



BMM Ispat Ltd.,

ENVIRONMENTAL MONITORING REPORT



**Danapur Village, Hosapete Taluk,
Vijayanagara District, PIN-583222, Karnataka.**

STAGE-II

AUGUST - 2023

Prepared by



GLOBAL ENVIRONMENT & MINING SERVICES

NABL & MOEFCC Recognized Laboratory

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PREFACE

The industries should monitor environmental parameters as per the frequency and locations given in the CFE/CFO. And the same should be submitted on every month to the respective pollution control board.


As part of the conditions and inherent concern on health of the employees and surroundings *M/s. BMM Ispat Ltd.*, as appointed *M/s. Global Environment & Mining Services, Hosapete*, to carry out the environmental pollution monitoring on AAQ Monitoring, Fugitive monitoring within the plant, Stack monitoring submit the same to the Pollution Control Board.


Accordingly, *M/s. Global Environment & Mining Services, Hosapete*, carried out the pollution monitoring as per the standard sampling methods prescribed by CPCB, for AAQ Monitoring, Fugitive monitoring within the plant, Stack monitoring & Personal Dust Sampling as per the CFO. These monitoring has been carried out in a frequency as mentioned in the CFO and the same report is being submitted to the Board.

We sincerely thank to officials of *M/s. BMM Ispat Ltd.*, for their valuable co-ordination & support during the sampling and reporting.

for GLOBAL Environment & Mining Services

Place: Hosapete
Date: 07.09.2023


K. Ramakrishna Reddy
(Technical Manager)



1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The journey of the BMM Group is a reflection of the path tread by every entrepreneur who believes in the human potential and one's own ability to bring about a life affirming change that transcends time. BMM Group was born out of this committed belief of Late Shri UdaichandSinghi.

Entrenched in the Indian ethos, with an astute understanding of market needs, values and sensibilities **Mr. Dinesh Kumar Singhi** inherited the legacy from his father and has built the BMM Group on sound fundamentals since 1998. He steered the company towards growth by being the first mining company to establish a power generation plant for captive use, and creating a steel plant from the captive ore mine. Over the last 12 years, BMM has been able to add value to every relationship under his able and dynamic leadership.

Today, BMM is a 4900 Crores Company due to its focus on market orientation and optimal usage of technology to achieve process efficiency and value addition. BMM has always believed in the principle of sharing and hence continues to transfer this benefit derived from sustained growth to its employees, partners and associates. The unique value proposition that defines the very fabric of the BMM culture is the firm's belief in unleashing this 'potential in tones' in terms of its human capital, continuous growth and consistent benefits to its stakeholders.

The human potential at BMM is reflected in the depth of domain expertise across diverse sectors and dynamism of youth at various levels in the Organization. Business operations lead by professionals with decades of market understanding and a dynamic team enables BMM to deliver superior product quality. This human potential keeps BMM attuned to scaling new heights and meeting customer expectations. While consistently adding value to its partners, BMM is sensitive to its responsibility towards the environment by implementing best practices in its Business Operations and contribution to society through various social Endeavors.

BMM has a commitment of being a good Corporate Citizen and is committed to achieving business goals through ethical means. BMM hence has been able to have deeper relevance to society by creating value that is inclusive and truly benefits all.



1.2 PROMOTERS OF THE PROJECT

BMM Group, one of the leading Steel, Power & Mining companies in India that has achieved the present level under the leadership and guidance of **Sri. Dinesh Kumar Singhi**, the Founder & Chairman of the group, is promoting the project. His vision is to globalize the company business and do value addition by operating responsibly and in a sustainable manner in exploring, exploiting, excavating and processing minerals followed by setting up steel plant facilities.

BMM is a step towards forward integration has set up new merchant Bar Mill. The works is located at:

BMM ISPAT LIMITED

(Registered Office & Works)

#114, Danapur

Hosapete - 583 222

Vijayanagara Dist., Karnataka

Phone +91 08394-264000, +91 9686550808/09

Fax - 08394 264010

1.3 Site Location

BMM ISPAT LIMITED is located at Danapur about 15 Kms away from Hosapete in Karnataka. The plant site can be connected by national highway, viz. NH-13. The plant is 1 km away from the NH-13 near Danapur village. The nearest railway station is Hospet; Bangalore is at a distance of 300 kms. Seaport is Belikere and Karwar, the nearest Airport is in the private sector belonging to JSW, a Jindal Group company at Thoranagallu (Vidyanagara).

M/s. BMM ISPAT Ltd., Has accorded Environmental Clearance for 2.0 MTPA Integrated Steel Plant, with the following facilities.

S.N.	Items	Capacity
1	Iron ore beneficiation plant	3.40 MTPA
2	Palletizing Plant	1.20 MTPA
3	DRI Plant	0.70 MTPA
4	Coke Oven	0.80 MTPA
5	Sinter Plant	2.50 MTPA
6	Blast furnace	1.70 MTPA
7	EAF & BOF Steel making shop	2.30 MTPA
8	Continuous casting machines	
	Slab Caster	1.10 MTPA
	Billet Caster	1.10 MTPA
9	Rolling mills:	
	Hot strip mill	1.00 MTPA
	Structural/wire rods	1.00 MTPA
10	Oxygen Plant	2x500 TPD
11	Calcining	1,080 TPD
12	Cement Plant	1.40 MTPA
13	Power Plant	230 MW

Out of the above units, presently **4 x 500 TPD Sponge Iron Plants** and **1X70 MW Thermal Power Plants** have been commissioned on August 2011. Beneficiation plant-2, Pellet Plant-2 are commissioned on March 2012. 2X70 MW Thermal based power plants have commissioned on Jan 2013, EAF, Steel Making Shop, CCM, Rolling Mill, Oxygen plants are commissioned on August 2015. Remaining units are under various stages of implementation.

Hence environmental pollution monitoring is being carried out for 4 x 500 TPD sponge iron plants, 1X70 MW Thermal Power Plant, 1.3MTPA Beneficiation, 1.2MTPA Pellet Plant, 2X70MW Power plant, SMS, and RML.

1.4 The report includes environmental monitoring data collected at above site for the month of **AUGUST-2023**. The Parameters monitored are:

- ❖ Ambient Air Quality
- ❖ Fugitive Dust Level
- ❖ Stack Emission

2.0 SCOPE AND METHODOLOGY

2.1 PREAMBLE

The scope of the study and the present report covers the detailed characterization of the existing environmental status in and around the plant area for major environmental components viz. Ambient & work zone air quality, Fugitive Emission, Noise level and water quality & Stack Emission.

2.2 AMBIENT AIR QUALITY

To assess the ambient air quality status, monitoring stations were identified 6 Location plant site. Work zone air monitoring stations were identified in the major work spots. Based on the production activities the parameters chosen for ambient air quality. Were Particulate Matter PM₁₀, Particulate Matter (size less than 2.5µm) PM_{2.5}.

2.2.1 PARTICULATE MATTER (PM₁₀)(size less than 10µm).

Purpose

The purpose of this protocol is to provide guidelines for monitoring and analysis of Particulate Matter PM₁₀ in ambient air

Reference Method: IS 5182 Part 23 Method of Measurement of Air Pollution: Respirable Suspended Particulate Matter (PM₁₀) cyclonic flow technique.

Principle of the method

Air is drawn through a size-selective inlet and through a 20.3 X 25.4 cm (8 X 10 in) filter at a flow rate, which is typically 1132 L/min. Particles with aerodynamic diameter less than the cut-point of the inlet are collected, by the filter. The mass of these particles is determined by the difference in filter weights prior to and after sampling. The concentration of PM₁₀ in the designated size range is calculated by dividing the weight gain of the filter by the volume of air sampled.

Sampling

Field Sampling - Tilt back the inlet and secure it according to manufacturer's instructions. Loosen the faceplate wing nuts and remove the faceplate. Remove the filter from its jacket and centre it on the support screen with the rough side of the filter facing upwards. Replace the faceplate and tighten the wing nuts to secure the rubber gasket against the filter edge. Gently lower the inlet. For automatically flow-

controlled units, record the designated flow rate on the data sheet. Record the reading of the elapsed time meter. The specified length of sampling is commonly 8 hours or 24 hours. During this period, several reading (hourly) of flow rate should be taken. After the required time of sampling, record the flow meter reading, take out the filter media from the sampler, and put in a container or envelope.

Analysis

Filter inspection: Inspect the filter for pin holes using a light table. Loose particles should be removed with a soft brush. Apply the filter identification number or a code to the filter if it is not a numbered. Condition the filter in conditioning room maintained within 20-30° C and 40-50% relative humidity or in an airtight desiccator for 24 hours. Take initial weight of the filter paper (W_i) before sampling. Condition the filter after sampling in conditioning room maintained within 20-30° C and 40-50% relative humidity or in an airtight desiccator for 24 hours. Take final weight of the filter paper (W_f).

2.2.2 Particulate Matter (PM_{2.5})(size less than 2.5 μ m)

Purpose

The purpose of this protocol is to provide guidelines for monitoring and analysis of Particulate Matter PM_{2.5} in ambient air.

Reference Method: USEPA 2001 Method of Measurement of Air Pollution:

Particulate Matter (PM_{2.5}) cyclonic flow technique.

Principle

An electrically powered air sampler draws ambient air at a constant volumetric flow rate (16.7 lpm) maintained by a mass flow / volumetric flow controller coupled to a microprocessor into specially designed inertial particle-size separator (i.e. cyclones or impactors) where the suspended particulate matter in the PM_{2.5} size ranges is separated for collection on a 47 mm polytetrafluoroethylene (PTFE) filter over a specified sampling period. Each filter is weighed before and after sample collection to determine the net gain due to the particulate matter. The mass concentration in the ambient air is computed as the total mass of collected particles in the PM_{2.5} size ranges divided by the actual volume of air sampled, and is expressed in μ g/m³. The microprocessor reads averages and stores five-minute averages of ambient temperature, ambient pressure, filter temperature and volumetric flow rate. In

addition, the microprocessor calculates the average temperatures and pressure, total volumetric flow for the entire sample run time and the coefficient of variation of the flow rate.

2.2.3 Sulphur Dioxide (SO₂)

Purpose: The purpose of this protocol is to provide guidelines for monitoring and analysis of sulphur dioxide in ambient air.

Reference Method: Modified West & Gaeke Method (IS 5182 Part 2 Method of Measurement of Air Pollution: Sulphur dioxide).

Sulphur dioxide from air is absorbed in a solution of potassium tetra chloromercurate (TCM). A dichlorosulphitomercurate complex, which resists oxidation by the oxygen in the air, is formed. Once formed, this complex is stable to strong oxidants such as ozone and oxides of nitrogen and therefore, the absorber solution may be stored for some time prior to analysis. The complex is made to react with para-rosaniline and formaldehyde to form the intensely coloured pararosaniline methyl sulphonic acid. The absorbance of the solution is measured by means of a suitable spectrophotometer.

Sampling

Place 30 ml of absorbing solution in an impinger and sample for four hours at the flow rate of 1 L/min. After sampling measure the volume of sample and transfer to a sample storage bottle.

Analysis

Replace any water lost by evaporation during sampling by adding distilled water up to the calibration mark on the absorber. Mix thoroughly, pipette out 10 ml of the collected sample into a 25 ml volumetric flask. Add 1 ml 0.6% sulphamic acid and allow reacting for 10 minutes to destroy the nitrite resulting from oxides of nitrogen. Add 2 ml of 0.2% formaldehyde solution and 2 ml pararosaniline solution and make up to 25 ml with distilled water. Prepare a blank in the same manner using 10 ml of unexposed absorbing reagent. After a 30 min colour development interval and before 60 minutes, measure and record the absorbance of samples and reagent blank at 560 nm. Use distilled water; not the reagent blank, as the optical reference.

2.2.4 Nitrogen Di Oxide (NO₂):**Purpose**

The purpose of this protocol is to provide guidelines for monitoring of nitrogen dioxide in ambient.

Principle of the method

Modified Jacobs & Hochheiser Method (IS 5182 Part 6 Methods for Measurement of Air Pollution: Oxides of nitrogen)

Ambient nitrogen dioxide (NO₂) is collected by bubbling air through a solution of sodium hydroxide and sodium arsenite. The concentration of nitrite ion (NO₂) produced during sampling is determined calorimetrically by reacting the nitrite ion with phosphoric acid, sulfanilamide, and N-(1-naphthyl)- ethylenediamine dihydrochloride (NEDA) and measuring the absorbance of the highly coloured azo-dye at 540 nm.

2.2.5 Ozone (Chemical method)**Purpose**

The purpose of this protocol is to provide guidelines for monitoring of ozone in ambient air.

Principle of the method

Micro-amounts of ozone and the oxidants liberate iodine when absorbed in a 1% solution of potassium iodine buffered at pH 6.8 + 0.2. The iodine is determined spectrophotometrically by measuring the absorption of tri-iodide ion at 352 nm.

Sampling

Place 10 ml of absorbing solution in a standard impinger and sample for one hour at the flow rate of 1 L/min. Do not expose the absorbing reagent to direct sunlight. After sampling measure the volume of sample and transfer to a sample storage bottle.

Analysis

If, appreciable evaporation of the absorbing solution occurs during sampling, add water to bring the liquid volume to 10 ml. Within 30 to 60 minutes after sample collection, read the absorbance in a cuvette at 352 nm against a reference cuvette containing distilled water. Measure the absorbance of the unexposed reagent and subtract the value from the absorbance of the sample.

2.2.6 Ammonia(NH₃)

Purpose

The purpose of this protocol is to provide guidelines for monitoring of ammonia in ambient air.

Principle of the method

Indophenol method Ammonia in the atmosphere is collected by bubbling a measured volume of air through a dilute solution of sulphuric acid to form ammonium sulphate. The ammonium sulphate formed in the sample is analysed calorimetrically by reaction with phenol and alkaline sodium hypochlorite to produce indophenol. The reaction is accelerated by the addition of Sodium Nitroprusside as catalyst.

Sampling

Place 10 ml of absorbing solution in an impinger and sample for one hour at the flow rate of 1 to 2 L/min. After sampling measure the volume of sample and transfer to a sample storage bottle

Analysis

Transfer contents of the sample bottle to a 25 ml glass stopper graduated cylinder. Maintain all the solutions and sample at 25° C. Add 2 ml buffer. Add 5 ml of working phenol solution, mix, and fill to about 22 ml. Add 2.5 ml of working hypochlorite solution and rapidly mix. Dilute to 25 ml, mix and store in the dark for 30 minutes to develop colour. Measure the absorbance of the solution at 630 nm on a spectrophotometer using 1 cm cells. Prepare a reagent blank and field blank and measure the absorbance as done in the analysis of samples.

2.2.7 Benzo(a)Pyrene

Purpose

The purpose of this protocol is to provide guidelines for monitoring of Benzo (a) Pyrene (BaP) in ambient air.

Principle of the Method

It is based on BIS method IS 5182 (Part 12):2004 and USEPA method (TO-13). This method is designed to collect particulate phase PAHs in ambient air and fugitive emissions and to determine individual PAH compounds using capillary gas chromatograph equipped with flame ionization detector. It is a high volume

(1.2m³/min) sampling method capable of detecting sub.ng/m³ concentration of PAH in 24 hours sample (i.e., collected in 3 shifts of 8 hour each with 480 m³ sampling volume of air).

Sampling

24 hr. sampling using PM10 high volume sampler with 8 hourly samples using EPM 2000 glass fibre or equivalent filter.

Sample Processing

Extraction: Filter papers (half of all the filters papers collected in a day) are cut into strips using scissors and transfer to 250 ml beaker. Add ~50 ml. of Toluene (GC/HPLC grade). These samples are extracted with toluene using ultra sonic bath for about 30 minutes. Repeat the procedure twice (50ml x 2 times) for complete extraction. Alternatively, sample can be extracted using soxhlet extraction apparatus for about 8 hr. with Toluene and repeat it twice.

Filtration

Filter the extracted samples with Whatman filter paper no.41 containing 2 gm of Anhydrous Sodium Sulphate (to remove moisture).

Sample injection

Take 2µl of sample from the amber vial using standard gas tight syringe and inject in the Capillary GC-FID instrument for analysis. Record the resulting concentration of each PAH compound including B(a)P. A 10ng/µl concentration B(a)P or other PAH standards are to be injected in GC/FID instrument with every batch of samples. As a control Internal Standard of 10 ng/µl conc. is added to each sample prior to the analysis in case of internal calibration is used.

2.2.8 Benzene

Samples collected through active sampling (sorbent tubes) are extracted or desorbed by conventional solvent (generally 1-5 ml of carbon disulphide) using ultrasonication for 15 min to remove analyte from the sorbent material. Desorbed samples are analyzed using gas chromatograph (GC) fitted with capillary column and flame ionization detector (FID). A single tube may provide enough samples to permit several analyses.

Principle of the Method

IS 5182 (Part 11): 2006, the charcoal tubes are available in different sizes and contain varying amount of activated charcoal. The ambient air is sucked through the tube using a low flow sampler used for collection of BTX sample in a way that results in an enrichment of the relevant substances in the activated charcoal. Desorption of the adsorbed benzene is done using carbon disulphide (CS₂). The substances desorbed in the CS₂ are analyzed by capillary gas chromatography. A flame ionization detector (FID) is used for analysis while quantification is performed using the internal/external standard.

Gas Chromatograph

Any suitable gas chromatograph with flame ionization detector (FID) with fused silica capillary columns having a length of 25 m or more, an internal diameter of 320 μ m or below and with a stationary phase film thickness less than 1.5 μ m as follows or equivalent may be recommended.

Sampling

Selection of Sorbent Tube - Samples are collected in glass sampling tube filled with an activated charcoal (coconut shell), Chromo sorb 106 or other suitable adsorbent.

Analytical Procedure

Samples collected through active sampling (sorbent tubes) are extracted or desorbed by conventional solvent (generally 1-5 ml of carbon disulphide) using ultrasonication for 15 min to remove analyte from the sorbent material. Desorbed samples are analysed using gas chromatograph (GC) fitted with capillary column and flame ionization detector (FID). A single tube may provide enough samples to permit several analyses.

2.2.9 Carbon Monoxide (CO)

Principle:

Samples containing carbon monoxide in the range of 0 to 100 mg/l are analysed on a non-dispersive infrared absorption gas analyser, namely, an electro-optical spectrophotometer with no spectral dispersion component. It may consist of a single or double source of infrared energy and one or more infrared detectors separated by an optical cell or cells through one or more of which the sample flows, whereby the specific spectral absorption of the component of interest is determined.

Non dispersive Infrared (NDIR) Gas Analyser

The apparatus shall be constructed so as to be suitable for operating within the temperature range of 15°C to 40°C and in a relative humidity range of 0 to 90 percent. The apparatus shall embody facilities for the analysis of continuously applied sample or a discrete sample of volume of 2.0 litres. In the later case the purification train shall be of such a design and dead volume that 2.0 litres is adequate for its proper flushing out. The apparatus shall include facilities for the visual inspection of results and also for their recording. The scale shall be divided into steps of 1.0 percent full scale division (fsd).

Though the basic instrument recommended is for (0 to 100) mg/l range, for samples of higher mg/l range the instrument may be used with proper dilution and conditioning of the samples.

2.2.10 Lead (Pb), Nickel (Ni) & Arsenic (As)**Purpose**

The purpose of this protocol is to provide guidelines for monitoring of Lead (Pb), Nickel (Ni) & Arsenic (As) in ambient air.

Principle of the method

The Atomic Absorption Spectroscopy (AAS) technique makes use of absorption spectrometry to assess the concentration of an analyte in the sample. The method is based on active sampling using PM10 Respirable Dust Sampler and then sample analysis is done by atomic absorption spectrophotometer.

Sampling procedure

Tilt back the inlet and secure it according to manufacturer's instructions. Loosen the face-plate wing-nuts and remove the face plate. Remove the filter from its jacket and centre it on the support screen with the rough side of the filter facing upwards. Replace the face-plate and tighten the wing-nuts to secure the rubber gasket against the filter edge. Gently lower the inlet. For automatically flow-controlled units, record the designated flow rate on the data sheet. Record the reading of the elapsed time meter. The specified length of sampling is commonly 8 hours or 24 hours. During this period, several reading (hourly) of flow rate should be taken. After the required time of sampling, record the flow meter reading and take out the filter media from the sampler and put in a container or envelope.

3.0 Fugitive Emission Monitoring

Fugitive air quality was monitored 36 samples were collected from the analyzed for SPM analyzed by gravimetric method. Work Zone Air quality was monitored at all Plant area and material handling area.

4.0 Stack Monitoring

Stack Monitoring was Collected 31 Sample from Vayubodhak Stack sampler VBSS2 stack monitoring was used for drawing the flue gas. Sulphur dioxide and oxides of Nitrogen in the flue gas was sampled by bubbling flue gas solution respectively and the analyses of the pollutants were done as per the Indian Standard procedures prescribed by CPCB/BIS. Stack Emission level was monitored as per the statutory requirement on twice in a month.

4.1 Stack Emissions Monitoring Methodology

Sampling Procedure

Pre-Sampling Activities

Weigh the properly conditioned thimble/filter and place it into the clean, air tight Container. Designate appropriate label or ID No. to each thimble/filter container. Particulate matter emission of "Stack Monitoring – Material and Methodology for isokinetic Sampling.

Field activity starts with the collection of detailed information from the industry about the products, raw materials, fuels, and stack dimensions.

4.2 Traverse Point Calculation

Calculate the traverse point and accordingly mark the distance from tip of the Nozzle, on Pitot tube and probe. Do not forget to add the collar length of port to the calculated traverses. For detailed calculation of "Stack Monitoring– Material and Methodology for isokinetic sampling.

4.3 Determination of Dust Concentration

Determine the mass of dust collected in the thimble by difference i.e., weighing the thimble before and after the run. Dry the thimble in an oven for about 2 hours at 120°C prior to sampling. After sampling, cool, dry and again weigh the thimble along with dust maintaining the same condition as prior to sampling.

DATA ANALYSIS

4.4 BUFFERZONE AMBIENT AIR QUALITY STATUS

Danapur Village (A1)

At this location, average of PM₁₀, PM_{2.5}, SO₂, NO₂ values Average 61.06, 15.68, 11.30 & 13.32 µg/m³ respectively. All above the values were found within the Limits. And the results given in **Annexure-1**.

Mariyammanahalli Village (A2)

At this location, average of PM₁₀, PM_{2.5}, SO₂, NO₂ values Average 55.35, 12.02, 9.91 & 12.27 µg/m³ respectively. All above the values were found within the Limits. And the results given in **Annexure-2**.

Hanumanahalli Village (A3)

At this location, average of PM₁₀, PM_{2.5}, SO₂, NO₂ values Average 54.74, 12.81, 9.45 & 11.65 µg/m³ respectively. All above the values were found within the Limits. Results given in **Annexure-3**.

Galemmanagudi Village (A4)

At this location, average of PM₁₀, PM_{2.5}, SO₂, NO₂ values Average 54.67, 11.23, 8.54 & 10.08 µg/m³ respectively. All above the values were found within the Limits. Results given in **Annexure-4**.

Gunda Village (A5)

At this location, average of PM₁₀, PM_{2.5}, SO₂, NO₂ values Average 46.08, 08.16, 7.88 & 10.39 µg/m³ respectively. All above the values were found within the Limits. Results given in **Annexure-5**.

Gunda Tanda Village (A6)

At this location, average of PM₁₀, PM_{2.5}, SO₂, NO₂ values Average 42.12, 06.19, 08.04 & 10.64 µg/m³ respectively. All above the values were found within the Limits. Results given in **Annexure-6**.

5.1 FUGITIVE DUST CONCENTRATION

Fortnightly fugitive air quality was monitored all plant area SPM value minimum 186.47 $\mu\text{g}/\text{m}^3$, maximum value 1893.94 $\mu\text{g}/\text{m}^3$ and average value 883.35 $\mu\text{g}/\text{m}^3$. The Fugitive air quality 1st& 2nd Fortnight Results given in **Annexure-7 & Annexure-8**.

5.2 STACK MONITORING

Stack emission level was monitored all chimneys' PM values (mg/Nm^3) 1st and 2ndFortnight Minimum Value 7.05 mg/Nm^3 , Maximum Value 41.23 mg/Nm^3 & Average Value 29.97 mg/Nm^3 . 1st& 2nd Fortnight Results are given in **Annexure-9 to Annexure-21**.

5.3 CONCLUSION

All the monitored Environmental parameters were found to be well within the statutory norms and the same are enclosed as follows.



GLOBAL ENVIRONMENT & MINING SERVICES

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,

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TC-5323

ANNEXURE-01
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference : WO/ADMIN/FY24/R018
Sample collected by : Global Environment & Mining Services
Discipline : Chemical
Group : Atmospheric Pollution
Sample Type : Ambient Air Quality Monitoring
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler
Month : **AUGUST- 2023**
Location : **A1-Danapur Village**
Duration of Monitoring : 24 Hour
Report Issued Date : **07.09.2023**
Report Number : **ULR-TC532323000000678F**

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
01.08.2023	02.08.2023	2045	17.12	100	0.00	60	10.55	80	13.58	80
02.08.2023	03.08.2023	2063	48.59		6.84		8.70		9.89	
07.08.2023	09.08.2023	2165	61.65		12.86		12.29		15.03	
08.08.2023	09.08.2023	2196	64.98		17.15		11.36		11.34	
16.08.2023	17.08.2023	2355	77.90		14.67		9.97		15.96	
17.08.2023	18.08.2023	2171	87.71		19.92		10.43		10.81	
21.08.2023	22.08.2023	2452	53.69		16.96		12.64		17.28	
22.08.2023	23.08.2023	2544	76.82		21.39		14.49		12.66	
Average			61.06		15.68		11.30		13.32	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / AAS-217 BL	Enviro instruments / EI-133
3	Serial No	R.D.S. / 14-A-142	PM2.5/PM10 Sampler / 158-K-20
4	Calibration Date	01.04.2023	06.03.2023
5	Calibration Due Date	31.03.2024	05.03.2024

INFERENCE	As per NAAQMS Standards (2009). Report Status: - Measured Values for the above parameters are within the limit.
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T R Pooja
Analysed By
T R Pooja
Chemist

K. Ramakrishna Reddy
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
- Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey



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ANNEXURE-01
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

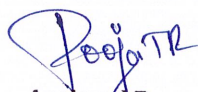
Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
 Customer Reference : WO/ADMIN/FY24/R018
 Sample collected by : Global Environment & Mining Services
 Discipline : Chemical
 Group : Atmospheric Pollution
 Sample Type : Ambient Air Quality Monitoring
 Particulars of Sample Collected : CO Analyser
 Month : **AUGUST- 2023**
 Location : **A1-Danapur Village**
 Duration of Monitoring : 1 Hour
 Report Issued Date : **07.09.2023**


RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	01.08.2023	2045	0.12	4.0
2	02.08.2023	2063	ND	
3	07.08.2023	2165	0.14	
4	08.08.2023	2196	ND	
5	16.08.2023	2355	ND	
6	17.08.2023	2171	0.16	
7	21.08.2023	2452	ND	
8	22.08.2023	2544	ND	

Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)
 ND - Not Detected

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
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 Analysed By
 T.R. Pooja
 Chemist


 Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



- Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey



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TC-5323

ANNEXURE-02
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference : WO/ADMIN/FY24/R018
Sample collected by : Global Environment & Mining Services
Discipline : Chemical
Group : Atmospheric Pollution
Sample Type : Ambient Air Quality Monitoring
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler
Month : **AUGUST- 2023**
Location : **A2-Mariyammanahalli Village**
Duration of Monitoring : 24 Hour
Report Issued Date : **07.09.2023**
Report Number : **ULR-TC532323000000692F**

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.08.2023	04.08.2023	2074	31.24	100	5.09	60	10.67	80	12.27	80
04.08.2023	05.08.2023	2101	39.23		7.54		6.96		9.36	
09.08.2023	10.08.2023	2214	55.37		11.91		11.59		12.13	
10.08.2023	11.08.2023	2237	72.76		17.96		8.81		13.85	
18.08.2023	19.08.2023	2278	61.02		15.78		11.48		11.34	
19.08.2023	20.08.2023	2400	58.24		10.34		7.88		13.72	
23.08.2023	24.08.2023	2423	71.08		18.12		12.29		15.03	
24.08.2023	25.08.2023	2505	53.86		9.42		9.62		10.42	
Average			55.35		12.02		9.91		12.27	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / APM -460BL	Enviro instruments / EI-133
3	Serial No	R.D.S./330-DTF-2005	PM2.5 /PM10 Sampler / 159-K-20
4	Calibration Date	01.04.2023	06.03.2023
5	Calibration Due Date	31.03.2024	05.03.2024

INFERENCE

As per NAAQMS Standards (2009),

Report Status: - Measured Values for the above parameters are within the limit.

T R Pooja
Analysed By
T R Pooja
Chemist

K. Ramakrishna Reddy
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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Website: www.globalmining.in

ANNEXURE-02
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
 Customer Reference : WO/ADMIN/FY24/R018
 Sample collected by : Global Environment & Mining Services
 Discipline : Chemical
 Group : Atmospheric Pollution
 Sample Type : Ambient Air Quality Monitoring
 Particulars of Sample Collected : CO Analyser
 Month : AUGUST - 2023
 Location : A2-Mariyammanahalli Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 07.09.2023


RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	03.08.2023	2074	0.10	4.0
2	04.08.2023	2101	0.18	
3	09.08.2023	2214	0.12	
4	10.08.2023	2237	0.10	
5	18.08.2023	2278	0.06	
6	19.08.2023	2400	0.08	
7	23.08.2023	2423	0.12	
8	24.08.2023	2505	0.06	

Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)

ND - Not Detected

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
-----------	---


 Analysed By
 T.R. Pooja
 Chemist


 Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



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TC-5323

ANNEXURE-03
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference : WO/ADMIN/FY24/R018
Sample collected by : Global Environment & Mining Services
Discipline : Chemical
Group : Atmospheric Pollution
Sample Type : Ambient Air Quality Monitoring
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler
Month : AUGUST- 2023
Location : A3-Hanumanahalli Village
Duration of Monitoring : 24 Hour
Report Issued Date : 07.09.2023
Report Number : ULR-TC532323000000674F

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.08.2023	04.08.2023	2103	45.69	100	12.20	60	9.62	80	13.06	80
04.08.2023	05.08.2023	2129	40.05		8.86		7.88		6.93	
09.08.2023	10.08.2023	2216	37.33		10.41		12.41		13.98	
10.08.2023	11.08.2023	2239	47.29		11.72		9.97		12.66	
16.08.2023	17.08.2023	2398	74.66		18.49		7.07		9.76	
17.08.2023	18.08.2023	2421	65.54		10.70		9.39		10.95	
21.08.2023	22.08.2023	2481	58.02		13.60		8.70		11.01	
22.08.2023	23.08.2023	2504	69.33		16.49		10.55		12.13	
Average			54.74		12.81		9.45		11.65	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Greentech instruments / GTI-151	Enviro instruments / EI-133
3	Serial No	R.D.S./242-DTC-2020	PM2.5 /PM10 Sampler / 160-K-20
4	Calibration Date	01.04.2023	06.03.2023
5	Calibration Due Date	31.03.2024	05.03.2024

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit.
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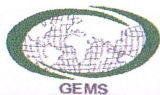
Pooja M
Analysed By
T R Pooja
Chemist

K. Ramakrishna Reddy
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
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ANNEXURE-03
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
 Customer Reference : WO/ADMIN/FY24/R018
 Sample collected by : Global Environment & Mining Services
 Discipline : Chemical
 Group : Atmospheric Pollution
 Sample Type : Ambient Air Quality Monitoring
 Particulars of Sample Collected : CO Analyser
 Month : AUGUST - 2023
 Location : A3-Hanumanahalli Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 07.09.2023

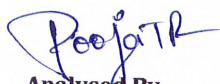
RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	03.08.2023	2103	0.32	4.0
2	04.08.2023	2129	0.20	
3	09.08.2023	2216	0.26	
4	10.08.2023	2239	0.18	
5	16.08.2023	2398	0.16	
6	17.08.2023	2421	0.12	
7	21.08.2023	2481	0.10	
8	22.08.2023	2504	0.12	

Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)

ND - Not Detected

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
-----------	---


 Analysed By
 T.R. Pooja
 Chemist


 Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



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TC-5323

ANNEXURE-04
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference : WO/ADMIN/FY24/R018
Sample collected by : Global Environment & Mining Services
Discipline : Chemical
Group : Atmospheric Pollution
Sample Type : Ambient Air Quality Monitoring
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler
Month : AUGUST - 2023
Location : A4-Galemmannagudi Village
Duration of Monitoring : 24 Hour
Report Issue Date : 07.09.2023
Report Number : ULR-TC532323000000679F

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
01.08.2023	02.08.2023	2046	18.04	100	4.63	60	8.70	80	12.00	80
02.08.2023	03.08.2023	2064	25.48		5.28		10.55		9.63	
07.08.2023	09.08.2023	2075	67.48		15.08		8.81		10.81	
08.08.2023	09.08.2023	2166	62.93		11.75		7.77		8.44	
16.08.2023	17.08.2023	2197	75.68		12.75		6.84		9.76	
17.08.2023	18.08.2023	2279	63.97		16.50		9.74		9.36	
21.08.2023	22.08.2023	2356	57.76		12.83		9.04		8.84	
22.08.2023	23.08.2023	2372	66.05		11.04		6.84		11.80	
Average			54.67		11.23		8.54		10.08	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / AAS-217 BL	Enviro instruments / EI-133
3	Serial No	R.D.S. / 14-A-142	PM2.5 / PM10 Sampler / 158-K-20
4	Calibration Date	01.04.2023	06.03.2023
5	Calibration Due Date	31.03.2024	05.03.2024

INFERENCE As per NAAQMS Standards (2009),
Report Status: - Measured Values for the above parameters are within the limit.

Pooja R
Analysed By
T R Pooja
Chemist

K. Ramakrishna Reddy
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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ANNEXURE-04
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
 Customer Reference : WO/ADMIN/FY24/R018
 Sample collected by : Global Environment & Mining Services
 Discipline : Chemical
 Group : Atmospheric Pollution
 Sample Type : Ambient Air Quality Monitoring
 Particulars of Sample Collected : CO Analyser
 Month : AUGUST - 2023
 Location : A4-Galemmannagudi Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 07.09.2023

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	01.08.2023	2046	0.16	4.0
2	02.08.2023	2064	0.10	
3	07.08.2023	2075	0.12	
4	08.08.2023	2166	0.22	
5	16.08.2023	2197	0.18	
6	17.08.2023	2279	0.10	
7	21.08.2023	2356	0.12	
8	22.08.2023	2372	0.16	

Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)
 ND - Not Detected

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
-----------	---

Analysed By
T.R. Pooja
Chemist

Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



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TC-5323

ANNEXURE-05
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference : WO/ADMIN/FY24/R018
Sample collected by : Global Environment & Mining Services
Discipline : Chemical
Group : Atmospheric Pollution
Sample Type : Ambient Air Quality Monitoring
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler
Month : AUGUST- 2023
Location : A5-Gunda Village
Duration of Monitoring : 24 Hour
Report Issue Date : 07.09.2023
Report Number : ULR-TC532323000000687F

RESULTS

Parameters			PM10 [µg/m3]		PM2.5 [µg/m3]		SO2 [µg/m3]		NO2 [µg/m3]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.08.2023	04.08.2023	2076	21.45	100	4.08	60	10.90	80	11.47	80
04.08.2023	05.08.2023	2102	46.18		6.48		6.96		9.89	
09.08.2023	10.08.2023	2128	53.03		9.46		8.23		12.27	
10.08.2023	11.08.2023	2215	44.56		5.38		5.91		8.97	
18.08.2023	19.08.2023	2238	52.47		7.77		7.19		10.68	
19.08.2023	20.08.2023	2280	51.07		11.51		6.49		9.76	
23.08.2023	24.08.2023	2373	47.43		8.96		5.92		8.70	
24.08.2023	25.08.2023	2454	52.41		11.66		11.48		11.34	
Average			46.08		08.16		7.88		10.39	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / APM -460 BL	Enviro instruments / EI-133
3	Serial No	R.D.S./330-DTF-2005	PM2.5 /PM10 Sampler / 159-K-20
4	Calibration Date	01.04.2023	06.03.2023
5	Calibration Due Date	31.03.2024	05.03.2024

INFERENCE As per NAAQMS Standards (2009),
Report Status: - Measured Values for the above parameters are within the limit.

Pooja TR
Analysed By
T R Pooja
Chemist

K. Ramakrishna Reddy
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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ANNEXURE-05
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA


Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
 Customer Reference : WO/ADMIN/FY24/R018
 Sample collected by : Global Environment & Mining Services
 Discipline : Chemical
 Group : Atmospheric Pollution
 Sample Type : Ambient Air Quality Monitoring
 Particulars of Sample Collected : CO Analyser
 Month : AUGUST - 2023
 Location : A5-Gunda Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 07.09.2023

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	03.08.2023	2076	0.06	4.0
2	04.08.2023	2102	0.08	
3	09.08.2023	2128	<0.01	
4	10.08.2023	2215	<0.01	
5	18.08.2023	2238	0.08	
6	19.08.2023	2280	0.06	
7	23.08.2023	2373	<0.01	
8	24.08.2023	2454	<0.01	

Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)
 ND - Not Detected

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
-----------	---


 Analysed By
 T.R. Pooja
 Chemist


 Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



- Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
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TC-5323

ANNEXURE-06
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference : WO/ADMIN/FY24/R018
Sample collected by : Global Environment & Mining Services
Discipline : Chemical
Group : Atmospheric Pollution
Sample Type : Ambient Air Quality Monitoring
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler
Month : AUGUST- 2023
Location : A6-Gunda Tanda Village
Duration of Monitoring : 24 Hour
Report Issue Date : 07.09.2023
Report Number : ULR-TC532323000000680F

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: 2006 (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
01.08.2023	02.08.2023	2047	10.14	100	0.00	60	8.93	80	11.34	80
02.08.2023	03.08.2023	2065	38.54		2.40		8.00		10.29	
07.08.2023	08.08.2023	2163	59.86		6.04		9.62		12.79	
08.08.2023	09.08.2023	2198	38.49		3.57		5.45		8.57	
17.08.2023	18.08.2023	2357	53.65		10.30		9.04		12.00	
18.08.2023	19.08.2023	2373	45.18		8.45		5.80		8.84	
24.08.2023	25.08.2023	2399	40.78		8.87		8.00		10.81	
25.08.2023	26.08.2023	2422	50.32		9.90		9.51		10.47	
Average			42.12		06.19		8.04		10.64	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Greentech instruments / GTI -151	Enviro instruments / EI-133
3	Serial No	R.D.S./242-DTC-2020	PM2.5 /PM10 Sampler / 160-K-20
4	Calibration Date	01.04.2023	06.03.2023
5	Calibration Due Date	31.03.2024	05.03.2024

INFERENCE As per NAAQMS Standards (2009),
Report Status: - Measured Values for the above parameters are within the limit.

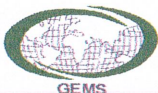
Analysed By
T R Pooja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
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ANNEXURE-06
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
 Customer Reference : WO/ADMIN/FY24/R018
 Sample collected by : Global Environment & Mining Services
 Discipline : Chemical
 Group : Atmospheric Pollution
 Sample Type : Ambient Air Quality Monitoring
 Particulars of Sample Collected : CO Analyser
 Month : **AUGUST - 2023**
 Location : **A6-Gunda Tanda Village**
 Duration of Monitoring : 1 Hour
 Report Issued Date : **07.09.2023**

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	01.08.2023	2047	0.08	4.0
2	02.08.2023	2065	<0.01	
3	07.08.2023	2163	<0.01	
4	08.08.2023	2198	<0.01	
5	17.08.2023	2357	<0.01	
6	18.08.2023	2373	0.06	
7	24.08.2023	2399	<0.01	
8	25.08.2023	2422	0.09	

Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)
 ND - Not Detected

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
-----------	---

T.R. Pooja
 Analysed By
 T.R. Pooja
 Chemist

K. Ramakrishna Reddy
 Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



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ANNEXURE-07
GEMS-LD/TF/11/01

FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)
- 5 Month : **AUGUST-2023(1st Fort Night)**
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Method adopted : IS 5182 (Part 4): 1999 RA 2014
- 9 Report Issued Date : **07.09.2023**
- 10 Report Number : **GEMS/BMM/FM/2023-24/681**

RESULTS

Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ($\mu\text{g}/\text{m}^3$)	Standard
I. Beneficiation Plant-II						
1.	Ball Mill Area (Zero Meter)	2049	01.08.2023	02.08.2023	1498.07	2000
2.	Iron Ore Hopper (Near Monsoon Shed)	2051	01.08.2023	02.08.2023	1870.32	2000
3.	Concentrate Thickner	2050	01.08.2023	02.08.2023	201.52	2000
II. Pellet Plant-I						
4.	PR-6	2052	01.08.2023	02.08.2023	186.47	2000
5.	Annual Cooler Pellet Discharge bin	2053	01.08.2023	02.08.2023	370.92	2000
6.	Additive Grinding Building	2079	02.08.2023	03.08.2023	419.81	2000
III. Sponge Iron Division -2 (Kiln 1 & 2)						
7.	Control room	2080	02.08.2023	03.08.2023	1893.94	2000
8.	Near Weigh bridge (dispatch)	2081	02.08.2023	03.08.2023	856.69	2000
9.	Pellet Storage bin	2104	03.08.2023	04.08.2023	1840.28	2000
10.	Transfer House area	2082	02.08.2023	03.08.2023	633.23	2000
11.	Production Separation Bin-PSB	2083	02.08.2023	03.08.2023	1717.01	2000
IV. Sponge Iron Division -2 (Kiln 3 & 4)						
12.	Near Control room	2105	03.08.2023	04.08.2023	738.84	2000
13.	Near Coal Crusher	2107	03.08.2023	04.08.2023	1730.33	2000
14.	Near Product bin	2106	03.08.2023	04.08.2023	1026.82	2000
15.	Coal Drier	2108	03.08.2023	04.08.2023	737.94	2000
V. Wagon Tipper/RMHS						
16.	Near Tipping point	2131	04.08.2023	05.08.2023	576.61	2000
17.	Monsoon Shed (CPU)	2132	04.08.2023	05.08.2023	428.72	2000
18.	MCC Room (2 nd Gate)	2133	04.08.2023	05.08.2023	954.72	2000
VI. Power Plant-70 MW						
19.	70MW-DM Plant (Near R.O. Plant)	2134	04.08.2023	05.08.2023	665.09	2000
20.	2 nd gate weigh bridge Near Coal Screen	2159	05.08.2023	06.08.2023	487.01	2000
21.	CFBC boiler	2135	04.08.2023	05.08.2023	720.22	2000
VII. 2X70MW Power Plant						
22.	Near Boiler	2160	05.08.2023	06.08.2023	624.47	2000
23.	Near Coal storage Shed	2161	05.08.2023	06.08.2023	399.41	2000
24.	CPP Dolocher Process Area	2162	05.08.2023	06.08.2023	498.32	2000

Note: SPM -Suspended Particulate matter ($\mu\text{g}/\text{m}^3$), INFERENCE: The Measured Values are within the limits.

SL NO	INSTRUMENT DETAILS	GEMS-01	GEMS-02	GEMS-03	GEMS-04	GEMS-05
1	Instrument Name	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler
2	Make & Model	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151
3	Serial No	RDS / 241-DTC-2020	RDS / 243-DTL-2020	RDS / 244-DTL-2020	RDS / 193-DTH-2019	RDS / 197-DTH-2019
4	Calibration Date	01.04.2023	01.04.2023	01.04.2023	01.04.2023	01.04.2023
5	Calibration Due Date	31.03.2024	31.03.2024	31.03.2024	31.03.2024	31.03.2024

Analysed By
T.R.Pooja
Chemist

Authorised Signatory
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Technical Manager



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ANNEXURE-08
GEMS-LD/TF/11/01

FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)
- 5 Month : AUGUST-2023 (2nd Fort Night)
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Method adopted : IS 5182 (Part 4): 1999 RA 2014
- 9 Report Issued Date : 07.09.2023
- 10 Report Number : GEMS/BMM/FM/2023-24/786

RESULTS

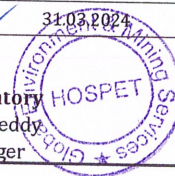
Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ($\mu\text{g}/\text{m}^3$)	Standard
I. Beneficiation Plant-II						
1.	Ball Mill Area (Zero Meter)	2346	16.08.2023	17.08.2023	597.81	2000
2.	Iron Ore Hopper (Near Monsoon Shed)	2348	16.08.2023	17.08.2023	1087.48	2000
3.	Concentrate Thickner	2347	16.08.2023	17.08.2023	476.66	2000
II. Pellet Plant-I						
4.	PR-6	2349	16.08.2023	17.08.2023	296.74	2000
5.	Annual Cooler Pellet Discharge bin	2350	16.08.2023	17.08.2023	420.78	2000
6.	Additive Grinding Building	2363	17.08.2023	18.08.2023	385.52	2000
III. Sponge Iron Division -2 (Kiln 1 & 2)						
7.	Control room	2364	17.08.2023	18.08.2023	1433.94	2000
8.	Near Weigh bridge (dispatch)	2367	17.08.2023	18.08.2023	939.59	2000
9.	Pellet Storage bin	2390	18.08.2023	19.08.2023	1500.22	2000
10.	Transfer House area	2366	17.08.2023	18.08.2023	1560.14	2000
11.	Production Separation Bin-PSB	2365	17.08.2023	18.08.2023	1795.08	2000
IV. Sponge Iron Division -2 (Kiln 3 & 4)						
12.	Near Control room	2391	18.08.2023	19.08.2023	1088.77	2000
13.	Near Coal Crusher	2393	18.08.2023	19.08.2023	1657.87	2000
14.	Near Product bin	2392	18.08.2023	19.08.2023	1372.70	2000
15.	Coal Dryer	2394	18.08.2023	19.08.2023	1372.70	2000
V. Wagon Tipper/RMHS						
16.	Near Tipping point	2413	19.08.2023	20.08.2023	1003.55	2000
17.	Monsoon Shed (CPU)	2414	19.08.2023	20.08.2023	252.86	2000
18.	MCC Room (2 nd Gate)	2415	19.08.2023	20.08.2023	593.18	2000
VI. Power Plant-70 MW						
19.	70MW-DM Plant (Near R.O. Plant)	2416	19.08.2023	20.08.2023	661.03	2000
20.	2 nd gate weigh bridge Near Coal Screen	2427	21.08.2023	22.08.2023	620.83	2000
21.	CFBC boiler	2417	19.08.2023	20.08.2023	1057.03	2000
VII. 2X70MW Power Plant						
22.	Near Boiler	2428	21.08.2023	22.08.2023	538.95	2000
23.	Near Coal storage Shed	2429	21.08.2023	22.08.2023	322.33	2000
24.	Dolochar Processing Area	2430	21.08.2023	22.08.2023	288.51	2000

Note: SPM -Suspended Particulate matter ($\mu\text{g}/\text{m}^3$), INFERENCE: The Measured Values are within the limits.

SL NO	INSTRUMENT DETAILS	GEMS-01	GEMS-02	GEMS-03	GEMS-04	GEMS-05
1	Instrument Name	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler
2	Make & Model	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151
3	Serial No	RDS / 241-DTC-2020	RDS / 243-DTL-2020	RDS / 244-DTL-2020	RDS / 193-DTH-2019	RDS / 197-DTH-2019
4	Calibration Date	01.04.2023	01.04.2023	01.04.2023	01.04.2023	01.04.2023
5	Calibration Due Date	31.03.2024	31.03.2024	31.03.2024	31.03.2024	31.03.2024

Analysed By
T.R.Pooja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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GEMS



NABET

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Website : www.globalmining.in



TC-5323

ANNEXURE-09
GEMS-LD/TF/10/01**Analysis Report of Stack Emission**

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/RO18
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ VBSS2 Sl.No:Stack Monitoring Kit/ 032308
5	Instrument Details	:	Calibration Date: 28.03.2023 Calibration Due Date: 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	:	Pellet Plant-2 ESP
10	Month of Sampling	:	AUGUST-2023
11	Date of Sample Received	:	-& 28.08.2023
12	Date of Sample Analysis	:	-& 28.08.2023
13	Date Sample Analysis Completion	:	-& 29.08.2023
14	Report Issued Date	:	07.09.2023
15	Report Number	:	ULR-TC532323000000846F

Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	100
3	Stack Diameter (mtr)	4.4

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 st Fort Night	2 nd Fort Night	
				01.08.2023	28.08.2023	
	Date of Monitoring					
	Sample Code				2587	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	SHUT DOWN	30	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C		65	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec		5.18	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr		283585	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr		249959	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³		38.58	100
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³		237	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm ³		18.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%		0.044	-

Note: NS- Not Specified. RA: Reaffirmed. **INFERENCE:** The Measured Values are within the limits.

Pooja TR
Analysed By
T R Pooja
Chemist

TR
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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TC-5323

ANNEXURE-10
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Vayubodhan Stack sampler/ **VBSS2**
Sl.No: Stack Monitoring Kit/ **032308**
- 5 Instrument Details : Calibration Date: 28.03.2023
Calibration Due Date: 27.03.2024
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Sampling Location : **SID Axis 1 & 2**
- 10 Month of Sampling : **AUGUST-2023**
- 11 Date of Sample Received : 08.08.2023 & 17.08.2023
- 12 Date of Sample Analysis : 09.08.2023 & 18.08.2023
- 13 Date Sample Analysis Completion : 09.08.2023 & 18.08.2023
- 14 Report Issued Date : **07.09.2023**
- 15 Report Number : **ULR-TC532323000000696F**

Stack Details

- 1 Fuel Used : Coal
- 2 Stack Height (mtr) : 70.0
- 3 Stack Diameter (mtr) : 3.00

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 st Fort Night	2 nd Fort Night	
				08.08.2023	17.08.2023	
	Date of Monitoring			2078	2368	
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	131	129	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	5.96	6.13	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	151683	156010	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	111075	115725	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	40.60	33.98	100
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	112	122	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm ³	28.0	22.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.027	0.332	1%

Note: NS- Not Specified. RA: Reaffirmed. **INFERENCE:** The Measured Values are within the limits.

Pooja TR
Analysed By
T R Pooja
Chemist

K. Ramakrishna Reddy
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15 Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
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TC-5323

ANNEXURE-11
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No:Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2023 Calibration Due Date: 27.03.2024
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: SID Axis 3&4
10	Month of Sampling	: AUGUST-2023
11	Date of Sample Received	: 05.08.2023& 18.08.2023
12	Date of Sample Analysis	: 05.08.2023 & 18.08.2023
13	Date Sample Analysis Completion	: 06.08.2023 & 19.08.2023
14	Report Issued Date	: 07.09.2023
15	Report Number	: ULR-TC532323000000704F

Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	70.0
3	Stack Diameter (mtr)	3.00

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 st Fort Night 05.08.2023	2 nd Fort Night 18.08.2023	
	Date of Monitoring Sample Code			2113	2395	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	29	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	132	128	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	5.99	5.85	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	152447	148884	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	112126	110554	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	41.23	34.97	100
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	140	163.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	36.0	61.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.134	0.221	1%

Note: NS- Not Specified. RA: Reaffirmed. INFERENCE: The Measured Values are within the limits.

Pooja R
Analysed By
T R Pooja
Chemist

K. Ramakrishna Reddy
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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TC-5323

ANNEXURE-12
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Vayubodhan Stack sampler/ **VBSS2**
Sl.No:Stack Monitoring Kit/ **032308**
- 5 Instrument Details : Calibration Date: 28.03.2023
Calibration Due Date: 27.03.2024
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Sampling Location : **1X70 MW-CFBC Boiler ESP**
- 10 Month of Sampling : **AUGUST-2023**
- 11 Date of Sample Received : 10.08.2023 & 19.08.2023
- 12 Date of Sample Analysis : 10.08.2023 & 19.08.2023
- 13 Date Sample Analysis Completion : 11.08.2023 & 20.08.2023
- 14 Report Issued Date : **07.09.2023**
- 15 Report Number : **ULR-TC532323000000707F**


Stack Details


- 1 Fuel Used : Coal
- 2 Stack Height (mtr) : 70.0
- 3 Stack Diameter (mtr) : 3.00

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 st Fort Night	2 nd Fort Night	
				10.08.2023	19.08.2023	
	Date of Monitoring					
	Sample Code			2130	2418	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	29	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	124	126	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	5.55	5.69	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	141249	144812	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	106137	107899	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	33.53	35.51	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	520.0	292	600
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	24.0	165	300
9	Carbon Monoxide	GEMS/SOP/69	%	0.336	0.019	-

Note: NS- Not Specified. RA: Reaffirmed. **INFERENCE:** The Measured Values are within the limits.


Analysed by
T R Pooja
Chemist


Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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TC-5323

ANNEXURE-13
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No: Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2023 Calibration Due Date: 27.03.2024
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: 2X70 MW CFBC Boiler ESP
10	Month of Sampling	: AUGUST-2023
11	Date of Sample Received	: -
12	Date of Sample Analysis	: -
13	Date Sample Analysis Completion	: -
14	Report Issued Date	: 07.09.2023
15	Report Number	: -

Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	110.0
3	Stack Diameter (mtr)	8.00

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
	Date of Monitoring Sample Code			-	-	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	Shutdown	Shutdown	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C			-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec			-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr			-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr			-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³			100
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³			600
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³			300
9	Carbon Monoxide	GEMS/SOP/69	%			-

Note: NS- Not Specified. RA: Reaffirmed

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

ANNEXURE-14
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Vayubodhan Stack sampler/ VBSS2
Sl.No:Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2023
Calibration Due Date: 27.03.2024
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : **AUGUST-2023 (1st Fort Night)**
- 10 Date of Sample Received : 11.08.2023
- 11 Date of Sample Analysis : 11.08.2023
- 12 Date Sample Analysis Completion : 12.08.2023
- 13 Report Issued Date : **07.09.2023**
- 14 Report Number : **ULR-TC532323000000734F**

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant-2											
1	Iron Ore Cone Crusher	-	-	---	-	-	-	30	1.20	-	50
2	Iron Ore Screening	11.08.2023	2281	---	25	29	4.62	30	0.90	18.97	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
1	Iron Ore Cone Crusher	-	-	-
2	Iron Ore Screening	10582	10211	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE: The Measured Values are within the limits.

Analysed By
T R Pooja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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TC-5323

ANNEXURE-15
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- | | | |
|----|---------------------------------|--|
| 1 | Name of the Industry | : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. |
| 2 | Customer Reference | : WO/ADMIN/FY24/RO18 |
| 3 | Sample collected by | : GLOBAL Environment & Mining Services |
| 4 | Particulars of sample collected | : Vayubodhan Stack sampler/ VBSS2
Sl.No: Stack Monitoring Kit/ 032308 |
| 5 | Instrument Details | : Calibration Date: 28.03.2023
Calibration Due Date: 27.03.2024 |
| 6 | Discipline | : Chemical |
| 7 | Group | : Atmospheric Pollution |
| 8 | Sample Type | : Stack Monitoring |
| 9 | Month of Sampling | : AUGUST-2023(1st Fort Night) |
| 10 | Date of Sample Received | : - |
| 11 | Date of Sample Analysis | : - |
| 12 | Date Sample Analysis Completion | : - |
| 13 | Report Issued Date | : 07.09.2023 |
| 14 | Report Number | : ULR-TC532323000000544F |

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant-II											
3	AGB main bag Filter										50
4	Lime & Bentonite Powder bin top bag filter										50
5	AGB De dusting Bag Filter										50
6	Powder Coal main bag filter										50
7	RP-6 Conveyor bag Filter										50
8	Pellet discharge bin bag filter										50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
3	AGB main bag Filter	SHUTDOWN		
4	Lime & Bentonite Powder bin top bag filter			
5	AGB De dusting Bag Filter			
6	Powder Coal main bag filter			
7	RP-6 Conveyor bag Filter			
8	Pellet discharge bin bag filter			

Parameter	Protocol
Particulate Matter (mg/Nm ³)	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE: The Measured Values are within the limits.

[Signature]
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

ANNEXURE-16
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/R018
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ VBSS2 Sl.No: Stack Monitoring Kit/ 032308
5	Instrument Details	:	Calibration Date: 28.03.2023 Calibration Due Date: 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Month of Sampling	:	AUGUST-2023(1 st Fort Night)
10	Date of Sample Received	:	02.08.2023, 03.08.2023, 04.08.2023
11	Date of Sample Analysis	:	02.08.2023, 03.08.2023, 04.08.2023
12	Date Sample Analysis Completion	:	03.08.2023, 04.08.2023, 05.08.2023
13	Report Issued Date	:	07.09.2023
14	Report Number	:	ULR-TC532323000000697F

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
2 X 500 TPD Sponge Iron Kiln 1 & 2											
9	Cooler Discharge -1	02.08.2023	2084	---	27	34	4.38	30	1.2	29.84	50
10	Cooler Discharge -2	02.08.2023	2085	---	28	35	4.32	30	1.2	32.14	50
11	Coal stock house	02.08.2023	2086	---	29	34	4.24	30	1.2	11.08	50
12	PSB 1 System-1	02.08.2023	2087	---	29	36	4.89	30	1.2	34.40	50
13	PSB 1 System-2	03.08.2023	2109	---	28	36	4.49	30	1.2	32.05	50
14	PSB 2 System-1 MCC	03.08.2023	2110	---	28	37	5.16	30	1.2	35.40	50
15	PSB 1 System-2 Road	03.08.2023	2111	---	29	36	4.69	30	1.2	34.19	50
16	Junction House Old & New	03.08.2023	2112	---	29	37	5.01	30	1.2	36.23	50
17	Storage Bunker	04.08.2023	2136	---	28	36	4.77	30	1.2	27.72	50
18	Dispatch	-	-	---	-	-	-	30	1.2	-	50

Sl. No	2 X 500 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
9	Cooler Discharge -1	17836	17297	-
10	Cooler Discharge -2	17591	16998	-
11	Coal stock house	17265	16713	-
12	PSB 1 System-1	19912	19140	-
13	PSB 1 System-2	18283	17609	-
14	PSB 2 System-1 MCC	20400	19702	-
15	PSB 1 System-2 Road	20115	19353	-
16	Junction House Old & New	18772	17971	-
17	Storage Bunker	18161	17490	-
18	Dispatch	-	-	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE: The Measured Values are within the limits.

Analysed By
T R Pooja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

ANNEXURE-17
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Vayubodhan Stack sampler/ VBSS2
Sl.No:Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2023
Calibration Due Date: 27.03.2024
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : AUGUST-2023(1st Fort Night)
- 10 Date of Sample Received : 04.08.2023,05.08.2023
- 11 Date of Sample Analysis : 04.08.2023, 05.08.2023
- 12 Date Sample Analysis Completion : 05.08.2023, 06.08.2023
- 13 Report Issued Date : 07.09.2023
- 14 Report Number : ULR-TC532323000000711F

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/s	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
2X500 TPD Sponge Iron Kiln 3&4											
19	DE 3, Axis 3 CD	04.08.2023	2137	---	29	37	4.62	30	1.2	7.05	50
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House(Stand By)	04.08.2023	2138	---	29	37	4.72	30	1.2	34.89	50
21	DE 8 & 12 I-Bin, (Stand By)	04.08.2023	2139	---	29	38	5.25	30	1.9	30.39	50
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	05.08.2023	2184	---	30	36	4.79	30	1.9	33.76	50
23	Coal Dryer	05.08.2023	2185	---	30	38	5.08	27	1.2	35.95	50

Sl. No	2X500 TPD Sponge Iron Kiln 3&4	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
12	Coal Primary Screen	18079	17390	-
13	Coal Stock House -1 & coal stock house-2	19586	18771	-
14	Cooler Discharge -1	51041	49267	-
15	Cooler Discharge -2 & PSB transfer tower	50225	48290	-
16	Production Bunker & Intermediate bin	20808	19856	-

INFERENCE: The Measured Values are within the limits.

Pooja
Analysed By
T R Pooja
Chemist

K. Ramakrishna Reddy
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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ANNEXURE-18
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No:Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2023 Calibration Due Date: 27.03.2024
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Month of Sampling	: AUGUST-2023(2ndFort Night)
10	Date of Sample Received	: 24.08.2023
11	Date of Sample Analysis	: 24.08.2023
12	Date Sample Analysis Completion	: 25.08.2023
13	Report Issued Date	: 07.09.2023
14	Report Number	: ULR-TC532323000000842F

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant-2											
1	Iron Ore Cone Crusher	-	-	---	-	-	-	30	1.20	-	50
2	Iron Ore Screening	24.08.2023	2509	---	30	36	4.74	30	0.90	15.53	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
1	Iron Ore Cone Crusher	-	-	-
2	Iron Ore Screening	10857	10446	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE: The Measured Values are within the limits.

T R Pooja
Analysed By
T R Pooja
Chemist

K. Ramakrishna Reddy
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:

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TC-5323

ANNEXURE-19
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No: Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2023 Calibration Due Date: 27.03.2024
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Month of Sampling	: AUGUST-2023(2 nd Fort Night)
10	Date of Sample Received	: 28.08.2023
11	Date of Sample Analysis	: 29.08.2023
12	Date Sample Analysis Completion	: 29.08.2023
13	Report Issued Date	: 07.09.2023
14	Report Number	: ULR-TC532323000000843F

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant											
3	AGB main bag Filter	28.08.2023	2578	---	32	37	4.59	6.5	0.5	28.26	50
4	Lime & Bentonite Powder bin top bag filter	28.08.2023	2579	---	31	38	4.78	3	0.35	30.79	50
5	AGB De dusting Bag Filter	-	-	---	-	-	-	6	0.6	-	50
6	Powder Coal main bagfilter	-	-	---	-	-	-	6	0.6	-	50
7	RP-6 Conveyor bag Filter	-	-	---	-	-	-	6	0.3	-	50
8	Pellet discharge bin bagfilter	28.08.2023	2586	---	29	40	5.02	20	0.5	30.68	50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
3	AGB main bag Filter	3301	3177	-
4	Lime & Bentonite Powder bin top bag filter	1587	1521	-
5	AGB De dusting Bag Filter	-	-	-
6	Powder Coal main bagfilter	-	-	-
7	RP-6 Conveyor bag Filter	-	-	-
8	Pellet discharge bin bagfilter	3549	3377	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE: The Measured Values are within the limits.

Analysed By
T R Pooja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
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TC-5323

GEMS-LD/TF/10/01

ANNEXURE-20

Analysis Report of Stack Emission

- Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- Customer Reference : WO/ADMIN/FY24/RO18
- Sample collected by : GLOBAL Environment & Mining Services
- Particulars of sample collected : Vayubodhan Stack sampler/ VBSS2
Sl.No:Stack Monitoring Kit/ 032308
- Instrument Details : Calibration Date: 28.03.2023
Calibration Due Date: 27.03.2024
- Discipline : Chemical
- Group : Atmospheric Pollution
- Sample Type : Stack Monitoring
- Month of Sampling : AUGUST-2023(2nd Fort Night)
- Date of Sample Received : 18.08.2023,19.08.2023, 21.08.2023 & 22.08.2023
- Date of Sample Analysis : 18.08.2023,19.08.2023, 21.08.2023 & 22.08.2023
- Date Sample Analysis Completion : 19.08.2023,20.08.2023, 22.08.2023 & 23.08.2023
- Report Issued Date : 07.09.2023
- Report Number : ULR-TC532323000000806F

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
2 X 500 TPD Sponge Iron Kiln 1 & 2											
9	Cooler Discharge -1	18.08.2023	2396	---	31	36	4.33	30	1.2	28.89	50
10	Cooler Discharge -2	18.08.2023	2397	---	31	37	4.51	30	1.2	26.98	50
11	Coal stock house	19.08.2023	2419	---	30	36	4.49	30	1.2	11.93	50
12	PSB 1 System-1	19.08.2023	2420	---	28	37	4.80	30	1.2	32.80	50
13	PSB 1 System-2	21.08.2023	2438	---	31	37	4.09	30	1.2	34.97	50
14	PSB 2 System-1 MCC	21.08.2023	2439	---	31	38	5.11	30	1.2	30.83	50
15	PSB 1 System-2 Road	22.08.2023	2465	---	33	37	4.63	30	1.2	32.76	50
16	Junction House Old & New	22.08.2023	2466	---	33	38	5.11	30	1.2	34.89	50
17	Storage Bunker	23.08.2023	2487	---	30	37	4.93	30	1.2	30.30	50
18	Dispatch	-	-	---	-	-	-	30	1.2	-	50

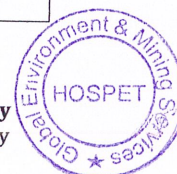
Sl. No	2 X 500 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
9	Cooler Discharge -1	17632	16935	-
10	Cooler Discharge -2	18365	17577	-
11	Coal stock house	18283	17551	-
12	PSB 1 System-1	19546	18693	-
13	PSB 1 System-2	16655	15940	-
14	PSB 2 System-1 MCC	20400	19702	-
15	PSB 1 System-2 Road	20115	19353	-
16	Junction House Old & New	18772	17971	-
17	Storage Bunker	18161	17490	-
18	Dispatch	-	-	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE: The Measured Values are within the limits.

Analysed By
T R Pooja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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TC-5323

ANNEXURE-21
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Vayubodhan Stack sampler/ VBSS2
Sl.No:Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2023
Calibration Due Date: 27.03.2024
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : AUGUST-2023(2nd Fort Night)
- 10 Date of Sample Received : 23.08.2023 & 24.08.2023
- 11 Date of Sample Analysis : 23.08.2023 & 24.08.2023
- 12 Date Sample Analysis Completion : 24.08.2023 & 25.08.2023
- 13 Report Issued Date : 07.09.2023
- 14 Report Number : ULR-TC532323000000808F

RESULTS

Sl. NO	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/s	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
2X500 TPD Sponge Iron Kiln 3&4											
19	DE 3, Axis 3 CD	23.08.2023	2488	---	31	38	4.78	30	1.20	33.19	50
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House(Stand By)	23.08.2023	2489	---	32	39	4.90	30	1.20	31.61	50
21	DE 8 & 12 I-Bin, (Stand By)	23.08.2023	2490	---	30	39	5.22	30	1.30	30.09	50
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	24.08.2023	2510	---	30	38	4.75	30	1.4	34.62	50
23	Coal Dryer	24.08.2023	2511	---	28	41	5.19	35	1.90	7.22	50

Sl. No	2X500 TPD Sponge Iron Kiln 3&4	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
19	DE 3, Axis 3 CD	18079	17390	-
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House(Stand By)	19586	18771	-
21	DE 8 & 12 I-Bin, (Stand By)	51041	49267	-
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	50225	48290	-
23	Coal Dryer	20808	19856	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE: The Measured Values are within the limits.

Pooja R
Analysed By
T R Pooja
Chemist

RKR
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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