie-up of funding the proposed projects and have received part sanction. However, the sanction formalities are yet to be Complied.</p> <p>Accordingly, financial closure for the entire projects are yet to be completed.</p> <p>Partially expansion project of granted EC has been completed. After start of balance project financial closure date and date of commencing of land development work will be submitted.</p>
<p>1.</p>	<p>The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.</p>	<p>Noted</p>
<p>2.</p>	<p>The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.</p>	<p>Noted</p>
<p>3.</p>	<p>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, Handling and Trans boundary Movement) Rules 2008 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.</p>	<p>Noted.</p>



COMPLIANCE STATUS OF CONDITIONS IMPOSED BY MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE VIDE THEIR LETTER NO. J-11011/355/2004-IAII (I) dated 09-11-2020

Period: From 1st Oct- 2023 to 31st Mar - 2024.

A	Specific conditions	Compliance
i	PP shall use low Sulfur coal in the Combustor. Post Combustion control for SO ₂ emission shall be included for coal with sulphur content of 1.2%	Noted, and complied. Low Sulphur coal is using in Combustor.
ii	CEMS shall be installed on the of Combustor stack,	Complied. CEMS (Continuous Emission Monitoring System) is installed in Combustor stack.
iii	Entire quantity of dolo char generated shall be used for power generation in side steel works itself.	Complied. Entire quantity of dolo char generation is used for power generation in Captive Power Plant (CPP).
iv	Combustor shall be designed to achieve PM, SO ₂ and NO _x emission norms notified by MoEF&CC in December, 2015	Complied. Combustor has been designed to achieve PM, SO ₂ and NO _x emission norms notified by MoEF&CC in December, 2015.
B	General Conditions	
I	Statutory compliance:	
i	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislation, etc., as may be applicable to the project	Agreed, we are strictly following the provisions of the EIA Notification, 2006 and its amendments issued from time to time. We have taken all the relevant permissions as applicable to the Project.
II	Air quality monitoring and preservation	
i	The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986,- The CEMS and CAAQMS shall be	Complied. Sunflag provided 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission and also provided Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to

	connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	standards prescribed in Environment (Protection) Rules 1986, The CEMS and CAAQMS are connected to SPCB and CPCB online servers, The emissions level are within prescribed limit and calibrate these systems from time to time according to equipment supplier specification through equipment manufacturer /supplier.
i	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986	Complied. Fugitive emissions in the plant premises is being monitored in every month through labs recognised under Environment (Protection) Act, 1986 and monthly report submitted to State Pollution Control Board.
ii	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.	Complied. Sampling facilities has been provided at process stacks and at quenching towers as per CPCB guidelines for manual monitoring of emissions.
iii	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Complied. Sunflag already provided leakage detection and mechanized bag cleaning facilities for regular maintenance of bags.
iv	Secondary emission control system shall be provided at SMS Converters.	Complied. Primary and Secondary Fume Extraction cum dust collection system has been provided at SMS Converters, Electric arc furnace(EAF) and Laddle Heat Furnace (LHF) to control the emissions from Steel Melt Shop area.
v	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	Complied. Sunflag already using leak proof trucks / dumpers for carrying coal and other raw materials and cover them with tarpaulin.
vi	Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility)	Not applicable, as we have not installed coke oven plant . However, we have full fledged spillage collection facilities are provided for coal and coke through mechanized mobile

		equipments like Bobcat, Tata ACE Tipping to collect spillage etc. The industrial vacuum cleaning facility is also provided for road sweeping and plant floor dust collection on daily basis.
vi	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Complied. Copy of Environmental statement for each financial year in Form V has been submitted on regular basis to the Maharashtra Pollution Control Board, also submitted to MoEFCC along with Six Monthly compliance report regularly. Also put on the website of the company. Form V for last financial year (April-2022 to March-2023)
vii	Land-based APC system shall be installed to control coke pushing emissions.	Not applicable, as we have not installed Coke Oven Plant.
viii	Monitor CO, HC and O ₂ in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber	Not applicable, as we have not installed Coke Oven Plant.
ix	The coke oven gas shall be subjected to desulfurization if the sulphur content in the coal exceeds 1%	Not applicable, as we have not installed Coke Oven Plant.
x	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	Complied. Wind shelter fence is provided on raw material stock piles and chemical BT 8080 (Bio Krishi Udyog) is spraying on the raw material stock piles.
xi	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	Complied. Ventilation system for adequate air changes as per norms for all tunnels, motor houses, Oil Cellars etc are already provided.
III	Water quality monitoring and preservation	
i	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB	Complied. Sunflag already installed 24x7 continuous Effluent Monitoring System with respect to standards prescribed in Environment (Protection) Rules 1986 and results are connected to SPCB and CPCB on line servers. Calibrate these system from time to time according to equipment

	online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories	supplier M/s Forbes Marshall.
ii	The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/ sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories	Complied. Sunflag monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of sampling wells and pond in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
iii	The project proponent shall provide the ETP for coke oven to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7thDecember 2015 (Thermal Power Plants) as amended from time to time as amended from time to time	Not applicable, as we have not installed Coke Oven Plant.
iv	Adhere to 'Zero Liquid Discharge'	Complied. 'Zero Liquid Discharge' has been implemented. 100% of any effluent generated in the plant is reused/ recycled.
v	Sewage Treatment Plant shall be provided for treatment of domestic waste water to meet the prescribed standards.	Complied. Sewage Treatment Plant are already provided for treatment of domestic waste water, parameters maintained within prescribed standards. The STP photo with analysis reports.
vi	Garland drains and collection pits shall be provided for each stock pile to arrest the run- off in the event of heavy rains and to check the water pollution due to surface run off.	Garland drains and collection pits for stock piles work is under progress.
vii	Tyre washing facilities shall be provided at the entrance/exit of the plant gates.	Tyre washing facilities work is under progress.
viii	CO2 injection shall be provided in GCP of SMS to reduce pH in circulating water to	SMS have Primary and Secondary Fume / Dust Extraction System with high capacity bag filters

	ensure optimal recycling of treated water for converter gas cleaning	& suction blowers. Working efficiently and maintain the emissions within prescribed limits.
ix	Water meters shall be provided at the inlet to all unit processes in the steel plants.	Complied. Water meters are already provided at the inlet to all unit processes in the steel plants.
x	The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water	Complied. Water consumption maintained at minimum level by recycling of waste water after treatment. Treated waste water is being used in process as a make up to Sinter, DRP, MBF / SMS slag quenching, Rolling mill etc.
IV	Noise monitoring and prevention	
i	Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report	Complied. Noise level is being monitored on regular basis and maintained as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard is being submitted to MoEFCC Regional Office of the Ministry as a part of six-monthly compliance report.
V	Energy Conservation measures	
i	Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption	Complied. Energy conservation measures has been adopted by providing solar street lights, and replacement of all lights with LED lights and up gradation in electrical control system etc. thus minimize the energy consumption.
VI	Waste management	
i	An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.	Our entire BF slag is being sold to Cement industries like ACC cement, Emami Cement, Ambhuja cement etc. BF slag is utilized for manufacturing of slag cement in cement industries.
ii	In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximize heat recovery.	At present not applicable, as we have not installed Coke Oven Plant.

iii	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	100% GCP slurry is being used at Sinter plant.
iv	Used refractories shall be recycled as far as possible.	Complied. Used refractories is being recycled, Buyback system is adopted with refractory suppliers / manufacturers.
v	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office	Complied. Fly ash is used for in house manufacturing of fly ash bricks & paver blocks and also sold to brick & Paver block manufacturers.
vi	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.	Complied. Oil Collection pits are provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays are provided.
vii	Kitchen waste shall be composted or converted to biogas for further use.	Complied. Kitchen waste compost machine has been installed at our Nursery and compost is being used for nursery / plantation.
VII	Green Belt	
i	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.	Complied. The existing Green belt has been developed in an area equal to 33%(I.e.72 Hectare) of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt are inter alia cover the entire periphery of the plant, Total plantation has been done till date 6,34,758 nos, will also be increased the green belt wherever possible in the project area, 25 Miyawaki sites of each site 500-600 feet square plot has been earmarked at different location of plant.
ii	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	Complied, GHG emissions of Sunflag steel was accounted and submitted every year from 2017-2018 onwards, a statement of carbon budgeting and amount of carbon sequestered by the existing green belt is calculated and also submitted every year. Adequate green belt have

		been developed in and around the plant to reduce the Co2 emissions. Existing green belt found to be good, also increase the green belt by planting maximum trees along the railway line, waste dump area, loading & unloading area etc and wherever possible.
VIII	Public hearing and Human health issues	
i	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	<p>Complied.</p> <p>Emergency plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan has been prepared and submitted along with six monthly compliance report.</p> <p>Mock drills and awareness programme for the employees are conducted periodically.</p>
ii	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act	<p>Complied.</p> <p>Heat stress analysis for the workmen who work in high temperature work zone has been carried out, accordingly shift duration for the employees working in high temperature zone have been followed. and also provided Personal Protection Equipment (PPE) as per the norms of Factory Act.</p>
iii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained	<p>Complied.</p> <p>Medical examinations of workers are carried out regularly. A dispensary with regular medical practitioner and auxiliary nursing facility is available in the plant premises. Additionally, a panel of Doctors regularly visits to the factory for check up the health of workers and Staff.</p>
IX	Corporate Environment Responsibility	
i	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms /	<p>Complied.</p> <p>Company has submitted Environment policy duly approved by Board of Directors towards CER along with previous compliance report.</p>

	conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	
ii	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization	Complied, separate Environmental Cell with qualified personnel has been provided under Section Head & control under Director-Technical and Chief Operating Officer.
X	Miscellaneous	
i	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently	Complied. Advertisement have been made in the local news paper within prescribed period & also displayed in the Sunflag Company website.
ii	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied. Copies of EC has been submitted to Local bodies, Gram Panchayat samiti etc..
iii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Complied. Copies of environment clearance letter, results of monitoring data report are uploaded on Sunflag company website link at https://sunflagsteel.com/1695-2/ . on half yearly basis. Also the Half yearly compliance report is uploaded in Sunflag Steel web site.
iv	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company	Complied, on line monitoring of pollutants data level namely; PM10, SO2, NOx (ambient levels & stack emissions) has been monitored for the projects and displayed the same at the Main Gate of the company.
v	The project proponent shall submit six-monthly reports on the status of the	Complied,

	compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	The Six monthly status of compliance report of EC conditions has been uploaded on website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
vi	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Complied. Last financial year FORM V submitted on 18.08.2023.
vii	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	Complied. Financial closure and final approval of project will be submitted after commissioning of Combustor.
viii	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Agree to comply with this condition.
ix	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)	Agree to comply with this condition.
x	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986	Agree to comply with this condition.
xi	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Agree to comply with this condition.
xii	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Agree to comply with this condition.
xiii	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Agree to comply with this condition.



xiv	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	Ok, Noted.
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ANNEXURE-1. (A)

STACK EMISSION STATUS

Location:- S-2 Reheating Furnace (ASM) S-1A

Stack Identity	S-2 Reheating Furnace (ASM) S-1A
Stack attached to	Reheating Furnace of Alloy Steel Mill
Material of construction	Mild Steel
Stack height above ground level	30.0 mtr.
Stack shape at top	Circular
Stack diameter	1.1 mtr
Type of fuel	LSHS/Furnace Oil & BF Gas

Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)	SO ₂ (kg/day)	NO _x (mg/Nm ³)
1	03-10-2023	268	9.43	17289.08	14.9	73.9	164.5
2	10-10-2023	274	8.89	16120.68	15.5	71.5	165.3
3	16-10-2023	254	8.89	16864.0	18.1	69.6	161.5
4	23-10-2023	264	9.28	17141.72	14.8	71.2	165.2
5	01-11-2023	162	7.92	18059.7	12.8	76.3	158.3
6	08-11-2023	174	8.57	19017.01	15.4	79.4	134.7
7	14-11-2023	158	7.55	17376.97	15.6	54.9	164.5
8	21-11-2023	168	8.62	19387.69	18.6	77.5	149.4
9	04-12-2023	258	7.72	14421.86	11.3	63.9	169.4
10	11-12-2023	246	8.03	15348.03	12.4	56.4	145.2
11	18-12-2023	216	8.17	16572.73	14.8	65.2	153.5



12	26-12-2023	254	8.72	16412.51	13.8	68.1	163.9
13	02-01-2024	206	8.77	18160.97	21.6	72.8	158.3
14	10-01-2024	246	7.63	14583.69	13.2	58.3	157.7
15	15-01-2024	218	7.94	16041.01	10.5	60.1	146.5
16	13-02-2024	248	8.91	16963.48	14.7	70.4	161.3
17	20-02-2024	252	8.71	16456.14	13.9	69.7	167.8
18	27-02-2024	264	8.30	15331.91	15.9	67.8	174.4
19	13-03-2024	246	8.66	16552.39	12.9	73.8	174.5
20	19-03-2024	234	8.19	16024.34	21.5	74.3	182.6
21	26-03-2024	258	9.34	17447.07	17.5	74.7	167.7
Method		IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-50 mg/Nm³.**
Sulphur Dioxide – 720 Kg/Day.

STACK EMISSION STATUS

Location:- S-3 FBC Boiler ESP (CPP)

Stack Identity	S-3 FBC Boiler ESP (CPP)
Stack attached to	FBC Boiler of CPP through ESP
Material of construction	Mild Steel
Stack height above ground level	55 mtr.
Stack shape at top	Circular
Stack diameter	1.6 mtr
Type of fuel	Coal Fines, DRI Ash, ESP Dust

Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)	SO ₂ (kg/day)	NO ₂ (mg/ Nm ³)
1	21-10-2023	126	10.12	53255.63	33.5	512.2	363.3
2	26-10-2023	133	9.63	49803.98	34.1	511.6	363.8
3	02-11-2023	138	10.8	55639.73	27.2	523.9	352.6
4	07-11-2023	134	9.12	47047.95	32.8	434.9	374.6
5	16-11-2023	132	9.95	51588.09	28.8	500.5	378.7
6	23-11-2023	128	9.32	48801.74	34.6	473.5	381.6
7	06-12-2023	118	9.37	50318.38	31.3	483.6	366.9
8	13-12-2023	124	10.63	56226.59	28.7	527.8	380.7
9	20-12-2023	132	9.10	47156.21	33.5	402.4	388.4
10	27-12-2023	128	10.14	53096.89	24.5	397.8	356.7
11	03-01-2024	136	10.24	52571.72	32.7	482.9	352.8
12	11-01-2024	124	9.36	49502.34	29.3	457.5	372.6
13	18-01-2024	128	9.23	48329.83	32.4	455.1	383.4
14	27-01-2024	132	8.92	46245.94	35.6	430.2	377.4
15	06-02-2024	136	10.56	54184.56	26.6	479.3	343.5



16	14-02-2024	124	9.93	52518.32	29.8	469.1	351.5
17	22-02-2024	137	9.68	49575.50	42.5	461.9	367.9
18	11-03-2024	136	10.79	55396.15	30.7	475.7	334.4
19	20-03-2024	138	10.27	52435.85	28.5	453.1	346.5
20	28-03-2024	134	9.73	50171.07	23.8	449.5	352.9
	Method	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	S 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-50 mg/Nm³.**
Sulphur Dioxide – 4100 Kg/Day.



STACK EMISSION STATUS

Location :S-4 (BSM)

Stack Identity	S-4 (BSM)
Stack attached to	Reheating Furnace of Bar & Section Mill
Material of construction	Mild Steel
Stack height above ground level	65.0 mtr.
Stack shape at top	Circular
Stack diameter	1.5 mtr
Type of fuel	LSHS/Furnace Oil & BF Gas

Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)	SO ₂ (kg/day)	NO _x (mg/Nm ³)
1	03-10-2023	318	12.32	38446.18	19.2	138.6	144.5
2	10-10-2023	312	11.15	35153.81	20.9	133.3	155.3
3	16-10-2023	307	10.89	34631.94	16.9	125.2	147.7
4	23-10-2023	320	11.64	36204.57	12.2	125.2	144.9
5	01-11-2023	334	12.50	37918.90	15.7	141.4	145.7
6	08-11-2023	316	11.61	36355.03	18.3	134.1	146.5
7	14-11-2023	308	11.9	37840.72	20.7	135.2	142.6
8	21-11-2023	328	10.76	33023.31	17.9	119.8	154.2
9	04-12-2023	284	10.78	35698.20	16.1	138.3	151.6
10	11-12-2023	312	10.50	33106.73	19.7	132.3	157.4
11	18-12-2023	293	11.07	36073.68	22.9	129.6	138.3
12	25-12-2023	298	10.15	32788.27	19.9	122.3	160.2
13	01-01-2024	304	10.97	35067.74	14.4	145.7	169.9
14	09-01-2024	294	10.23	33279.84	15.7	139.9	160.3
15	15-01-2024	312	10.72	33799.02	16.3	133.0	151.7



16	23-01-2024	296	11.10	35981.22	14.8	139.0	157.7
17	05-02-2024	294	11.29	36726.21	13.1	160.1	174.5
18	13-02-2024	304	10.65	34043.87	12.8	157.3	184.4
19	20-02-2024	318	11.00	34329.27	16.2	152.3	178.2
20	27-02-2024	307	10.46	33265.82	15.9	156.6	191.3
21	04-03-2024	314	11.17	35097.35	15.3	161.1	181.8
22	13-03-2024	307	11.41	36285.62	17.7	170.8	190.7
23	19-03-2024	318	10.67	33301.19	26.9	155.4	189.6
24	26-03-2024	312	10.94	34494.05	22.6	153.2	179.5
Method		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	S 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-50 mg/Nm³.**
Sulphur Dioxide – 2916 Kg/Day.
Oxides of Nitrogen – 400 mg/Nm³



STACK EMISSION STATUS

Location:-S-5 SMS-Secondary

Stack Identity	S-5 SMS-Secondary
Stack attached to	EAF & LHF of Steel Melting Shop through Bag Filters
Material of construction	Mild Steel
Stack height above ground level	36.75 mtr.
Stack shape at top	Circular
Stack diameter	4.3 mtr
Type of fuel	Type of Fuel Electricity & O ₂ is used for melting

Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)
1	04-10-2023	92	13.48	559407.09	17.3
2	11-10-2023	86	13.04	550266.19	21.4
3	17-10-2023	84	12.32	522838.32	15.2
4	25-10-2023	94	13.68	564674.23	25.6
5	02-11-2023	82	12.75	544090.97	13.4
6	09-11-2023	87	11.90	500853.25	18.3
7	15-11-2023	76	12.19	529172.57	14.1
8	22-11-2023	84	13.33	565632.03	19.7
9	05-12-2023	82	12.40	529624.84	14.1
10	12-12-2023	91	11.97	498263.19	17.6
11	19-12-2023	86	12.70	535911.51	19.4
12	26-12-2023	92	12.22	507207.48	13.9
13	09-01-2024	84	12.44	527980.88	19.1
14	16-01-2024	91	13.46	560193.00	25.6
15	22-01-2024	96	12.88	528820.82	17.9



16	06-02-2024	86	12.42	524184.56	13.2
17	15-02-2024	94	13.68	564689.51	12.7
18	21-02-2024	91	12.79	532374.91	16.9
19	05-03-2024	82	12.41	529639.17	13.5
20	12-03-2024	94	13.52	558062.31	12.6
21	18-03-2024	86	12.76	538399.68	20.7
22	27-03-2024	91	13.13	546431.10	17.8
Method		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

Norms: **Total Particulate Matter (PM)- 50 mg/Nm³.**



STACK EMISSION STATUS

Location:-S-11 (MBF Stoves)

Stack Identity	S-11 (MBF Stoves)
Stack attached to	MBF Gas Fired Hot Blast Burner Stoves
Material of construction	Mild Steel
Stack height above ground level	45.0 mtr.
Stack shape at top	Circular
Stack diameter	2.0 mtr
Type of fuel	MBF Cleaned Gas & Coke

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)	SO ₂ (kg/day)	NO _x (mg/Nm ³)	CO %
1	07-10-2023	146	13.48	105444.85	19.8	626.3	128.3	BDL(<0.1)
2	14-10-2023	153	14.80	113844.88	12.3	265.6	113.3	BDL(<0.1)
3	19-10-2023	148	13.80	108049.22	13.2	267.3	122.7	BDL(<0.1)
4	27-10-2023	156	12.92	98713.87	10.1	211.3	96.6	BDL(<0.1)
5	03-11-2023	142	13.78	108842.27	10.4	628.9	122.8	BDL(<0.1)
6	06-11-2023	146	10.69	83646.59	19.3	171.4	116.4	BDL(<0.1)
7	16-11-2023	154	13.22	101494.18	11.2	232.4	125.5	BDL(<0.1)
8	23-11-2023	144	12.81	100706.27	10.5	200.0	91.3	BDL(<0.1)
9	06-12-2023	146	13.23	103492.07	10.2	315.5	118.3	BDL(<0.1)
10	13-12-2023	152	12.86	99184.23	15.7	254.7	111.8	BDL(<0.1)
11	20-12-2023	142	12.61	97226.12	10.5	270.5	122.1	BDL(<0.1)
12	27-12-2023	154	12.21	93735.02	9.14	292.0	131.6	BDL(<0.1)
13	04-01-2024	136	9.15	73361.87	13.7	242.9	124.9	BDL(<0.1)
14	11-01-2024	142	11.69	92350.49	9.39	257.7	126.4	BDL(<0.1)



15	18-01-2024	148	13.13	102219.11	17.3	263.3	118.8	BDL(<0.1)
16	23-01-2024	154	12.69	97410.71	8.49	292.8	114.6	BDL(<0.1)
17	07-02-2024	154	13.98	107321.69	27.6	316.8	115.7	BDL(<0.1)
18	15-02-2024	146	12.77	99896.40	7.36	319.4	123.5	BDL(<0.1)
19	22-02-2024	143	13.18	103844.46	20.9	323.6	120.5	BDL(<0.1)
20	29-02-2024	152	14.55	112198.83	14.6	329.2	114.5	BDL(<0.1)
21	05-03-2024	158	12.27	93318.90	10.4	300.5	120.7	BDL(<0.1)
22	15-03-2024	142	13.04	102984.79	8.68	313.4	186.8	BDL(<0.1)
23	20-03-2024	152	11.8	99180.21	11.8	319.4	191.1	BDL(<0.1)
24	28-03-2024	146	14.03	109739.70	15.9	330.9	195.3	BDL(<0.1)
Method		IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	

Results of Analysis

Norms: **Total Particulate Matter (PM)-30 mg/Nm³.**
Sulphur Dioxide – 1620 Kg/Day.
Oxides of Nitrogen – 200 mg/Nm³
Carbon Monoxide - 1.0 %



STACK EMISSION STATUS

Location:-S-23 (Sinter Plant)

Stack Identity	S-23 (Sinter Plant)
Stack attached to	Head ESP at Sinter Plant
Material of construction	Mild Steel
Stack height above ground level	50.0 mtr.
Stack shape at top	Circular
Stack diameter	3.0 mtr
Type of fuel	Coke Breeze/Fines

Results of Analysis

Sr. No.	Date of Monitoring	Temp(° C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)	SO ₂ (kg/day)	NO _x (mg/Nm ³)
1	06-10-2023	162	18.55	314275.52	45.9	252.8	178.2
2	12-10-2023	174	17.68	291526.23	44.8	211.2	192.4
3	20-10-2023	168	18.01	300987.63	39.5	243.6	179.3
4	27-10-2023	172	19.10	316296.21	44.9	185.6	157.9
5	06-11-2023	162	15.52	263076.23	43.5	249.4	182.5
6	20-11-2023	156	14.85	255267.37	48.2	240.4	205.3
7	07-12-2023	164	18.12	305664.0	48.5	174.4	168.3
8	15-12-2023	172	19.56	323975.18	38.6	258.9	219.5
9	28-12-2023	158	39.40	339065.58	39.4	249.4	225.7
10	05-01-2024	158	14.59	249644.37	22.7	200.2	179.6
11	19-01-2024	165	18.14	305211.88	30.3	202.1	164.7
12	25-01-2024	168	17.04	284811.43	45.9	184.6	167.4
13	09-02-2024	163	17.95	303523.63	23.6	217.9	163.6
14	17-02-2024	168	17.04	284880.79	35.3	247.7	172.6
15	26-02-2024	156	18.42	316514.78	38.3	255.3	165.9
16	07-03-2024	167	16.50	276453.64	34.7	220.3	110.3
Method	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	



Norms: **Total Particulate Matter (PM)-50 mg/Nm³.**
Sulphur Dioxide – 272 Kg/Day.
Oxides of Nitrogen – 500 mg/Nm³



STACK EMISSION STATUS

Location:-S-24 (Sinter Plant)

Stack Identity	S-24 (Sinter Plant)
Stack attached to	Tail ESP at Sinter Plant
Material of construction	Mild Steel
Stack height above ground level	40.0 mtr.
Stack shape at top	Circular
Stack diameter	2.376 mtr
Type of fuel	Coke Breeze/Fines

Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)	SO ₂ (kg/day)	NO _x (mg/Nm ³)
1	06-10-2023	154	9.61	104559.18	45.8	75.9	124.5
2	12-10-2023	148	9.28	102403.53	34.7	58.6	108.6
3	20-10-2023	152	9.14	99908.04	38.3	72.8	112.8
4	27-10-2023	142	8.75	97947.06	41.2	91.4	113.4
5	06-11-2023	143	7.96	88893.25	48.7	63.6	134.2
6	20-11-2023	146	8.30	92031.52	36.2	65.9	112.5
7	07-12-2023	134	8.66	98849.06	39.1	77.3	124.4
8	15-12-2023	142	8.46	94705.93	31.7	73.6	102.5
9	28-12-2023	137	8.21	93030.63	22.8	86.3	101.3
10	05-01-2024	146	8.30	92025.30	16.6	85.6	137.5
11	19-01-2024	138	8.80	99465.46	34.8	78.5	123.9
12	25-01-2024	143	9.04	100958.89	42.8	86.2	132.4
13	09-02-2024	146	9.35	103668.46	28.5	81.6	123.5
14	17-02-2024	142	8.94	100082.02	39.9	85.4	135.2
15	26-02-2024	136	9.41	106883.21	33.4	78.2	128.6
16	07-03-2024	138	8.89	100486.79	43.6	86.6	96.3
Method	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	



Norms: **Total Particulate Matter (PM)-50 mg/Nm³.**
Sulphur Dioxide – 92 Kg/Day.
Oxides of Nitrogen - 500 mg/Nm³



STACK EMISSION STATUS

Location:-S-24 (Sinter Plant)

Stack Identity	S-25 (Sinter Plant)
Stack attached to	Tail ESP-2 at Sinter Plant
Material of construction	Mild Steel
Stack height above ground level	40.0 mtr.
Stack shape at top	Circular
Stack diameter	2.376 mtr
Type of fuel	Coke Breeze/Fines

Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)	SO ₂ (kg/day)	NO _x (mg/Nm ³)
1	06-11-2023	124	9.01	104499.34	45.5	104.0	119.6
2	20-11-2023	126	8.58	99018.68	48.8	126.7	127.6
3	07-12-2023	124	9.01	104507.82	40.3	124.7	119.3
4	15-12-2023	133	8.75	99243.57	41.6	119.9	115.7
5	28-12-2023	118	7.72	90921.53	32.5	122.1	126.5
6	08-01-2024	123	7.77	90356.19	35.9	122.8	124.6
7	19-01-2024	127	7.16	82429.96	43.8	128.6	137.8
8	25-01-2024	124	7.46	118413.47	27.9	167.9	122.6
9	09-02-2024	127	7.05	81163.58	24.6	126.1	138.7
10	17-02-2024	134	7.45	84291.20	32.8	142.5	145.6
11	26-02-2024	132	7.32	83234.95	35.4	129.4	137.2
12	07-03-2024	128	7.06	81074.92	44.5	145.1	127.7
Method	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	

**Norms: Total Particulate Matter (PM)-50 mg/Nm³.
 Sulphur Dioxide – 184 Kg/Day.
 Oxides of Nitrogen - 500 mg/Nm³**

STACK EMISSION STATUS

Location:- S-27 Flux Crusher De-Dusting System (Sinter Plant)

Stack Identity	S-27 Flux Crusher De-Dusting System (Sinter Plant)
Stack diameter	1.1 mtr

Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)
1	13-10-2023	38	4.18	13334.21	12.7
2	13-11-2023	38	4.60	14673.60	6.15
3	27-11-2023	36	4.31	13837.52	7.40
4	08-12-2023	38	4.18	13334.03	7.22
5	29-12-2023	36	3.85	12360.99	9.97
6	29-01-2024	36	4.72	15153.24	10.7
7	10-02-2024	37	4.59	14688.94	5.53
8	19-02-2024	41	4.89	15449.86	6.81
9	08-03-2024	38	4.46	14227.01	8.68
10	30-03-2024	41	4.20	13269.82	19.9
Method	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

Norms: **Total Particulate Matter (PM)-50 mg/Nm³.**

STACK EMISSION STATUS

Location:- S-28 Flux Screening Quickling Bunker Top De-Dusting System (Sinter Plant)

Stack Identity	S-28 Flux Screening Quickling Bunker Top De-Dusting System (Sinter Plant)
Stack diameter	1.1 meter

Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)
1	13-10-2023	52	7.04	21495.44	20.8
2	13-11-2023	42	7.19	22651.9	15.3
3	27-11-2023	48	6.81	21052.55	15.9
4	08-12-2023	44	6.28	19658.28	8.59
5	29-12-2023	38	6.41	20451.78	11.6
6	29-01-2024	43	6.27	19690.15	20.4
7	10-02-2024	45	6.48	20221.65	13.7
8	19-02-2024	52	6.35	19388.89	19.6
9	08-03-2024	52	6.46	19723.17	21.4
10	30-03-2024	46	5.98	18600.57	12.2
Method	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019

Norms: **Total Particulate Matter (PM) - 50 mg/Nm³.**



STACK EMISSION STATUS

Stack Identity	S-29 ESP to New WHRSG of Kiln (DRP– 2)
Stack diameter	2.8 meter

Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)	SO ₂ (kg/day)	NO _x (mg/Nm ³)	(CO) %
1	09-10-2023	143	9.31	143835.94	44.5	1208.9	297.5	BDL(<0.1)
2	18-10-2023	141	8.74	135687.48	46.9	1113.8	289.6	BDL(<0.1)
3	26-10-2023	146	8.98	137746.08	45.7	1081.1	392.4	BDL(<0.1)
4	04-11-2023	146	9.70	148792.32	25.5	1235.0	254.5	BDL(<0.1)
5	07-11-2023	143	9.04	139672.09	34.5	1122.8	275.1	BDL(<0.1)
6	17-11-2023	142	9.30	144039.35	25.7	1030.7	324.1	BDL(<0.1)
7	24-11-2023	137	8.70	136384.20	32.5	1117.9	374.3	BDL(<0.1)
8	30-12-2023	138	8.89	139023.62	23.9	1182.6	267.1	BDL(<0.1)
9	04-01-2024	142	7.85	121417.27	16.4	1080.6	274.3	BDL(<0.1)
10	17-01-2024	134	8.76	138337.0	28.5	1184.2	265.5	BDL(<0.1)
11	24-01-2024	138	9.17	143396.52	37.8	1210.9	252.3	BDL(<0.1)
12	08-02-2024	146	8.98	137751.67	33.4	1198.9	259.8	BDL(<0.1)
13	16-02-2024	137	8.41	131832.72	28.8	1173.8	265.4	BDL(<0.1)
14	23-02-2024	142	8.26	127924.80	37.5	1161.5	271.3	BDL(<0.1)
15	28-02-2024	148	9.37	143049.45	34.6	1248.9	254.5	BDL(<0.1)
16	06-03-2024	146	8.98	137738.63	43.4	1028.2	264.2	BDL(<0.1)
17	14-03-2024	142	8.84	136909.27	45.7	1044.9	275.8	BDL(<0.1)
18	21-03-2024	138	8.32	130109.85	32.3	1014.6	286.4	BDL(<0.1)
19	29-03-2024	148	9.37	143047.51	34.6	1289.1	276.8	BDL(<0.1)
Method	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017	Multi Gas Analyzer Method	



Norms: **Total Particulate Matter (PM)- 50 mg/Nm³.**
Sulphur Dioxide – 4520 Kg/Day.
CO – 1.0 %



STACK EMISSION STATUS

Stack Identity	S-34 Producer Hopper (DRP – 2)
Stack diameter	1.11 meter

Results of Analysis

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)
1	09-10-2023	53	16.87	52366.12	45.9
2	18-10-2023	56	17.33	53314.99	26.1
3	26-10-2023	54	17.51	54190.91	24.4
4	04-11-2023	54	16.86	52180.67	35.7
5	10-11-2023	48	17.23	54329.12	42.7
6	17-11-2023	46	16.14	51193.97	38.8
7	24-11-2023	51	17.05	53243.65	29.4
8	30-12-2023	47	16.72	52867.93	28.9
9	08-01-2024	52	15.89	49472.53	20.5
10	17-01-2024	50	17.02	53327.47	27.1
11	24-01-2024	47	16.25	51389.44	33.8
12	08-02-2024	48	16.27	51289.63	28.9
13	16-02-2024	54	17.98	55646.99	23.1
14	23-02-2024	52	17.19	53520.72	24.9
15	28-02-2024	51	17.35	54199.49	31.4
16	06-03-2024	54	15.53	48039.76	31.1
17	14-03-2024	54	17.62	54537.96	34.5
18	21-03-2024	57	16.97	52037.32	37.4
19	29-03-2024	53	17.78	55125.79	35.5
Method	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	

Norms: **Total Particulate Matter (PM)- 50 mg/Nm³.**



STACK EMISSION STATUS

Location:- S-35 Reheating Furnace (Blooming Mill)

Stack Identity	S-35 Reheating Furnace (Blooming Mill)
Stack attached to	Reheating Furnace Blooming Mill
Material of construction	Mild Steel
Stack height above ground level	70.0 mtr.
Stack shape at top	Circular
Stack diameter	2.0 mtr
Type of fuel	LSHS / Furnace Oil & BF gas

Sr. No.	Date of Monitoring	Temp (°C)	Velocity of Flue Gas (m/sec)	Volume of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)	SO ₂ (kg/day)	NO _x (mg/Nm ³)
1	04-10-2023	328	10.12	56856.94	25.9	336.7	185.3
2	11-10-2023	324	9.91	54434.21	15.3	341.1	202.3
3	17-10-2023	318	10.10	56042.59	20.3	344.2	194.5
4	25-10-2023	322	9.77	53847.78	14.2	340.7	187.5
5	03-11-2023	324	10.03	55095.59	20.5	317.0	172.6
6	09-11-2023	314	9.46	52851.21	19.5	305.1	175.5
7	15-11-2023	310	9.79	55069.38	16.1	324.1	181.3
8	22-11-2023	322	10.13	55830.43	18.7	329.6	178.4
9	19-12-2023	326	9.68	52997.62	18.6	346.9	177.8
10	25-12-2023	322	10.25	56491.03	24.8	259.4	157.5
11	02-01-2024	320	9.38	51874.04	19.4	297.7	175.3
12	10-01-2024	317	8.97	49858.19	17.2	284.3	177.2
13	16-01-2024	324	9.66	53064.58	14.8	292.8	163.5
14	22-01-2024	304	9.13	51888.07	15.7	280.7	181.8
15	05-02-2024	324	9.41	51689.88	15.5	30.6.1	182.5
16	14-02-2024	318	8.98	49829.99	17.3	300.6	195.4
17	21-02-2024	312	9.44	52920.50	17.8	328.9	201.5
18	04-03-2024	326	9.43	51628.18	17.5	267.5	185.9



19	12-03-2024	318	8.98	49828.64	15.4	271.3	192.8
20	18-03-2024	324	9.54	52406.10	22.2	268.2	185.5
21	27-03-2024	328	8.78	47909.54	15.8	265.9	201.9
Method		IS 11255 (Part 3): 2008 RA 2018	S 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	IS 11255 (Part 2):1985 RA 2019	IS 11255 (Part 7):2005 RA 2017

Norms: **Total Particulate Matter (PM)-50 mg/Nm³.**
Sulphur Dioxide – 5490 Kg/Day.
Oxides of Nitrogen – 400 mg/Nm³

STACK EMISSION STATUS

Location:- S-40 MBF stock house de dusting system

Stack Identity	S-40 MBF stock house de dusting system
Stack diameter	1.0 meter

Results of Analysis

Sr. No.	Date of Monitoring	Temp(°C)	Velocity of Flue Gas (m/sec)	Flow Rate of Flue Gas (Nm ³ /hr)	Total Particulate Matter (PM) (mg/Nm ³)
1	19-10-2023	54	17.58	44159.91	17.9
2	10-11-2023	41	17.41	45547.78	14.8
3	29-11-2023	40	17.23	45224.54	10.5
4	21-12-2023	41	17.15	44873.02	6.86
5	03-01-2024	38	17.18	45383.90	8.55
6	27-01-2024	42	16.43	42842.26	18.1
7	12-02-2024	42	17.51	45665.20	9.78
8	24-02-2024	46	16.69	42971.62	13.6
9	11-03-2024	51	17.13	43419.17	18.1
Method	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 3): 2008 RA 2018	IS 11255 (Part 1):1985 RA 2019	

Norms: Total Particulate Matter (PM)-30 mg/Nm³.

ANNEXURE - 1 (B)

AMBIENT AIR QUALITY STATUS

1.0 Location:- A - 1 (Eklari Gate)

Sr. No.	Month	Date of Monitoring	PM ₁₀	PM _{2.5}	SO ₂	NO _x
			µg/m ³	µg/m ³	µg/m ³	µg/m ³
1	Oct-23	03-10-2023 to 04-10-2023	57.7	31.4	10.4	13.4
2		06-10-2023 to 07-10-2023	59.8	32.5	9.82	14.4
3		09-10-2023 to 10-10-2023	68.4	33.6	12.6	17.5
4		13-10-2023 to 14-10-2023	65.3	31.7	7.85	13.6
5		16-10-2023 to 17-10-2023	62.8	31.4	7.59	14.7
6		20-10-2023 to 21-10-2023	69.6	33.1	7.36	15.2
7		23-10-2023 to 24-10-2023	71.8	33.9	10.3	13.6
8		27-10-2023 to 28-10-2023	67.1	32.2	9.92	13.4
9		30-10-2023 to 31-10-2023	58.7	26.9	7.46	11.8
10	Nov-23	01-11-2023 to 02-11-2023	65.4	23.8	7.74	12.3
11		03-11-2023 to 04-11-2023	77.1	31.6	12.3	17.2
12		06-11-2023 to 07-11-2023	85.4	38.8	12.7	17.3
13		10-11-2023 to 11-11-2023	67.2	28.5	7.96	11.9
14		13-11-2023 to 14-11-2023	72.7	32.4	7.88	13.1
15		17-11-2023 to 18-11-2023	63.2	26.4	7.26	15.6
16		20-11-2023 to 21-11-2023	86.9	41.7	10.1	14.2
17		24-11-2023 to 25-11-2023	70.1	34.6	12.4	13.2
18		27-11-2023 to 28-11-2023	68.6	36.8	7.39	10.4
19	29-11-2023 to 30-11-2023	80.4	39.1	12.7	21.1	
20	Dec-23	04-12-2023 to 05-12-2023	64.8	32.1	9.83	16.5
21		08-12-2023 to 09-12-2023	61.1	30.4	12.2	17.6
22		11-12-2023 to 12-12-2023	78.9	37.1	8.11	14.3



23		15-12-2023 to 16-12-2023	69.5	33.2	10.2	18.7
24		18-12-2023 to 19-12-2023	73.4	34.1	8.03	16.6
25		22-12-2023 to 23-12-2023	75.7	35.3	8.31	12.7
26		25-12-2023 to 26-12-2023	78.5	36.0	10.1	13.4
27		29-12-2023 to 30-12-2023	77.3	33.8	11.4	23.3
28	Jan-24	01-01-2024 to 02-01-2024	79.7	38.9	11.2	16.9
29		05-01-2024 to 06-01-2024	72.3	33.6	9.70	15.5
30		08-01-2024 to 09-01-2024	74.3	32.7	9.51	17.4
31		12-01-2024 to 13-01-2024	67.6	31.6	12.2	19.3
32		15-01-2024 to 16-01-2024	76.4	35.2	8.75	18.2
33		19-01-2024 to 20-01-2024	67.9	29.8	7.32	15.6
34		22-01-2024 to 23-01-2024	68.8	30.4	9.01	14.1
35		25-01-2024 to 26-01-2024	72.7	33.6	8.05	16.5
36		29-01-2024 to 30-01-2024	75.8	34.5	7.83	12.1
37		Feb-24	05-02-2024 to 06-02-2024	70.4	31.6	7.56
38	09-02-2024 to 10-02-2024		67.4	29.0	8.19	12.9
39	12-02-2024 to 13-02-2024		58.3	28.6	6.45	11.2
40	16-02-2024 to 17-02-2024		79.3	35.6	7.61	10.3
41	19-02-2024 to 20.02-2024		75.8	32.2	10.9	14.1
42	23-02-2024 to 24-02-2024		66.5	29.4	10.6	15.1
43	26-02-2024 to 27.02.2024		72.8	31.8	7.68	10.8
44	28-02-2024 to 29-02-2024		62.4	30.5	7.93	11.8
45	Mar-24	04-03-2024 to 05-03-2024	75.2	36.9	7.93	14.4
46		08-03-2024 to 09-03-2024	69.2	33.4	6.35	12.9
47		11-03-2024 to 12-03-2024	83.8	37.2	8.19	10.9
48		15-03-2024 to 16-03-2024	77.6	34.5	7.71	11.4
49		18-03-2024 to 19-03-2024	80.4	35.3	7.71	13.8



50		22-03-2024 to 23-03-2024	85.8	35.3	8.22	16.3
51		26-03-2024 to 27-03-2024	86.8	38.1	9.89	16.6
52		29-03-2024 to 30-03-2024	82.4	33.6	10.0	15.2
NAAQM Standard			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80(24 hrs)

- All Concentrations are in microgram per cubic meter

2.0 Location :- Pump House (Near Water Reservoir (A-2)

Sr. No.	Month	Date of Monitoring	PM ₁₀	PM _{2.5}	SO ₂	NO _x
			µg/m ³	µg/m ³	µg/m ³	µg/m ³
1	Oct-23	03-10-2023 to 04-10-2023	59.7	32.5	7.98	14.5
2		06-10-2023 to 07-10-2023	61.8	33.0	8.09	15.2
3		09-10-2023 to 10-10-2023	71.2	35.4	14.8	23.3
4		13-10-2023 to 14-10-2023	59.5	31.2	9.91	12.3
5		16-10-2023 to 17-10-2023	68.3	34.4	10.5	16.2
6		20-10-2023 to 21-10-2023	58.3	26.0	7.77	13.5
7		23-10-2023 to 24-10-2023	65.1	30.1	7.96	12.2
8		27-10-2023 to 28-10-2023	74.1	36.4	12.8	22.1
9		30-10-2023 to 31-10-2023	68.8	29.6	10.2	12.3
10	Nov-23	01-11-2023 to 02-11-2023	87.9	32.5	12.2	18.2
11		03-11-2023 to 04-11-2023	88.4	35.1	12.8	19.5
12		06-11-2023 to 07-11-2023	94.8	38.4	15.5	21.8
13		10-11-2023 to 11-11-2023	83.1	35.6	10.3	17.1
14		13-11-2023 to 14-11-2023	66.4	34.7	12.4	18.3
15		17-11-2023 to 18-11-2023	74.2	36.8	13.3	20.5
16		20-11-2023 to 21-11-2023	97.8	43.5	13.4	20.2
17		24-11-2023 to 25-11-2023	84.3	41.4	12.8	17.8
18		27-11-2023 to 28-11-2023	80.4	39.1	12.8	21.1
19		29-11-2023 to 30-11-2023	82.8	39.6	9.55	23.8
20	Dec-23	04-12-2023 to 05-12-2023	70.4	35.2	12.7	20.4
21		08-12-2023 to 09-12-2023	57.9	26.3	9.95	15.3
22		11-12-2023 to 12-12-2023	84.3	39.1	12.2	20.9
23		15-12-2023 to 16-12-2023	86.7	40.8	14.3	18.7
24		18-12-2023 to 19-12-2023	75.8	34.7	8.36	12.6



25		22-12-2023 to 23-12-2023	72.6	32.2	9.57	14.8
26		25-12-2023 to 26-12-2023	80.5	37.1	8.25	18.3
27		29-12-2023 to 30-12-2023	74.9	31.6	10.2	15.6
28	Jan-24	01-01-2024 to 02-01-2024	69.3	34.6	10.9	17.2
29		05-01-2024 to 06-01-2024	65.4	31.6	8.08	16.2
30		08-01-2024 to 09-01-2024	82.8	34.5	7.48	16.7
31		12-01-2024 to 13-01-2024	75.5	33.3	10.5	11.8
32		15-01-2024 to 16-01-2024	79.4	34.5	8.47	17.3
33		19-01-2024 to 20-01-2024	68.9	35.8	10.0	17.6
34		22-01-2024 to 23-01-2024	69.9	32.1	10.7	15.5
35		25-01-2024 to 26-01-2024	76.3	35.1	10.3	12.2
36		29-01-2024 to 30-01-2024	81.6	29.4	9.55	12.7
37		Feb-24	05-02-2024 to 06-02-2024	79.6	33.1	8.13
38	09-02-2024 to 10-02-2024		74.8	30.4	9.11	13.4
39	12-02-2024 to 13-02-2024		89.2	37.8	9.91	12.9
40	16-02-2024 to 17-02-2024		82.5	32.9	7.61	10.9
41	19-02-2024 to 20-02-2024		80.9	34.0	6.68	10.4
42	23-02-2024 to 24-02-2024		81.2	37.2	6.65	11.5
43	26-02-2024 to 27-02-2024		74.2	34.3	8.39	12.6
44	28-02-2024 to 29-02-2024		80.5	37.4	7.78	15.7
45	Mar-24	04-03-2024 to 05-03-2024	80.2	38.1	8.21	12.5
46		08-03-2024 to 09-03-2024	83.7	39.1	7.93	12.7
47		11-03-2024 to 12-03-2024	74.6	34.5	6.54	10.3
48		15-03-2024 to 16-03-2024	80.7	36.9	8.14	14.6
49		18-03-2024 to 19-03-2024	83.6	38.0	9.16	16.3
50		22-03-2024 to 23-03-2024	78.3	38.2	9.49	18.5
51		26-03-2024 to 27-03-2024	81.5	34.0	9.35	16.4



52		29-03-2024 to 30-03-2024	85.3	38.1	9.59	18.9
NAAQM Standard			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80(24 hrs)

- All Concentrations are in microgram per cubic meter



3.1 Location : STP (A-3)

Sr. No.	Month	Date of Monitoring	PM ₁₀	PM _{2.5}	SO ₂	NO _x
			µg/m ³	µg/m ³	µg/m ³	µg/m ³
1	Oct-23	03-10-2023 to 04-10-2023	48.8	24.6	9.88	12.3
2		06-10-2023 to 07-10-2023	53.8	27.5	10.4	14.9
3		09-10-2023 to 10-10-2023	50.8	25.6	8.15	12.7
4		13-10-2023 to 14-10-2023	53.4	25.3	9.49	15.1
5		16-10-2023 to 17-10-2023	55.1	27.1	7.59	11.9
6		20-10-2023 to 21-10-2023	57.2	27.8	8.09	11.1
7		23-10-2023 to 24-10-2023	53.6	21.6	7.54	12.4
8		27-10-2023 to 28-10-2023	54.1	25.2	7.88	14.2
9		30-10-2023 to 31-10-2023	56.8	24.8	7.31	14.0
10	Nov-23	01-11-2023 to 02-11-2023	42.8	21.3	10.5	12.7
11		03-11-2023 to 04-11-2023	48.3	23.6	10.6	11.4
12		06-11-2023 to 07-11-2023	49.7	23.2	2.25	7.75
13		10-11-2023 to 11-11-2023	45.1	21.4	7.39	10.7
14		13-11-2023 to 14-11-2023	58.0	25.7	8.04	13.4
15		17-11-2023 to 18-11-2023	57.9	24.5	7.41	11.7
16		20-11-2023 to 21-11-2023	41.2	19.5	7.44	13.6
17		24-11-2023 to 25-11-2023	58.7	32.7	10.2	18.5
18		27-11-2023 to 28-11-2023	49.1	22.9	7.96	13.3
19		29-11-2023 to 30-11-2023	52.8	23.1	9.37	17.2
20	Dec-23	04-12-2023 to 05-12-2023	57.6	28.3	7.52	12.2
21		08-12-2023 to 09-12-2023	50.8	25.8	7.46	13.9
22		11-12-2023 to 12-12-2023	43.7	21.7	6.62	15.9
23		15-12-2023 to 16-12-2023	53.2	24.5	8.48	16.5
24		18-12-2023 to 19-12-2023	47.1	23.0	8.68	14.9



25		22-12-2023 to 23-12-2023	50.4	25.1	7.97	11.2
26		25-12-2023 to 26-12-2023	52.6	24.6	8.25	10.7
27		29-12-2023 to 30-12-2023	56.2	29.6	8.14	15.4
28	Jan-24	01-01-2024 to 02-01-2024	55.8	27.2	6.29	10.7
29		05-01-2024 to 06-01-2024	54.3	25.9	7.11	11.6
30		08-01-2024 to 09-01-2024	56.7	26.2	8.08	15.3
31		12-01-2024 to 13-01-2024	58.6	27.3	9.48	17.5
32		15-01-2024 to 16-01-2024	59.7	28.5	8.62	14.6
33		19-01-2024 to 20-01-2024	54.5	26.2	7.46	12.2
34		22-01-2024 to 23-01-2024	57.8	25.2	6.59	11.7
35		25-01-2024 to 26-01-2024	55.4	24.6	10.2	15.4
36		29-01-2024 to 30-01-2024	50.1	24.6	7.98	11.7
37		Feb-24	05-02-2024 to 06-02-2024	47.8	22.8	8.45
38	09-02-2024 to 10-02-2024		42.7	21.4	7.88	16.3
39	12-02-2024 to 13-02-2024		54.2	24.4	7.54	15.7
40	16-02-2024 to 17-02-2024		57.3	25.2	10.0	11.8
41	19-02-2024 to 20-02-2024		53.2	25.3	7.93	11.2
42	23-02-2024 to 24-02-2024		55.4	24.6	8.32	9.84
43	26-02-2024 to 27-02-2024		50.6	24.8	6.65	10.6
44	28-02-2024 to 29-02-2024		56.7	27.2	10.2	15.9
45	Mar-24	04-03-2024 to 05-03-2024	48.6	21.2	8.09	17.9
46		08-03-2024 to 09-03-2024	54.3	24.5	6.57	11.5
47		11-03-2024 to 12-03-2024	56.7	25.6	9.26	13.6
48		15-03-2024 to 16-03-2024	60.1	27.6	9.80	11.8
49		18-03-2024 to 19-03-2024	58.6	27.8	9.99	16.0
50		22-03-2024 to 23-03-2024	61.8	31.5	8.06	13.2
51		26-03-2024 to 27-03-2024	60.3	29.4	8.22	14.7



52		29-03-2024 to 30-03-2024	59.8	27.6	7.01	14.3
NAAQM Standard			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80(24 hrs)

- All Concentrations are in micro gram per cubic meter.



4. Location : Guest House (A-4)

Sr. No.	Month	Date of Monitoring	PM ₁₀	PM _{2.5}	SO ₂	NO _x
			µg/m ³	µg/m ³	µg/m ³	µg/m ³
1	Oct-23	03-10-2023 to 04-10-2023	56.1	26.3	10.4	14.5
2		06-10-2023 to 07-10-2023	55.8	27.0	10.6	13.8
3		09-10-2023 to 10-10-2023	56.9	26.8	10.4	15.6
4		13-10-2023 to 14-10-2023	47.2	24.6	9.78	13.9
5		16-10-2023 to 17-10-2023	51.6	24.7	7.44	11.8
6		20-10-2023 to 21-10-2023	53.1	25.2	7.67	12.4
7		23-10-2023 to 24-10-2023	54.8	23.1	7.79	14.6
8		27-10-2023 to 28-10-2023	59.1	29.0	10.1	15.6
9		30-10-2023 to 31-10-2023	63.4	25.2	9.75	17.3
10	Nov-23	01-11-2023 to 02-11-2023	53.1	27.2	10.3	14.8
11		03-11-2023 to 04-11-2023	56.3	29.2	12.8	17.2
12		06-11-2023 to 07-11-2023	42.6	21.1	9.59	14.3
13		10-11-2023 to 11-11-2023	38.8	17.5	7.39	12.3
14		13-11-2023 to 14-11-2023	69.5	34.2	7.67	11.6
15		17-11-2023 to 18-11-2023	54.4	25.8	7.82	12.6
16		20-11-2023 to 21-11-2023	52.8	28.4	9.92	16.4
17		24-11-2023 to 25-11-2023	53.8	23.7	11.2	17.1
18		27-11-2023 to 28-11-2023	54.9	27.1	7.24	12.7
19		29-11-2023 to 30-11-2023	58.8	29.2	13.1	21.8
20	Dec-23	04-12-2023 to 05-12-2023	57.9	29.3	7.93	14.8
21		08-12-2023 to 09-12-2023	52.2	27.4	8.79	11.4
22		11-12-2023 to 12-12-2023	45.7	24.7	8.11	13.8
23		15-12-2023 to 16-12-2023	58.9	27.8	6.51	15.4
24		18-12-2023 to 19-12-2023	53.2	26.4	11.2	17.5



25		22-12-2023 to 23-12-2023	56.4	27.2	7.01	16.9
26		25-12-2023 to 26-12-2023	58.6	28.4	10.2	15.9
27		29-12-2023 to 30-12-2023	55.6	26.7	11.9	16.3
28	Jan-24	01-01-2024 to 02-01-2024	59.4	29.6	8.03	16.3
29		05-01-2024 to 06-01-2024	53.6	25.9	6.47	15.0
30		08-01-2024 to 09-01-2024	59.3	29.4	7.76	10.5
31		12-01-2024 to 13-01-2024	66.3	31.3	7.92	17.1
32		15-01-2024 to 16-01-2024	63.4	29.1	7.98	10.1
33		19-01-2024 to 20-01-2024	50.2	23.4	7.87	10.4
34		22-01-2024 to 23-01-2024	59.0	27.2	7.95	11.1
35		25-01-2024 to 26-01-2024	57.3	25.3	8.36	11.3
36		29-01-2024 to 30-01-2024	51.8	22.9	7.68	13.8
37		Feb-24	05-02-2024 to 06-02-2024	54.2	21.4	9.07
38	09-02-2024 to 10-02-2024		49.8	21.8	9.79	14.3
39	12-02-2024 to 13-02-2024		56.1	25.4	7.52	12.1
40	16-02-2024 to 17-02-2024		52.4	23.1	8.06	11.7
41	19-02-2024 to 20-02-2024		52.6	24.9	7.61	9.75
42	23-02-2024 to 24-02-2024		58.6	27.9	8.03	11.5
43	26-02-2024 to 27-02-2024		55.6	25.3	9.10	14.6
44	28-02-2024 to 29-02-2024		57.8	26.4	7.78	12.5
45	Mar-24	04-03-2024 to 05-03-2024	52.1	23.7	6.35	13.9
46		08-03-2024 to 09-03-2024	46.6	23.3	6.35	13.2
47		11-03-2024 to 12-03-2024	50.6	23.3	7.89	13.0
48		15-03-2024 to 16-03-2024	49.2	21.3	7.87	11.7
49		18-03-2024 to 19-03-2024	49.6	23.5	8.62	13.6
50		22-03-2024 to 23-03-2024	51.6	24.5	8.49	11.2
51		26-03-2024 to 27-03-2024	53.8	26.9	9.87	13.7



52		29-03-2024 to 30-03-2024	55.2	26.3	8.43	13.3
NAAQM Standard			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80(24 hrs)

- All Concentrations are in microgram per cubic meter



ANNEXURE-1. (C)

Ambient Noise Quality Status

Oct-2023	Hourly Average Noise Level dB (A)							
Location	1 st		2 nd		3 rd		4 th	
	07-10-2023		14-10-2023		21-10-2023		28-10-2023	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	70.0	63.1	65.6	60.7	64.2	59.2	70.8	62.1
N-2 (Pump House-2) Near Water Reservoir	72.2	63.9	71.0	63.4	70.6	62.7	71.3	63.1
N-3 (STP)	53.0	45.8	52.8	46.2	51.7	46.3	52.6	44.8
N-4 (Guest House)	62.9	53.2	60.7	58.1	63.4	52.9	65.9	59.1
Norms	75	70	75	70	75	70	75	70

Nov-2023	Hourly Average Noise Level dB (A)							
Location	1 st		2 nd		3 rd		4 th	
	04-11-2023		11-11-2023		18-11-2023		25-11-2023	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	65.2	59.1	68.6	60.6	64.1	56.4	63.9	53.7
N-2 (Pump House-2) Near Water Reservoir	71.8	61.7	71.0	62.1	70.5	60.5	70.1	61.7
N-3 (STP)	53.7	47.8	52.5	45.8	51.7	46.3	50.6	44.7
N-4 (Guest House)	62.8	58.5	60.7	53.2	60.5	54.7	61.7	53.1
Norms	75	70	75	70	75	70	75	70



Dec-2023	Hourly Average Noise Level dB (A)							
	1 st		2 nd		3 rd		4 th	
	09-12-2023		16-12-2023		23-12-2023		30-12-2023	
Location	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	70.1	62.1	64.2	56.5	68.6	57.7	70.0	63.1
N-2 (Pump House-2) Near Water Reservoir	72.3	65.9	71.3	63.1	70.8	62.7	70.6	62.1
N-3 (STP)	53.0	45.8	52.6	46.3	53.7	47.8	52.5	48.8
N-4 (Guest House)	62.9	53.1	60.5	53.2	61.7	54.7	62.0	54.1
Norms	75	70	75	70	75	70	75	70

Jan-2024	Hourly Average Noise Level dB (A)							
	1 st		2 nd		3 rd		4 th	
	06-01-2024		13-01-2024		20-01-2024		27-01-2024	
Location	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
N-1 (Eklari Gate)	69.1	57.3	68.6	59.2	70.1	65.8	65.3	59.2
N-2 (Pump House-2) Near Water Reservoir	71.8	62.7	70.6	63.5	71.8	61.7	72.1	63.4
N-3 (STP)	52.5	48.7	51.7	44.7	52.6	46.3	52.6	47.4
N-4 (Guest House)	60.7	58.1	61.7	57.2	60.7	52.2	62.9	53.1
Norms	75	70	75	70	75	70	75	70



Feb-2024		Hourly Average Noise Level dB (A)							
Location	1 st		2 nd		3 rd		4 th		
	10-02-2024		17-02-2024		24-02-2024		29-02-2024		
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	
N-1 (Eklari Gate)	63.1	56.4	65.6	60.7	62.7	54.1	63.8	56.5	
N-2 (Pump House-2) Near Water Reservoir	70.2	59.2	72.2	63.4	71.3	61.7	71.0	62.1	
N-3 (STP)	52.5	48.8	53.0	45.8	53.2	47.8	51.7	46.3	
N-4 (Guest House)	61.7	54.1	60.7	58.1	62.9	53.1	60.5	57.2	
Norms	75	70	75	70	75	70	75	70	

Mar-2024		Hourly Average Noise Level dB (A)							
Location	1 st		2 nd		3 rd		4 th		
	09-03-2024		16-03-2024		23-03-2024		30-03-2024		
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	
N-1 (Eklari Gate)	69.1	57.3	60.5	56.4	61.7	54.0	62.6	53.7	
N-2 (Pump House-2) Near Water Reservoir	71.8	62.7	70.0	63.1	71.4	63.8	72.2	61.7	
N-3 (STP)	52.6	47.3	53.9	46.5	53.2	45.8	51.2	44.7	
N-4 (Guest House)	61.1	54.7	61.2	53.2	59.2	52.5	60.7	52.2	
Norms	75	70	75	70	75	70	75	70	



ANNEXURE-1. (D)

FUGITIVE DUST EMISSION MONITORING STATUS

Sr. No.	LOCATION	Month	SPM ($\mu\text{g}/\text{m}^3$)	RSPM ($\mu\text{g}/\text{m}^3$)
1	Sinter Plant (Near Main Control Room Building)	Oct-2023	1546.7	674.2
		Nov-2023	1891.7	941.8
		Dec-2023	1546.3	705.8
		Jan-2024	--	--
		Feb-2024	1492.0	775.5
		Mar-2024	1426.3	760.0
2	Raw Material Handling Area (Near Transfer Point)	Oct-2023	1254.4	567.8
		Nov-2023	1781.2	742.6
		Dec-2023	1478.1	658.3
		Jan-2024	--	--
		Feb-2024	1324.5	650.5
		Mar-2024	1402.7	679.3
3	SMS (Steel Melting Shop) (Near Ladle Heating Furnace)	Oct-2023	1041.0	568.3
		Nov-2023	1542.7	754.3
		Dec-2023	1324.7	623.9
		Jan-2024	--	--
		Feb-2024	1405.9	682.1
		Mar-2024	1435.7	704.7
4	MBF (Near Mini Blast Furnace)	Oct-2023	1342.5	657.9
		Nov-2023	1587.6	747.1
		Dec-2023	1649.1	840.5
		Jan-2024	1652.2	802.6
		Feb-2024	1592.4	745.9



		Mar-2024	1568.9	727.7
5	Raw Material Feed Area (Near Mixing Area)	Oct-2023	1465.2	843.4
		Nov-2023	--	--
		Dec-2023	1304.6	698.5
		Jan-2024	1452.5	676.0
		Feb-2024	1278.2	576.9
		Mar-2024	1326.4	524.6
6	DRP-2 (Near Coal Circuit Area)	Oct-2023	1804.1	992.6
		Nov-2023	1379.9	680.3
		Dec-2023	--	--
		Jan-2024	1394.4	667.4
		Feb-2024	1542.4	796.3
		Mar-2024	1489.6	645.8
Norms			2000	--

Annexure- 1. (E)
TREATED EFFLUENT QUALITY STATUS

1. Location : E-2 STP Outlet

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
1.	pH value	--	--	--	--	--	--	--	--
2.	Total Suspended Solids	mg/l	29.2	46.2	32.2	21.4	26.6	10.0	50
3.	Biochemical oxygen demand(BOD at 27°C for 3 days)	mg/l	23.3	24.5	13.7	28.0	26.7	21.5	30
4.	Chemical Oxygen Demand (COD)	mg/l	83.2	87.1	63.7	87.7	79.4	67.7	100
5.	Oil & Grease	mg/l	--	--	--	--	--	--	--
6.	Total Dissolved Solids	mg/l	--	--	--	--	--	--	--
7.	Chloride (as Cl)	mg/l	--	--	--	--	--	--	--
8.	Sulphate (as SO ₄)	mg/l	--	--	--	--	--	--	--
9.	Iron (as Fe)	mg/l	--	--	--	--	--	--	--



1.1 Location : E-2 (Waste Water Tank) In Front of Raw Water Treatment Plant

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
1.	pH value	-	7.84	7.72	8.3	8.34	7.49	--	5.5 to 9.0
2.	Total Suspended Solids	mg/l	32.0	57.2	10.2	8.20	5.20	--	100
3.	Biochemical oxygen demand(BOD at 27°C for 3 days)	mg / l	5.40	6.80	6.08	11.4	10.0	--	100
4.	Chemical oxygen demand (COD)	mg / l	136.0	148.0	139.2	109.3	88.0	--	250
5.	Oil & Grease	mg / l	BDL(< 0.2)	BDL(< 0.2)	BDL(< 0.2)	BDL(< 0.2)	BDL(< 0.2)	--	10
6.	Total dissolved solids	mg/l	494.0	410.0	346.0	714	370.0	--	2100
7.	Chloride (as Cl)	mg / l	110.9	57.9	57.9	172.2	37.5	--	600
8.	Sulphate (as SO ₄)	mg/l	37.2	93.0	44.2	17.7	51.2	--	1000
9.	Iron (as Fe)	mg/l	BDL(< 0.05)	BDL(< 0.05)	BDL(< 0.05)	BDL(< 0.05)	BDL(< 0.05)	--	3.0

1.2 Location : E-3 (Coal Washery)

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
1.	pH value	-	7.75	8.04	7.68	8.29	8.05	8.12	5.5 to 9.0
2.	Total Suspended Solids	mg/l	26.8	32.6	34.6	37.6	42.0	62.4	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg / l	3.86	3.14	3.18	3.62	2.92	5.14	100
4.	Chemical oxygen demand (COD)	mg / l	114.8	132.0	140.0	153.8	124.0	136.0	250
5.	Oil & Grease	mg / l	BDL(< 0.2)	BDL(< 0.2)	BDL(< 0.2)	BDL(< 0.2)	BDL(< 0.2)	BDL(< 0.2)	10
6.	Total dissolved solids	mg/l	580.0	800.0	1308.0	1360.0	792.0	834.0	2100
7.	Chloride (as Cl)	mg / l	100.9	171.9	273.9	277.4	143.1	219.5	600



8.	Sulphate (as SO ₄)	mg/l	152.8	139.4	135.9	224.9	142.7	209.8	1000
9.	Iron (as Fe)	mg/l	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.02)	BDL(<0.02)	BDL(<0.02)	3.0

1.3 Location : E-4 ETP Main Outlet (Utility)

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
1.	pH value	-	8.03	7.40	7.30	7.62	8.09	8.07	5.5 to 9.0
2.	Total Suspended Solids	mg/l	24.0	30.2	28.2	26.0	7.20	17.2	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	4.67	4.20	5.07	25.3	20.0	22.5	100
4.	Chemical oxygen demand (COD)	mg/l	116.0	112.0	128.0	109.3	115.5	120.0	250
5.	Oil & Grease	mg/l	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	10
6.	Total dissolved solids	mg/l	456.0	418.0	422.0	510.0	458.0	454.0	2100
7.	Chloride (as Cl)	mg/l	80.9	40.5	48.9	75.9	42.6	41.5	600
8.	Sulphate (as SO ₄)	mg/l	39.9	76.4	30.9	34.7	126.9	120.1	1000
9.	Iron (as Fe)	mg/l	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	3.0

1.4 Location : E-5- Pickling ETP Outlet

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
1.	pH value	-	8.04	7.54	8.27	--	8.34	--	5.5 to 9.0
2.	Total Suspended Solids	mg/l	28.0	72.4	86.2	--	13.2	--	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	BDL(<2.0)	BDL(<2.0)	32.1	--	BDL(<2.0)	--	100
4.	Chemical oxygen demand (COD)	mg/l	120.0	140.0	228.0	--	223.1	--	250
5.	Oil & Grease	mg/l	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	--	BDL(<0.2)	--	10
6.	Total dissolved solids	mg/l	290.0	264.0	268.0	--	1342.0	--	2100



7.	Chloride (as Cl)	mg/l	41.9	16.9	57.8	--	411.5	--	600
8.	Sulphate (as SO ₄)	mg/l	16.4	42.6	15.9	--	69.6	--	1000
9.	Iron (as Fe)	mg/l	BDL(<0.05)	BDL(<0.05)	0.06	--	BDL(<0.05)	--	3.0

1.6 Location : E-7 MBF ETP Outlet

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
1.	pH value	-	6.91	7.10	6.73	7.61	7.11	7.30	5.5 to 9.0
2.	Total Suspended Solids	mg/l	59.0	26.4	34.0	53.0	53.0	38.4	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	3.83	2.63	6.64	8.24	12.7	14.4	100
4.	Chemical oxygen demand (COD)	mg/l	112.0	104.0	120.0	178.1	196.0	208.0	250
5.	Oil & Grease	mg/l	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	10
6.	Total dissolved solids	mg/l	1794	2004	2042	2078	2084	2078	2100
7.	Chloride (as Cl)	mg/l	534.8	579.8	559.8	583.9	589.8	539.9	600
8.	Sulphate (as SO ₄)	mg/l	283.2	291.3	344.1	426.3	441.4	321.0	1000
9.	Iron (as Fe)	mg/l	0.06	BDL(<0.05)	0.06	0.06	0.05	0.05	3.0



1.7 Location : E- 8 DRP Nala

Sr. No.	Test Parameter	Measurement Unit	Test Results						Limit as per Consent Conditions
			Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
1.	pH value	-	7.82	7.36	7.65	8.21	7.95	7.50	5.5 to 9.0
2.	Total Suspended Solids	mg/l	40.4	43.0	24.8	82.0	54.0	48.4	100
3.	Biochemical oxygen demand (BOD at 27°C for 3 days)	mg/l	3.38	3.50	3.25	7.84	5.22	8.83	100
4.	Chemical oxygen demand (COD)	mg/l	158.4	164.0	160.0	198.4	164	212.0	250
5.	Oil & Grease	mg/l	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	BDL(<0.2)	10
6.	Total dissolved solids	mg/l	852.0	520.0	644.0	1416.0	546	1268.0	2100
7.	Chloride (as Cl)	mg/l	203.9	81.9	100.9	297.4	74.5	262.1	600
8.	Sulphate (as SO ₄)	mg/l	207.9	117.8	134.6	206.2	79.5	280.4	1000
9.	Iron (as Fe)	mg/l	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	0.05	BDL(<0.05)	BDL(<0.05)	3.0

Annexure 2

Sl. No.	CSR Activity	Actual Expenditure during the financial year 2023-24 up to 31.03.2024 (Amount in Rs.)	Budget allocation for the next 5 years (Amount in Rs.)
A	Community Health Improvement	33,14,783	
B	Improvement in Community Education, Training and Skill Development Facilities	2,45,17,706	
C	Rural Development Infrastructure activities:		
i	Infrastructure development of the Community area i.e. village road/other work	40,65,334	
ii	Drinking Water and Sanitation	7,61,233	
D	Environment Sustainability and protection of Flora & Fauna	17,07,379	
E	Miscellaneous		
i	Community welfare activities including Swachh Bharat, Promotion of Sports and Cultural activities	70,80,566	
F	Rural Electrification and Renovation of Community Hall	16,49,501	
TOTAL (*)		4,30,96,502	

Details of CSR Amount allocated to the projects during FY 2022-23 & 2023-24:

Project S. N.	Name of the Project	Area of Project	Location of the Project	Year of allocation	Year of commencement of Project	Amount allocated for the project (Rs
P-3	Construction of Rural Road	State of Maharashtra	Bhandara	FY2022-23	FY2023-24	1,83,99,774
	Construction of Rural Road	State of Maharashtra	Bhandara	FY2023-24	FY2023-24	66,00,226
	Total					2,50,00,000

GRAND TOTAL	Rs. 6,80,96,502
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(*) – Quarter wise Details given below



Quarter-wise Details of CSR Expenditure for the year 2023-24 up to 31.03.2024

(Amount in Rs.)

Particulars	Quarter ended 30.06.2023	Quarter ended 30.09.2023	Quarter ended 31.12.2023	Quarter ended 31.03.2024	Total
Community Health Improvement (Promotion of health care)	59,313	29,94,383	85,388	1,75,699	33,14,783
Improvement in Community Education, Training and Skill Development Facilities	92,083	6,58,708	40,67,198	1,96,99,717	2,45,17,706
Rural Development – Drinking Water and Sanitation	7,61,233	-	-	-	7,61,233
Rural Development – Infrastructure development of the Community area i.e. village road/other work	10,29,188	10,15,684	92,385	3,45,822	17,07,379
Environment Sustainability and protection of Flora & Fauna	30,326	12,38,846	-	20,20,462	40,65,334
Community welfare activities including Swatch Bharat, Promotion of Sports and Cultural activities	4,86,790	7,04,526	21,01,040	37,88,210	70,80,566
Rural Electrification and Renovation of Community Hall	-	5,00,000	9,23,615	2,25,886	16,49,501
TOTAL	24,58,933	71,12,147	72,69,626	2,62,55,796	4,30,96,502



EXPENDITURE ON CORPORATE SOCIAL RESPONSIBILITY (CSR) – PROJECT- 2023-24

Particulars	Quarter ended 30.06.2023	Quarter ended 30.09.2023	Quarter ended 31.12.2023	Quarter ended 31.03.2024	Total 01.04.23 to 31.03.2024
<u>Project-3 - Rural Development - Construction of Road</u>	20,49,328	-	25,67,190	88,10,165	1,34,26,683
TOTAL	20,49,328	-	25,67,190	88,10,165	1,34,26,683

GRAND TOTAL (Expenditure during FY 2023-24)

Rs. 5,65,23,185