



BMM Ispat Ltd.,

ENVIRONMENTAL MONITORING REPORT



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

JULY-2024

Prepared by



GLOBAL ENVIRONMENT & MINING SERVICES

NABL & MOEFCC Recognized Laboratory

(Consulting Engineers, Mine Designers, Geologists & Surveyors)

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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, Noise Monitoring, Water Analysis & Stack monitoring pollution and 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:02.08.2024


K. Ramakrishna Reddy
(Technical Manager)



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-

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.

2.2.6 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

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.

3.0 Fugitive Emission Monitoring

Fugitive air quality was monitored 40 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 60 Sample from Vayubodhan Stack sampler VSS1 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 is kinetic 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.

5.1 FUGITIVE DUST CONCENTRATION

Fortnightly fugitive air quality was monitored all plant area SPM value minimum 245.79 $\mu\text{g}/\text{m}^3$, maximum value 1674.65 $\mu\text{g}/\text{m}^3$ and average value 781.36 $\mu\text{g}/\text{m}^3$. The Fugitive air quality 1st & 2nd Fortnight Results given in **Annexure-7 to Annexure-10**.

5.2 STACK MONITORING

Stack emission level was monitored all chimneys' PM values (mg/Nm^3) 1st and 2ndFortnight Minimum Value 6.03 mg/Nm^3 , Maximum Value 39.28 mg/Nm^3 & Average Value 26.98 mg/Nm^3 . 1st & 2nd Fortnight Results are given in **Annexure-11 to Annexure-37**.

5.3 NOISE LEVEL MEASUREMENT

Noise level was recorded at 30 locations each in Ambient and work zone area using Sound Level Meter (Equinox-EQ 107 Instrument / Lutron) The Day time noise level values were ranging between 44.8 to 72.8 dB (A). The noise level status is given in **Annexure-38 to Annexure-39**.

5.4 Water Sample Collected at 17 locations in side plant and surrounding nearest villages and nearest surface water Sample Collected every Month. The Water Analysis Test Report is given in **Annexure-41 to Annexure-52**.

5.5 CONCLUSION

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



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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 - 450000125
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 : JULY-2024
Location : A1-Danapur Village
Duration of Monitoring : 24 Hour
Report Issued Date : 02.08.2024
Report Number : ULR-TC532324000001107F

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
02.07.2024	03.07.2024	1953	43.06	100	9.42	60	8.18	80	9.14	80
03.07.2024	04.07.2024	1981	40.60		5.74		9.35		11.29	
08.07.2024	09.07.2024	2087	51.95		10.16		6.92		9.91	
09.07.2024	10.07.2024	2122	45.84		7.21		8.14		8.52	
18.07.2024	19.07.2024	2369	55.13		6.03		9.86		11.27	
19.07.2024	20.07.2024	2399	39.03		4.62		7.43		7.66	
24.07.2024	25.07.2024	2537	59.25		9.93		10.35		12.47	
25.07.2024	26.07.2024	2579	36.82		8.60		7.49		7.73	
Average			46.46		7.71		8.46		9.75	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133
3	Serial No	R.D.S. / 197-C-21	PM2.5/PM10 Sampler / 158-K-20
4	Calibration Date	08.07.2024	28.03.2024
5	Calibration Due Date	07.07.2025	27.03.2025

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit.
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Analysed By
Priyanka B M
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 15 Days, 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.
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 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 : JULY-2024
 Location : A1-Danapur Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 02.08.2024
 Report Number : GEMS/BMM/NAAQ/2024-25/1107

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	02.07.2024	1953	0.12	4.0
2	03.07.2024	1981	0.12	
3	08.07.2024	2087	<0.01	
4	09.07.2024	2122	0.10	
5	18.07.2024	2369	0.12	
6	19.07.2024	2399	<0.01	
7	24.07.2024	2537	0.10	
8	25.07.2024	2579	<0.01	

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

ND - Not Detected

SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025

INFERENCE

As per NAAQMS Standards (2009),

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

Analysed By
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Chemist

Authorised Signatory
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Technical Manager



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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 - 450000125
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 : JULY-2024
Location : A2-Mariyammanahalli Village
Duration of Monitoring : 24 Hour
Report Issued Date : 02.08.2024
Report Number : ULR-TC532324000001109F

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
02.07.2024	03.07.2024	1955	34.98	100	5.22	60	10.43	80	12.32	80
03.07.2024	04.07.2024	1982	52.38		10.59		8.72		11.30	
08.07.2024	09.07.2024	2088	53.66		9.29		10.10		12.40	
09.07.2024	10.07.2024	2123	59.54		10.47		9.24		11.97	
16.07.2024	17.07.2024	2318	50.42		8.47		10.65		11.43	
17.07.2024	18.07.2024	2343	38.52		6.31		7.54		8.95	
22.07.2024	23.07.2024	2465	45.51		8.07		10.77		11.18	
23.07.2024	24.07.2024	2498	47.84		7.79		9.76		10.48	
Average			47.85		8.27		9.65		11.25	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Greentech instruments / GTI-151-N	Enviro instruments / EI-133
3	Serial No	466-DTE-2023	PM2.5 / PM10 Sampler / 159-K-20
4	Calibration Date	08.07.2024	28.03.2024
5	Calibration Due Date	07.07.2025	27.03.2025

INFERENCE

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

Analysed By
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Technical Manager



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ANNEXURE-02
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 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 : JULY-2024
 Location : A2-Mariyammanahalli Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 02.08.2024
 Report Number : GEMS/BMM/NAAQ/2024-25/1109

RESULTS


Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	02.07.2024	1955	0.10	4.0
2	03.07.2024	1982	0.10	
3	08.07.2024	2088	0.12	
4	09.07.2024	2123	<0.01	
5	16.07.2024	2318	0.10	
6	17.07.2024	2343	0.12	
7	22.07.2024	2465	<0.01	
8	23.07.2024	2498	<0.01	


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

ND - Not Detected

SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025

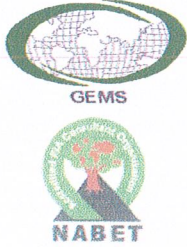
INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
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ANNEXURE-03
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Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference : WO/ADMIN/FY24/R018 - 450000125
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 : **JULY-2024**
Location : **A3-Hanumanahalli Village**
Duration of Monitoring : 24 Hour
Report Issued Date : **02.08.2024**
Report Number : **ULR-TC532324000001108F**

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
02.07.2024	03.07.2024	1954	49.14	100	6.24	60	7.78	80	10.67	80
03.07.2024	04.07.2024	1983	39.28		5.41		10.18		11.91	
11.07.2024	12.07.2024	2183	40.99		9.71		8.92		10.02	
12.07.2024	13.07.2024	2224	56.36		11.88		10.23		11.26	
18.07.2024	19.07.2024	2370	50.75		10.44		7.86		9.38	
19.07.2024	20.07.2024	2400	42.32		8.26		9.82		10.26	
24.07.2024	25.07.2024	2538	40.65		8.72		7.74		10.80	
25.07.2024	26.07.2024	2580	37.59		5.30		9.15		9.82	
Average			44.63		8.24		8.96		10.51	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133
3	Serial No	R.D.S. / 197-C-21	PM2.5 /PM10 Sampler / 160-K-20
4	Calibration Date	08.07.2024	28.03.2024
5	Calibration Due Date	07.07.2025	27.03.2025

INFERENCE

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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	: JULY-2024
Location	: A3-Hanumanahalli Village
Duration of Monitoring	: 1 Hour
Report Issued Date	: 02.08.2024
Report Number	: GEMS/BMM/NAAQ/2024-25/1108

RESULTS

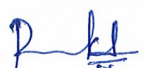
Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	02.07.2024	1954	0.12	4.0
2	03.07.2024	1983	<0.01	
3	11.07.2024	2183	0.10	
4	12.07.2024	2224	<0.01	
5	18.07.2024	2370	<0.01	
6	19.07.2024	2400	<0.01	
7	24.07.2024	2538	<0.01	
8	25.07.2024	2580	<0.01	


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

ND - Not Detected

SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025

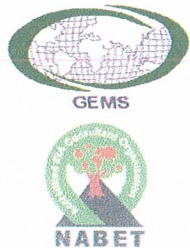
INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
-----------	-------------------------------------------------------------------------------------------------------------------


Analysed By
Priyanka B M
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-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 - 450000125
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	: JULY-2024
Location	: A4-Galemmanagudi Village
Duration of Monitoring	: 24 Hour
Report Issue Date	: 02.08.2024
Report Number	: ULR-TC532324000001143F

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
04.07.2024	05.07.2024	2001	59.54	100	17.19	60	9.63	80	12.49	80
05.07.2024	06.07.2024	2027	44.57		11.58		6.87		7.37	
08.07.2024	09.07.2024	2089	40.01		6.54		10.87		12.90	
09.07.2024	10.07.2024	2124	50.74		12.18		8.23		10.25	
18.07.2024	19.07.2024	2371	52.42		15.59		8.48		11.31	
19.07.2024	20.07.2024	2401	46.63		10.15		6.96		10.02	
24.07.2024	25.07.2024	2527	51.20		9.25		8.65		10.01	
25.07.2024	26.07.2024	2582	46.06		10.03		6.20		7.32	
Average			48.89		11.56		8.24		10.21	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133
3	Serial No	R.D.S./198-C-21	PM2.5 /PM10 Sampler / 158-K-20
4	Calibration Date	08.07.2024	28.03.2024
5	Calibration Due Date	07.07.2025	27.03.2025

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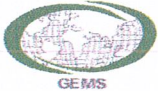
Analysed By
Priyanka B M
Chemist

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 15 Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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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 : JULY-2024
 Location : A4-Galemmanagudi Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 02.08.2024
 Report Number : GEMS/BMM/NAAQ/2024-25/1143

RESULTS


Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	04.07.2024	2001	0.12	4.0
2	05.07.2024	2027	0.16	
3	08.07.2024	2089	0.12	
4	09.07.2024	2124	0.14	
5	18.07.2024	2371	<0.01	
6	19.07.2024	2401	<0.01	
7	24.07.2024	2527	0.10	
8	25.07.2024	2582	<0.01	

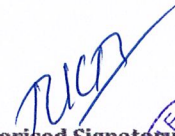
Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)

ND - Not Detected

SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025

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


 Analysed By
 Priyanka B M
 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 - 450000125
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 : JULY-2024
Location : A5-G Nagalapura Village
Duration of Monitoring : 24 Hour
Report Issue Date : 02.08.2024
Report Number : ULR-TC532324000001147F

RESULTS

Parameters			PM10 [µg/m ³]		PM2.5 [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 Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
04.07.2024	05.07.2024	2005	46.96	100	8.30	60	9.07	80	10.33	80
05.07.2024	06.07.2024	2028	37.14		5.65		6.93		8.74	
08.07.2024	09.07.2024	2090	45.31		6.57		8.48		10.33	
09.07.2024	10.07.2024	2125	37.05		4.62		7.51		9.68	
16.07.2024	17.07.2024	2320	43.66		11.32		8.61		10.20	
17.07.2024	18.07.2024	2345	38.00		9.57		8.05		8.94	
24.07.2024	25.07.2024	2539	49.83		8.90		9.90		9.41	
25.07.2024	26.07.2024	2581	40.06		4.81		6.10		9.83	
Average			42.25		7.47		8.08		9.68	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133
3	Serial No	R.D.S. / 198-C-21	PM2.5 / PM10 Sampler / 159-K-20
4	Calibration Date	08.07.2024	28.03.2024
5	Calibration Due Date	07.07.2025	27.03.2025

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

Analysed By
Priyanka B M
Chemist

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 : JULY-2024
 Location : A5- G Nagalapura Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 02.08.2024
 Report Number : GEMS/BMM/NAAQ/2024-25/1147

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	04.07.2024	2005	<0.01	4.0
2	05.07.2024	2028	<0.01	
3	08.07.2024	2090	0.12	
4	09.07.2024	2125	<0.01	
5	16.07.2024	2320	<0.01	
6	17.07.2024	2345	0.10	
7	24.07.2024	2539	<0.01	
8	25.07.2024	2581	<0.01	

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

ND - Not Detected

SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025

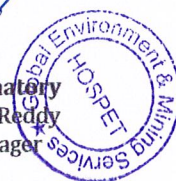
INFERENCE

As per NAAQMS Standards (2009),

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

Analysed By
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Chemist

Authorised Signatory
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Technical Manager



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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 - 450000125
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 : JULY-2024
Location : A6-Gunda Tanda Village
Duration of Monitoring : 24 Hour
Report Issue Date : 02.08.2024
Report Number : ULR-TC532324000001145F

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 Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
04.07.2024	05.07.2024	2003	37.99	100	10.82	60	8.79	80	9.44	80
05.07.2024	06.07.2024	2029	35.88		7.30		6.52		8.56	
08.07.2024	09.07.2024	2091	34.88		7.57		8.57		10.52	
09.07.2024	10.07.2024	2126	43.72		6.68		8.01		8.86	
16.07.2024	17.07.2024	2319	54.78		12.97		9.34		9.15	
17.07.2024	18.07.2024	2344	41.14		4.89		7.81		8.11	
22.07.2024	23.07.2024	2466	45.77		6.94		7.51		8.87	
23.07.2024	24.07.2024	2499	36.84		10.22		7.91		8.88	
Average			41.37		8.42		8.06		9.05	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133
3	Serial No	R.D.S./200-C-21	PM2.5 /PM10 Sampler / 160-K-20
4	Calibration Date	08.07.2024	28.03.2024
5	Calibration Due Date	07.07.2025	27.03.2025

INFERENCE

As per NAAQMS Standards (2009),

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

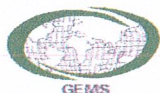
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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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 : JULY-2024
 Location : A6-Gunda Tanda Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 02.08.2024
 Report Number : GEMS/BMM/NAAQ/2024-25/1145

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	04.07.2024	2003	<0.01	4.0
2	05.07.2024	2029	<0.01	
3	08.07.2024	2091	<0.01	
4	09.07.2024	2126	<0.01	
5	16.07.2024	2319	<0.01	
6	17.07.2024	2344	<0.01	
7	22.07.2024	2466	<0.01	
8	23.07.2024	2499	<0.01	

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

ND - Not Detected

SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025

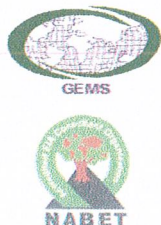
INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
-----------	-------------------------------------------------------------------------------------------------------------------

Analysed By
 Priyanka B M
 Chemist

Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



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- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey



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Website: www.globalmining.in

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

FORTNIGHTLY FUGITIVE AIR QUALITY MONITORING DATA

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, Hosapete
4	Particulars of sample collected	:	RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)
5	Month	:	JULY-2024(1 st Fort Night)
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	02.08.2024
10	Report Number	:	GEMS/BMM/FM/2024-25/1231

RESULTS

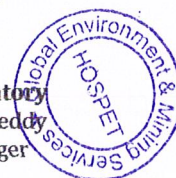
Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ($\mu\text{g}/\text{m}^3$)	Standard
I. Beneficiation Plant-1						
1.	Main Canteen	2117	09.07.2024	10.07.2024	428.30	2000
2.	Near Iron Ore Bottom Hopper	2115	09.07.2024	10.07.2024	587.42	2000
3.	Iron Ore Screen	2116	09.07.2024	10.07.2024	645.01	2000
II. Pellet Plant-I						
4.	Near Pellet Plant	2147	10.07.2024	11.07.2024	900.12	2000
5.	Annual Cooler Pellet Discharge bin	2148	10.07.2024	11.07.2024	1120.75	2000
6.	Pellet Stock Yard	2149	10.07.2024	11.07.2024	595.27	2000
III. Sponge Iron Division-1 (kiln 1 & 2)						
7.	Control Room SID-1	2216	12.07.2024	13.07.2024	1223.83	2000
8.	Near Product bin	2217	12.07.2024	13.07.2024	560.78	2000
9.	Coal Feeding Area	2218	12.07.2024	13.07.2024	538.02	2000
IV. Induction Furnace & Rolling Mill - 1						
10.	IF Office	2176	11.07.2024	12.07.2024	747.53	2000
11.	TMT Stock Yard	2177	11.07.2024	12.07.2024	394.01	2000
12.	RML Gasifier	2178	11.07.2024	12.07.2024	386.43	2000
V. Power Plant 25 MW-1						
13.	25 MW ESP	2179	11.07.2024	12.07.2024	827.93	2000
14.	25 MW ACC	2242	13.07.2024	13.07.2024	254.61	2000
VI. Site Services						
15.	PGP- coal handling system	2150	10.07.2024	11.07.2024	556.44	2000
16.	IF Slag Crusher	2219	12.07.2024	13.07.2024	551.98	2000
17.	Main Gate	2243	13.07.2024	13.07.2024	353.98	2000
18.	Fly ash Dump	2083	08.07.2024	09.07.2024	524.38	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	28.03.2024	28.03.2024	28.03.2024	28.03.2024	28.03.2024
5	Calibration Due Date	27.03.2025	27.03.2025	27.03.2025	27.03.2025	27.03.2025

Analysed By
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Chemist

Authorised Signatory
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ANNEXURE-08

GEMS-LD/TF/11/01

FORTNIGHTLY FUGITIVE AIR QUALITY MONITORING DATA

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, Hosapete
4	Particulars of sample collected	: RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)
5	Month	: JULY-2024(2nd Fort Night)
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Method adopted	: IS 5182 (Part 4) 1999 RA 2014
9	Report Issued Date	: 02.08.2024
10	Report Number	: GEMS/BMM/FM/2024-25/1438

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-1						
1.	Main Canteen	2490	23.07.2024	24.07.2024	748.72	2000
2.	Near Iron Ore Bottom Hopper	2488	23.07.2024	24.07.2024	339.15	2000
3.	Iron Ore Screen	2489	23.07.2024	24.07.2024	519.01	2000
II. Pellet Plant-I						
4.	Near Pellet Plant	2528	24.07.2024	25.07.2024	1294.78	2000
5.	Annual Cooler Pellet Discharge bin	2529	24.07.2024	25.07.2024	1011.72	2000
6.	Pellet Stock Yard	2530	24.07.2024	25.07.2024	361.60	2000
III. Sponge Iron Division-1(kiln 1 & 2)						
7.	Control Room SID-I	2593	26.07.2024	27.07.2024	923.70	2000
8.	Near Product bin	2594	26.07.2024	27.07.2024	1029.63	2000
9.	Coal Feeding Area	2595	26.07.2024	27.07.2024	643.74	2000
IV. Induction Furnace & Rolling Mill						
10.	IF Office	2571	25.07.2024	26.07.2024	681.29	2000
11.	TMT Stock Yard	2572	25.07.2024	26.07.2024	809.91	2000
12.	RML Gasifier	2573	25.07.2024	26.07.2024	727.07	2000
V. Power Plant 25 MW-1						
13.	25 MW ESP	2574	25.07.2024	26.07.2024	1055.48	2000
14.	25 MW ACC	2618	27.07.2024	27.07.2024	351.48	2000
VI. Site Services						
15.	PGP- Coal handling system	2531	24.07.2024	25.07.2024	553.92	2000
16.	IF Slag Crusher	2596	26.07.2024	27.07.2024	704.02	2000
17.	Main Gate	2619	27.07.2024	27.07.2024	245.79	2000
18.	Fly ash Dump	2441	21.07.2024	22.07.2024	577.58	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	28.03.2024	28.03.2024	28.03.2024	28.03.2024	28.03.2024
5	Calibration Due Date	27.03.2025	27.03.2025	27.03.2025	27.03.2025	27.03.2025

Analysed By
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Chemist

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ANNEXURE-09
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	:	JULY-2024(1 ST Fort Night)
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	02.08.2024
10	Report Number	:	GEMS/BMM/FM/2024-25/1102

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)	1944	02.07.2024	03.07.2024	1332.77	2000
2.	Near Cone Crusher	1946	02.07.2024	03.07.2024	1100.86	2000
3.	Concentrate Thickner	1945	02.07.2024	03.07.2024	547.86	2000
II. Pellet Plant						
4.	PR-6	1947	02.07.2024	03.07.2024	502.30	2000
5.	Annual Cooler Pellet Discharge bin	1972	03.07.2024	04.07.2024	1298.05	2000
6.	Additive Grinding Building	1973	03.07.2024	04.07.2024	1650.97	2000
III. Sponge Iron Division -2 (Kiln 3 & 4)						
7.	Control room	1994	04.07.2024	05.07.2024	782.43	2000
8.	Near Weigh bridge (dispatch)	1995	04.07.2024	05.07.2024	438.50	2000
9.	Pellet Storage bin	2018	05.07.2024	06.07.2024	521.37	2000
10.	Transfer House area	1974	03.07.2024	04.07.2024	1674.65	2000
11.	Production Separation Bin-PSB	1975	03.07.2024	04.07.2024	791.61	2000
IV. Sponge Iron Division -2 (Kiln 5 & 6)						
12.	Near Control room	1996	04.07.2024	05.07.2024	577.24	2000
13.	Near Coal Crusher	2019	05.07.2024	06.07.2024	1034.47	2000
14.	Near Product bin	1997	04.07.2024	05.07.2024	1468.35	2000
15.	Coal Dryer	2020	05.07.2024	06.07.2024	815.97	2000
V. Wagon Tipper/RMHS						
16.	Near Tipping point	2021	05.07.2024	06.07.2024	1483.75	2000
17.	Monsoon Shed (CPU)	2041	06.07.2024	07.07.2024	870.05	2000
18.	MCC Room (2 nd Gate)	2042	06.07.2024	07.07.2024	1252.71	2000
VI. Power Plant-70 MW						
19.	70MW-DM Plant (Near R.O. Plant)	2043	06.07.2024	07.07.2024	649.30	2000
20.	2 nd gate weigh bridge Near Coal Screen	2114	09.07.2024	10.07.2024	510.30	2000
21.	CFBC boiler	2044	06.07.2024	07.07.2024	1300.87	2000
VII. 2X70MW Power Plant						
22.	Near Boiler	2080	08.07.2024	09.07.2024	555.28	2000
23.	Near Coal storage Shed	2081	08.07.2024	09.07.2024	728.10	2000
24.	Dolochar Processing Area	2082	08.07.2024	09.07.2024	602.39	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	28.03.2024	28.03.2024	28.03.2024	28.03.2024	28.03.2024
5	Calibration Due Date	27.03.2025	27.03.2025	27.03.2025	27.03.2025	27.03.2025

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ANNEXURE-10 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	: JULY(2 ND Fort Night)
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Method adopted	: IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	: 02.08.2024
10	Report Number	: GEMS/BMM/FM/2024-25/1344

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)	2309	16.07.2024	17.07.2024	1077.88	2000
2.	Near Cone Crusher	2311	16.07.2024	17.07.2024	884.11	2000
3.	Concentrate Thickner	2310	16.07.2024	17.07.2024	365.52	2000
II. Pellet Plant-I						
4.	PR-6	2312	16.07.2024	17.07.2024	626.69	2000
5.	Annual Cooler Pellet Discharge bin	2334	17.07.2024	18.07.2024	1521.15	2000
6.	Additive Grinding Building	2335	17.07.2024	18.07.2024	1316.07	2000
III. Sponge Iron Division -2 (Kiln 3 & 4)						
7.	Control room	2336	17.07.2024	18.07.2024	1014.54	2000
8.	Near Weigh bridge (dispatch)	2337	17.07.2024	18.07.2024	1075.23	2000
9.	Pellet Storage bin	2362	18.07.2024	19.07.2024	923.89	2000
10.	Transfer House area	2360	18.07.2024	19.07.2024	1571.20	2000
11.	Production Separation Bin-PSB	2361	18.07.2024	19.07.2024	1089.92	2000
IV. Sponge Iron Division -2 (Kiln 5 & 6)						
12.	Near Control room	2363	18.07.2024	19.07.2024	989.10	2000
13.	Near Coal Crusher	2387	19.07.2024	20.07.2024	841.91	2000
14.	Near Product bin	2386	19.07.2024	20.07.2024	831.19	2000
15.	Coal Drier	2388	19.07.2024	20.07.2024	672.75	2000
V. Wagon Tipper/RMHS						
16.	Near Tipping point	2389	19.07.2024	20.07.2024	813.60	2000
17.	Monsoon Shed (CPU)	2418	20.07.2024	20.07.2024	543.69	2000
18.	MCC Room (2 nd Gate)	2419	20.07.2024	20.07.2024	260.23	2000
VI. Power Plant-70 MW						
19.	70MW-DM Plant (Near R.O. Plant)	2420	20.07.2024	20.07.2024	509.02	2000
20.	2 nd gate weigh bridge Near Coal Screen	2491	23.07.2024	24.07.2024	701.59	2000
21.	CFBC boiler	2421	20.06.2024	20.07.2024	559.03	2000
VII. 2X70MW Power Plant						
22.	Near Boiler	2438	21.07.2024	22.07.2024	452.21	2000
23.	Near Coal storage Shed	2439	21.07.2024	22.07.2024	376.63	2000
24.	CPP Dolochar Process Area	2440	21.07.2024	22.07.2024	351.69	2000

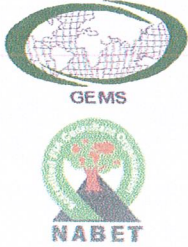
Note: SPM -Suspended Particulate matter ($\mu\text{g}/\text{m}^3$), INFERENCE: The Measured Values are within the limits.

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	28.03.2024	28.03.2024	28.03.2024	28.03.2024	28.03.2024
5	Calibration Due Date	27.03.2025	27.03.2025	27.03.2025	27.03.2025	27.03.2025

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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 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	: Vayubodhak Stack sampler/ VBSS-2 Sl. No: Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: Pellet Plant-1 ESP
10	Month of Sampling	: JULY-2024
11	Date of Sample Received	: 02.07.2024 & 17.07.2024
12	Date of Sample Analysis	: 03.07.2024 & 18.07.2024
13	Date of Sample Analysis completion	: 05.07.2024 & 20.07.2024
14	Report Issued Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001103F

Stack Details

1	Fuel Used	Coal & furnace oil
2	Stack Height (mtr)	100.0
3	Stack Diameter (mtr)	4.4

Emission Details

Sl. No.	Parameters	Method	Unit	Results		Permissible Limit
				02.07.2024	17.07.2024	
	Date of Monitoring Sample Code			1948	2339	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	27	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	68	74	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	5.96	6.03	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr	326219	330340	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	284483	282461	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	36.55	39.28	50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³	98.0	104.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	27.0	31.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.026	0.029	NS

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

Analysed By
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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 15 Days, 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.
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TC-5323

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

Analysis Report of Stack Emission

- Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- Customer Reference : WO/ADMIN/FY24/RO18 - 450000125
- Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2
Sl. No: Stack Monitoring Kit/ 032308
- Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- Discipline : Chemical
- Group : Atmospheric Pollution
- Sample Type : Stack Monitoring
- Sampling Location : 2X100 TPD Sponge iron plant Kiln 1 & 2
- Month of Sampling : JULY-2024
- Date of Sample Received : 11.07.2024 & 20.07.2024
- Date of Sample Analysis : 12.07.2024 & 22.07.2024
- Date of Sample Analysis completion : 13.07.2024 & 23.07.2024
- Report Issued Date : 02.08.2024
- Report Number : ULR-TC532324000001247F

Stack Details

- Fuel Used : Coal
- Stack Height (mtr) : 60.0
- Stack Diameter (mtr) : 2.00

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
	Date of Monitoring			1 st Fort Night	2 nd Fort Night	
	Sample Code			11.07.2024	20.07.2024	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	27	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	161	172	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.30	7.00	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr	82566	79178	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	56484	52646	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	19.75	22.85	50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³	128.0	136.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	26.0	42.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.184	0.196	1

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

Analysed By
Priyanka B M
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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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/RO18 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : JULY-2024(1st Fort Night)
- 10 Date of Sample Received : 12.07.2024
- 11 Date of Sample Analysis : 13.07.2024
- 12 Date of Sample Analysis completion : 15.07.2024
- 13 Report Issued Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001280F

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
Induction Furnace 1 & 2											
1	Induction Furnace 1	12.07.2024	2220	Electric Power	29	41	6.43	30	1.2	6.49	150
2	Induction Furnace 2	12.07.2024	2221		29	43	6.42	30	1.3	12.09	150

Sl. No	Induction Furnance 1 & 2	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
1	Induction Furnance 1	26164	24684	-
2	Induction Furnance 2	30697	28762	-

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)

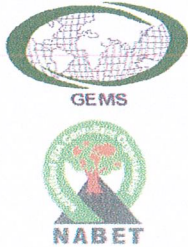
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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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 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	: Vayubodhak Stack sampler/ VBSS-2 Sl. No: Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: Rolling mill reheating furnace
10	Month of Sampling	: JULY-2024
11	Date of Sample Received	: 08.07.2024 & 26.07.2024
12	Date of Sample Analysis	: 09.07.2024 & 27.07.2024
13	Date of Sample Analysis completion	: 09.07.2024 & 27.07.2024
14	Report Issued Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001201F

Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	30.0
3	Stack Diameter (mtr)	0.8

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
				08.07.2024	26.07.2024	
	Date of Monitoring					
	Sample Code			2086	2599	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	27	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	369	373	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	9.08	9.25	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr	16432	16736	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	7596.4	7688.8	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	12.74	10.90	50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³	21	26	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	292	317	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.034	0.041	NS

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

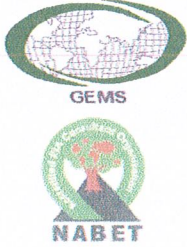
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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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/R018 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	: Vayubodhak Stack sampler/ VBSS-2 Sl. No: Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: AFBC Boiler ESP (25 MW Power Plant)
10	Month of Sampling	: JULY-2024
11	Date of Sample Received	: 29.07.2024
12	Date of Sample Analysis	: 30.07.2024
13	Date of Sample Analysis completion	: 30.07.2024
14	Report Issued Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001523F

Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	65.0
3	Stack Diameter (mtr)	2.5

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 st Fort Night	2 nd Fort Night	
	Date of Monitoring Sample Code			-	29.07.2024	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	Shutdown	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C		114	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec		7.10	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr		125404	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr		95777	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³		32.71	50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³		112	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³		265	NS
9	Carbon Monoxide	GEMS/SOP/69	%		0.253	NS

Note: NS- Not Specified. RA: Reaffirmed,

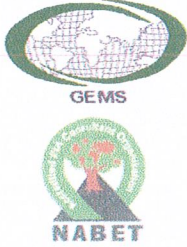
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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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/RO18 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : JULY-2024 (1st Fort Night)
- 10 Date of Sample Received : 13.07.2024
- 11 Date of Sample Analysis : 15.07.2024
- 12 Date of Sample Analysis completion : 15.07.2024
- 13 Report Issued Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001300F

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 - I											
1	Iron Ore dump hopper	13.07.2024	2246	-	30	35	5.25	25	0.40	14.61	50
2	Iron Ore Screen bin	13.07.2024	2245	-	31	36	5.34	30	0.40	17.66	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 dump hopper	2374	2282	-
2	Iron Ore Screen bin	2415	2313	-

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)

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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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/RO18 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : JULY-2024 (1st Fort Night)
- 10 Date of Sample Received : 15.07.2024
- 11 Date of Sample Analysis : 16.07.2024
- 12 Date of Sample Analysis completion : 16.07.2024
- 13 Report Issued Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001334F

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)											
RMHS											
3	Screen, Coal Crusher (CPU)	15.07.2024	2287	-	27	38	6.17	30	1.50	34.48	50
4	Main Crusher	15.07.2024	2288	-	27	35	5.36	25	0.50	14.15	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
3	Screen, Coal Crusher (CPU)	39237	37443	-
4	Main Crusher	3789	3645	-

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)

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

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TC-5323

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 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : JULY-2024 (1st Fort Night)
- 10 Date of Sample Received : 02.07.2024 & 03.07.2024
- 11 Date of Sample Analysis : 04.07.2024 & 05.07.2024
- 12 Date of Sample Analysis completion : 04.07.2024 & 05.07.2024
- 13 Report Issued Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001104F

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 -I											
5	AGB Main Bag Filter	02.07.2024	1949	-	29	35	5.24	6.5	0.50	20.12	50
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	02.07.2024	1950	-	36	36	5.40	3.0	0.30	21.81	50
7	Bentonite Powder bin top bag filter	03.07.2024	1978	-	29	36	5.57	3.0	0.30	22.34	50
8	H-4 Conveyor discharge bag filter	Shutdown	-	-	-	-	-	7.0	0.50	-	50
9	P-1 Bag Filter	03.07.2024	1976	-	30	51	5.58	7.0	0.50	30.86	50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
5	AGB Main Bag Filter	3705	3569	-
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	1374	1318	-
7	Bentonite Powder bin top bag filter	1418	1360	-
8	H-4 Conveyor discharge bag filter	-	-	-
9	P-1 Bag Filter	3945	3606	-

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)

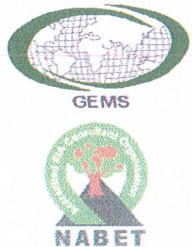
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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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/RO18 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : JULY-2024 (1st Fort Night)
- 10 Date of Sample Received : 11.07.2024 & 12.07.2024
- 11 Date of Sample Analysis : 12.07.2024 & 13.07.2024
- 12 Date of Sample Analysis completion : 12.07.2024 & 13.07.2024
- 13 Report Issued Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001248F

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 100 TPD Sponge Iron Kiln 1 & 2											
10	Cooler-1 Discharge & Blending Chute	11.07.2024	2181	---	30	36	5.48	30	1.20	30.45	50
11	Cooler-2 Discharge	11.07.2024	2182	---	30	37	5.72	30	1.20	26.05	50
12	Intermediate Bin & Blending	12.07.2024	2222	---	28	36	5.69	30	1.20	27.82	50
13	Product House	12.07.2024	2223	---	29	38	5.99	30	1.20	25.37	50

Sl. No	2 X 100 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
10	Cooler-1 Discharge & Blending Chute	22318	21390	-
11	Cooler-2 Discharge	23311	22259	-
12	Intermediate Bin & Blending	23176	22272	-
13	Product House	24409	23293	-

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)

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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ANNEXURE-20
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 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : JULY-2024 (2nd Fort Night)
- 10 Date of Sample Received : 26.07.2024
- 11 Date of Sample Analysis : 27.07.2024
- 12 Date of Sample Analysis completion : 27.07.2024
- 13 Report Issued Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001499F

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
Induction Furnance 1 & 2											
1	Induction Furnance 1	26.07.2024	2597	Electric	28	38	6.04	30	1.2	6.03	50
2	Induction Furnance 2	26.07.2024	2598	Power	27	41	6.15	30	1.3	9.48	50

Sl. No	Induction Furnance 1 & 2	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
1	Induction Furnance 1	24598	23440	-
2	Induction Furnance 2	29397	27727	-

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)

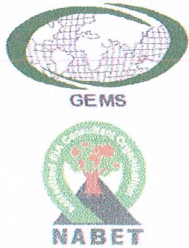
Analysed By
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Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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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/R018 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : JULY-2024(2nd Fort Night)
- 10 Date of Sample Received : 27.07.2024
- 11 Date of Sample Analysis : 29.07.2024
- 12 Date of Sample Analysis completion : 29.07.2024
- 13 Report Issued Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001517F

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											
1	Iron Ore dump hopper	27.07.2024	2620	---	27	34	5.05	25	0.40	14.03	50
2	Iron Ore Screen bin	27.07.2024	2621	---	27	35	5.22	30	0.40	16.62	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 dump hopper	2284	2207	-
2	Iron Ore Screen bin	2360	2267	-

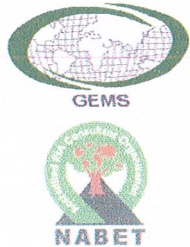
Parameter	Protocol
Particulate Matter (mg/Nm ³)	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

Analysed By
Priyanka B M
Chemist

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.
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TC-5323

ANNEXURE-22
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 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : JULY-2024(2nd Fort Night)
- 10 Date of Sample Received : 24.07.2024 & 27.07.2024
- 11 Date of Sample Analysis : 25.07.2024 & 27.07.2024
- 12 Date of Sample Analysis completion : 26.07.2024 & 29.07.2024
- 13 Report Issued Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001466F

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)											
RMHS											
3	Screen, Coal Crusher (CPU)	24.07.2024	2535	-	28	38	6.32	30	1.50	28.85	50
4	Main Crusher	27.07.2024	2622	-	26	34	5.21	25	0.50	11.75	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
3	Screen, Coal Crusher (CPU)	40180	38237	-
4	Main Crusher	3687	3564	-

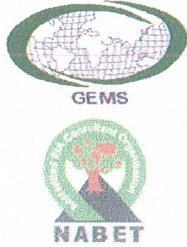
Parameter	Protocol
Particulate Matter (mg/Nm ³)	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:

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ANNEXURE-23
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 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : JULY-2024(2nd Fort Night)
- 10 Date of Sample Received : 17.07.2024 & 18.07.2024
- 11 Date of Sample Analysis : 18.07.2024 & 19.07.2024
- 12 Date of Sample Analysis completion : 18.07.2024 & 19.07.2024
- 13 Report Issued Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001362F

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/N m ³
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant-I											
5	AGB Main Bag Filter	17.07.2024	2340	---	28	34	5.40	6.5	0.50	21.70	50
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	18.07.2024	2366	---	28	36	5.26	3.0	0.30	26.99	50
7	Bentonite Powder bin top bag filter	18.07.2024	2359	---	27	35	5.62	3.0	0.30	24.66	50
8	H-4 Conveyor discharge bag filter	-	-	---	-	-	-	7.0	0.50	-	50
9	P-1 Bag Filter	19.07.2024	2396	---	28	39	5.27	7.0	0.50	32.36	50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
5	AGB Main Bag Filter	3821	3680	-
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	1338	1281	-
7	Bentonite Powder bin top bag filter	1429	1373	-
8	H-4 Conveyor discharge bag filter	-	-	-
9	P-1 Bag Filter	3725	3529	-

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)

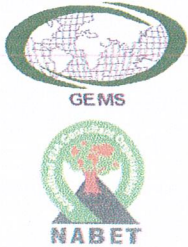
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

ANNEXURE-24
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- Customer Reference : WO/ADMIN/FY24/RO18 - 450000125
- Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2
Sl. No: Stack Monitoring Kit/ 032308
- Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- Discipline : Chemical
- Group : Atmospheric Pollution
- Sample Type : Stack Monitoring
- Month of Sampling : JULY-2024 (2nd Fort Night)
- Date of Sample Received : 25.07.2024
- Date of Sample Analysis : 26.07.2024
- Date of Sample Analysis completion : 27.07.2024
- Report Issued Date : 02.08.2024
- Report Number : ULR-TC532324000001489F

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 100 TPD Sponge Iron Kiln 1 & 2											
10	Cooler-1 Discharge & Blending Chute	25.07.2024	2575	---	26	34	5.63	30	1.20	24.52	50
11	Cooler-2 Discharge	25.07.2024	2576	---	27	35	5.76	30	1.20	26.55	50
12	Intermediate Bin & Blending	25.07.2024	2577	---	27	36	5.50	30	1.20	23.13	50
13	Product House	25.07.2024	2578	---	27	37	6.04	30	1.20	24.27	50

Sl. No	2 X 100 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
10	Cooler-1 Discharge & Blending Chute	22921	22159	-
11	Cooler-2 Discharge	23454	22591	-
12	Intermediate Bin & Blending	22384	21448	-
13	Product House	24577	23464	-

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)

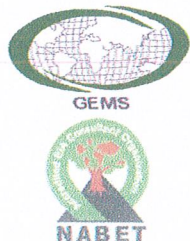
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

ANNEXURE-25
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: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: Pellet Plant-2 ESP
10	Month of Sampling	: JULY-2024
11	Date of Sample Received	: 03.07.2024 & 16.07.2024
12	Date of Sample Analysis	: 04.07.2024 & 17.07.2024
13	Date Sample Analysis Completion	: 05.07.2024 & 18.07.2024
14	Report Issued Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001128F

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	
				03.07.2024	16.07.2024	
	Date of Monitoring			1977	2313	
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	27	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	71	71	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.53	6.43	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	357344	351904	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	308460	303363	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	34.48	35.95	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	108	212	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm ³	54	65	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.019	0.022	1%

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

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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TC-5323

ANNEXURE-26
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: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: SID Axis 3 & 4
10	Month of Sampling	: JULY-2024
11	Date of Sample Received	: 04.07.2024 & 18.07.2024
12	Date of Sample Analysis	: 05.07.2024 & 19.07.2024
13	Date Sample Analysis Completion	: 06.07.2024 & 20.07.2024
14	Report Issued Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001140F

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
				1st Fort Night	2nd Fort Night	
				04.07.2024	18.07.2024	
	Date of Monitoring			1998	2365	
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	28	28	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	126	128	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.60	6.94	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	167894	176561	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	125197	130674	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	34.48	34.61	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	141	189	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm ³	24	31.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.128	0.112	1%

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

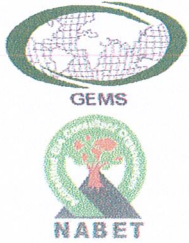
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K Ramakrishna Reddy
Technical Manager



Note:

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TC-5323

ANNEXURE-27
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: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: SID Axis 5&6
10	Month of Sampling	: JULY-2024
11	Date of Sample Received	: 05.07.2024 & 19.07.2024
12	Date of Sample Analysis	: 06.07.2024 & 20.07.2024
13	Date Sample Analysis Completion	: 08.07.2024 & 22.07.2024
14	Report Issued Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001157F

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	
	Date of Monitoring Sample Code			05.07.2024	19.07.2024	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	27	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	129	131	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.06	7.16	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	179614	182338	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	132656	133647	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	27.65	30.17	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	405	442	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	282	184	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.119	0.124	1%

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

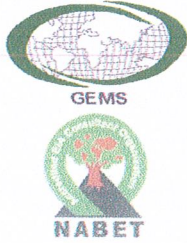
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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TC-5323

ANNEXURE-28
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: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: 1X70 MW-CFBC Boiler ESP
10	Month of Sampling	: JULY-2024
11	Date of Sample Received	: 06.07.2024
12	Date of Sample Analysis	: 08.07.2024
13	Date Sample Analysis Completion	: 09.07.2024
14	Report Issued Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001174F

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	
	Date of Monitoring			06.07.2024	-	
	Sample Code			2045	-	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	Shutdown	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	122		-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.84		-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	174010		-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	130726		-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	32.76		50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	145		600
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	16		300
9	Carbon Monoxide	GEMS/SOP/69	%	0.034		NS

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

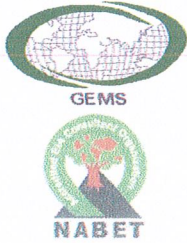
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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TC-5323

ANNEXURE-29
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: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: 2X70 MW CFBC Boiler ESP
10	Month of Sampling	: JULY-2024
11	Date of Sample Received	: 13.07.2024
12	Date of Sample Analysis	: 15.07.2024
13	Date Sample Analysis Completion	: 15.07.2024
14	Report Issued Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001298F

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
				1 st Fort Night	2 nd Fort Night	
				13.07.2024	-	
	Date of Monitoring			13.07.2024	-	
	Sample Code			2244		
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	29	Shutdown	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	126		-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.24		-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	1309832		-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	974152		-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	38.54		50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	39		600
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	283		300
9	Carbon Monoxide	GEMS/SOP/69	%	0.027		NS

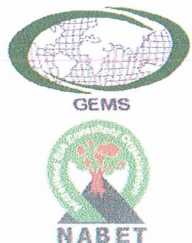
Note: NS- Not Specified. RA: Reaffirmed

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

ANNEXURE-30
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: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : JULY-2024 (1st Fort Night)
- 10 Date of Sample Received : 15.07.2024
- 11 Date of Sample Analysis : 16.07.2024
- 12 Date Sample Analysis Completion : 17.07.2024
- 13 Report Issued Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001332F

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	15.07.2024	2285	Coal	26	36	5.61	30	0.90	22.08	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	12858	12356	-

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.

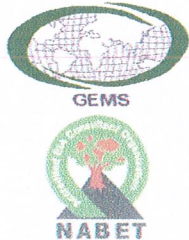
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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Website : www.globalmining.in



TC-5323

ANNEXURE-31
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: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : JULY-2024 (1st Fort Night)
- 10 Date of Sample Received : 04.07.2024 & 05.07.2024
- 11 Date of Sample Analysis : 05.07.2024 & 06.07.2024
- 12 Date Sample Analysis Completion : 05.07.2024 & 06.07.2024
- 13 Report Issued Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001141F

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	04.07.2024	1999	---	29	35	5.52	6.5	0.5	24.27	50
4	Lime & Bentonite Powder bin top bag filter	04.07.2024	2000	---	30	36	5.76	6	0.35	26.02	50
5	AGB De dusting Bag Filter	-	-	---	-	-	-	6	0.6	-	50
6	Powder Coal main bag filter	-	-	---	-	-	-	6	0.6	-	50
7	RP-6 Conveyor bag Filter	-	-	---	-	-	-	6	0.3	-	50
8	Pellet discharge bin bag filter	05.07.2024	2023	---	28	42	5.77	20	0.5	31.98	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 bag filter	-	-	-
7	RP-6 Conveyor bag Filter	-	-	-
8	Pellet discharge bin bag filter	4077	3835	-

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
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:

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ANNEXURE-32
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: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Month of Sampling	: JULY-2024 (1st Fort Night)
10	Date of Sample Received	: 15.07.2024, 06.07.2024, 08.07.2024 & 09.07.2024
11	Date of Sample Analysis	: 16.07.2024, 08.07.2024, 09.07.2024 & 10.07.2024
12	Date Sample Analysis Completion	: 16.07.2024, 08.07.2024, 09.07.2024 & 10.07.2024
13	Report Issued Date	: 02.08.2024
14	Report Number	: ULR-TC532324000001333F

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	15.07.2024	2286	---	28	37	6.03	30	1.2	29.75	50
10	Cooler Discharge -2	06.07.2024	2024	---	29	36	5.98	30	1.2	30.16	50
11	Coal stock house	06.07.2024	2046	---	29	35	5.25	30	1.2	11.38	50
12	PSB 1 System-1	06.07.2024	2047	---	28	37	5.69	30	1.2	28.13	50
13	PSB 1 System-2	08.07.2024	2084	---	29	37	5.92	30	1.2	33.56	50
14	PSB 2 System-1 MCC	08.07.2024	2085	---	29	38	5.78	30	1.2	29.15	50
15	PSB 1 System-2 Road	09.07.2024	2118	---	27	36	5.50	30	1.2	31.99	50
16	Junction House Old & New	09.07.2024	2119	---	28	38	5.88	30	1.2	36.42	50
17	Storage Bunker	09.07.2024	2120	---	29	38	5.95	30	1.2	28.49	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	24568	23474	-
10	Cooler Discharge -2	24358	23345	-
11	Coal stock house	21361	20540	-
12	PSB 1 System-1	23186	22139	-
13	PSB 1 System-2	24096	23017	-
14	PSB 2 System-1 MCC	20115	19353	-
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
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:

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TC-5323

ANNEXURE-33
GEMS-LD/TF/10/01

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: 28.03.2024
Calibration Due Date: 27.03.2025
- Discipline : Chemical
- Group : Atmospheric Pollution
- Sample Type : Stack Monitoring
- Month of Sampling : JULY-2024 (1st Fort Night)
- Date of Sample Received : 09.07.2024 & 10.07.2024
- Date of Sample Analysis : 10.07.2024 & 11.07.2024
- Date Sample Analysis Completion : 10.07.2024 & 11.07.2024
- Report Issued Date : 02.08.2024
- Report Number : ULR-TC532324000001217F

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	09.07.2024	2121	---	30	37	5.66	30	1.2	31.49	50
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House (Stand By)	10.07.2024	2151	---	27	37	5.29	30	1.2	35.46	50
21	DE 8 & 12 I-Bin, (Stand By)	10.07.2024	2152	---	28	38	6.04	30	1.9	32.66	50
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	10.07.2024	2153	---	29	36	5.73	30	1.9	34.96	50
23	Coal Dryer	10.07.2024	2154	---	29	39	6.16	27	1.2	37.06	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	-

INFERENCE: The Measured Values are within the limits.

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

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ANNEXURE-34
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: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Month of Sampling	: JULY-2024 (2 nd Fort Night)
10	Date of Sample Received	: 27.07.2024
11	Date of Sample Analysis	: 29.07.2024
12	Date Sample Analysis Completion	: 29.07.2024
13	Report Issued Date	: 02.08.2024
14	Report Number	: ULR-TC532324000001518F

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	-	-	---	-	-	-	-	-	-	50
2	Iron Ore Screening	27.07.2024	2621	---	28	36	5.50	30	0.90	18.01	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	12600	12060	-

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
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:

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TC-5323

ANNEXURE-35
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: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Month of Sampling	: JULY-2024 (2nd Fort Night)
10	Date of Sample Received	: 16.07.2024 & 17.07.2024
11	Date of Sample Analysis	: 17.07.2024 & 18.07.2024
12	Date Sample Analysis Completion	: 17.07.2024 & 18.07.2024
13	Report Issued Date	: 02.08.2024
14	Report Number	: ULR-TC532324000001346F

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	16.07.2024	2314	---	28	35	5.39	6.5	0.5	27.41	50
4	Lime & Bentonite Powder bin top bag filter	16.07.2024	2315	---	28	36	5.91	6	0.35	29.58	50
5	AGB De dusting Bag Filter	-	-	---	-	-	-	6	0.6	-	50
6	Powder Coal main bag filter	-	-	---	-	-	-	6	0.6	-	50
7	RP-6 Conveyor bag Filter	-	-	---	-	-	-	6	0.3	-	50
8	Pellet discharge bin bag filter	17.07.2024	2338	---	28	40	5.61	20	0.5	34.18	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 bag filter	-	-	-
7	RP-6 Conveyor bag Filter	-	-	-
8	Pellet discharge bin bag filter	3969	3751	-

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
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:

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TC-5323

ANNEXURE-36
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: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Month of Sampling	: JULY-2024 (2 nd Fort Night)
10	Date of Sample Received	: 19.07.2024, 20.07.2024, 22.07.2024, & 23.07.2024
11	Date of Sample Analysis	: 20.07.2024, 22.07.2024, 23.07.2024, & 24.07.2024
12	Date Sample Analysis Completion	: 20.07.2024, 22.07.2024, 23.07.2024, & 24.07.2024
13	Report Issued Date	: 02.08.2024
14	Report Number	: ULR-TC532324000001382F

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	19.07.2024	2395	Coal	27	36	5.74	30	1.2	30.24	50
10	Cooler Discharge -2	20.07.2024	2422	Coal	27	34	5.82	30	1.2	32.74	50
11	Coal stock house	20.07.2024	2423	Coal	27	35	5.03	30	1.2	14.89	50
12	PSB 1 System-1	22.07.2024	2459	Coal	27	36	5.65	30	1.2	35.37	50
13	PSB 1 System-2	22.07.2024	2460	Coal	28	37	5.84	30	1.2	32.52	50
14	PSB 2 System-1 MCC	22.07.2024	2461	Coal	29	38	5.64	30	1.2	36.25	50
15	PSB 1 System-2 Road	22.07.2024	2462	Coal	29	38	5.30	30	1.2	34.75	50
16	Junction House Old & New	23.07.2024	2492	Coal	27	38	5.69	30	1.2	36.84	50
17	Storage Bunker	23.07.2024	2493	Coal	28	36	6.06	30	1.2	32.09	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	23360	22330	-
10	Cooler Discharge -2	23691	22833	-
11	Coal stock house	20484	19665	-
12	PSB 1 System-1	22988	22088	-
13	PSB 1 System-2	23762	22764	-
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.

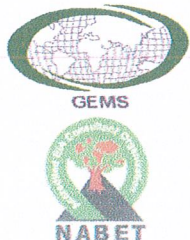
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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TC-5323

ANNEXURE-37
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: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : JULY-2024 (2nd Fort Night)
- 10 Date of Sample Received : 23.07.2024 & 24.07.2024
- 11 Date of Sample Analysis : 24.07.2024 & 25.07.2024
- 12 Date Sample Analysis Completion : 24.07.2024 & 25.07.2024
- 13 Report Issued Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001441F

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	23.07.2024	2494	---	27	37	5.42	30	1.20	27.31	50
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House (Stand By)	23.07.2024	2495	---	28	38	5.52	30	1.20	34.07	50
21	DE 8 & 12 I-Bin, (Stand By)	24.07.2024	2532	---	27	35	6.15	30	1.90	35.50	50
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	24.07.2024	2533	---	28	37	5.78	30	1.90	30.0	50
23	Coal Dryer	24.07.2024	2534	---	28	39	6.10	30	1.20	36.12	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.

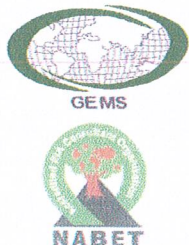
Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

ANNEXURE-38
GEMS-LD/TF/08/01

NOISE LEVEL MONITORING REPORT

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference : WO/ADMIN/FY24/R018 - 450000125
Sample collected by : Global Environment & Mining Services
Discipline : Chemical
Group : Atmospheric Pollution
Sample Type : Noise Level Monitoring
Particulars of Sample Collected : Lutron: SL- 4023SD
Sl. No: Q679952
Instrument Details : Calibration Date: 02.11.2023
Due Calibration: 01.11.2024
Month : JULY-2024
Report Issue Date : 02.08.2024
Method Adopted : IS 9989-1981 Reaffirmed 2014
Report No : ULR-TC532324000001106F

Sl. No	Location	Date of Monitoring	Noise Level dB (A)		
			Day Time		Standard
			Min	Max	
1	Main Gate	02.07.2024	51.2	58.2	75
2	Near ATM	02.07.2024	46.8	56.4	75
3	Transit House	03.07.2024	52.4	66.2	75
4	CAAQMS Station	03.07.2024	49.2	53.8	75
5	Gunda Road	04.07.2024	50.2	66.2	75
6	Gunda Railway Station	04.07.2024	62.8	72.8	75
7	Bagging Shed	05.07.2024	56.2	68.6	75
8	Railway Siding	05.07.2024	60.2	70.4	75
9	4th Gate	06.07.2024	52.8	58.2	75
10	Bricks Plant	06.07.2024	48.2	60.4	75
11	Kempuhalla (Wagon Tippler)	08.07.2024	48.6	58.2	75
12	Danapura Bridge	08.07.2024	56.2	64.8	75
13	2nd Gate	09.07.2024	46.6	56.8	75
14	Project Store	09.07.2024	44.8	51.2	75
15	Dispatch (Truck Parking Area)	10.07.2024	61.2	70.2	75

Note : Each Location above the Noise Level taken Readings 15 Minutes.

INFERENCE

As per CPCB Standards,

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

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.
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TC-5323

ANNEXURE-39
GEMS-LD/TF/08/01

NOISE LEVEL MONITORING REPORT

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference : WO/ADMIN/FY24/R018 - 450000125
Sample collected by : Global Environment & Mining Services
Discipline : Chemical
Group : Atmospheric Pollution
Sample Type : Noise Level Monitoring
Particulars of Sample Collected : Lutron: SL- 4023SD
Sl. No: Q679952
Instrument Details : Calibration Date: 02.11.2023
Due Calibration: 01.11.2024
Month : JULY-2024
Report Issue Date : 02.08.2024
Method Adopted : IS 9989-1981 Reaffirmed 2014
Report No : ULR-TC532324000001348F

Sl. No	Location	Date of Monitoring	Noise Level dB (A)		
			Day Time		Standard
			Min	Max	
1	Main Gate	16.07.2024	48.0	54.6	75
2	Near ATM	16.07.2024	50.2	57.8	75
3	Transit House	17.07.2024	53.1	65.1	75
4	CAAQMS Station	17.07.2024	48.6	55.0	75
5	Gunda Road	18.07.2024	59.1	65.6	75
6	Gunda Railway Station	18.07.2024	63.4	72.8	75
7	Bagging Shed	19.07.2024	52.2	58.6	75
8	Railway Siding	19.07.2024	56.8	71.8	75
9	4th Gate	20.07.2024	49.6	56.8	75
10	Bricks Plant	20.07.2024	58.2	66.4	75
11	Kempuhalla (Wagon Tippler)	22.07.2024	51.6	58.1	75
12	Danapura Bridge	22.07.2024	58.2	65.6	75
13	2nd Gate	23.07.2024	50.1	59.4	75
14	Project Store	23.07.2024	46.7	54.6	75
15	Dispatch (Truck Parking Area)	24.07.2024	62.4	71.8	75

Note : Each Location above the Noise Level taken Readings 15 Minutes.

INFERENCE

As per CPCB Standards,

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

[Signature]
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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TC-5323

ANNEXURE-40
GEMS-LD/TF/08/01

AMBIENT NOISE LEVEL MONITORING REPORT

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference : WO/ADMIN/FY24/R018 - 450000125
Sample collected by : Global Environment & Mining Services
Discipline : Chemical
Group : Atmospheric Pollution
Sample Type : Noise Level Monitoring
Particulars of Sample Collected : Lutron: SL- 4023SD
Sl. No: Q679953
Instrument Details : Calibration Date: 02.11.2023
Due Calibration: 01.11.2024
Month : JULY-2024
Report Issue Date : 02.08.2024
Method Adopted : IS 9989-1981 Reaffirmed 2014
Report No : ULR-TC53232400001110F

Sl. No	Location	Date of Monitoring	Noise Level dB (A)							
			Day Time			Standard	Night Time			Standard
			Min	Max	Avg		Min	Max	Avg	
1	Danapur Village	02.07.2024	48.2	53.8	51.86	55	39.2	42.6	40.02	45
2	Mariyammana Halli	03.07.2024	46.6	54.1	53.12		38.4	43.2	40.48	
3	Hanumana Halli	02.07.2024	45.8	53.6	51.74		39.6	43.6	40.64	
4	Galemmanagudi	04.07.2024	46.6	53.2	51.12		40.2	44.1	42.38	
5	G.Nagalapura Village	04.07.2024	45.2	52.8	50.86		38.2	41.6	39.22	
6	Gunda Tanda Village	05.07.2024	43.6	52.6	50.01		38.1	40.9	38.28	

Note: Each Location above the Noise Level taken Readings 15 Minutes.

INFERENCE

As per CPCB Standards,

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

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

NOISE: (AMBIENT STANDARDS)

Area code	Category of Area	Limit in dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Area	50	40

Note:

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TC-5323

ANNEXURE-41
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 2247
10	Date of Sampling	: 13.07.2024
11	Sample Received	: 13.07.2024
12	Date of Analysis	: 15.07.2024
13	Date of Analysis Completion	: 20.07.2024
14	Report Issue Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001301F

Results

Sl. No.	Parameters	Protocol	Unit	Danapur Village (GW1)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.14	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	2780	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1668	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.3	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	352.61	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	275.5	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	164.9	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	40.32	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	578.2	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	419.32	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.89	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	17.28	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	561.0	200	600

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ANNEXURE-41

17.	Acidity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23 rd Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.15	0.30	NR
19.	Nickel as Ni	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<1.0	5	15
23.	Lead as Pb	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 rd Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23 rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR

Note: GW1: Danapur Village. NR-No relaxation.

INFERENCE	As per Standards IS: 10500:2012 Report Status: - Measured Values for the above parameters are within the limits.
------------------	-----------------------------------------------------------------------------------------------------------------------------------

Analysed By
Priyanka B M
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.
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ANNEXURE-41
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

- 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 : Grab Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical/Biological
- 7 Group : Pollution & Environment
- 8 Sample Type : Ground Water
- 9 Sample Code : 2247
- 10 Date of Sampling : 13.07.2024
- 11 Sample Received : 13.07.2024
- 12 Date of Analysis : 15.07.2024
- 13 Date of Analysis Completion : 20.07.2024
- 14 Report Issue Date : 02.08.2024
15. Report Number : GEMS/WATER/2024-2025/1301

Results

Sl. No	Parameters	Protocol	Unit	Danapur Village (GW1)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Color	APHA-23RD Edition-2120 C (Pg No. 2 -7 to 2-8)	Hazen	<5	5	15
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
3.	Total Coli form count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

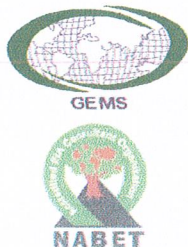
Note: Ab: Absent, NR: No Relaxation

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

ANNEXURE-42 GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

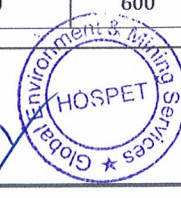
1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 2249
10	Date of Sampling	: 13.07.2024
11	Sample Received	: 13.07.2024
12	Date of Analysis	: 15.07.2024
13	Date of Analysis Completion	: 20.07.2024
14	Report Issue Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001303F

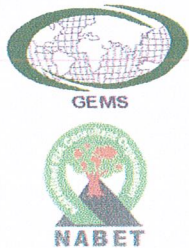
Results

Sl. No	Parameters	Protocol	Unit	Hanumanahalli Village (GW2)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.38	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	3450	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	2070	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.3	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	362.61	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	445.0	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	141.37	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	57.0	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	588.0	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl-	mg/L	663.55	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	1.41	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	18.69	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	594.0	200	600

Note:

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ANNEXURE-42

17.	Acidity as CaCO ₃	APHA 22nd Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23rd Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.18	0.30	NR
19.	Nickel as Ni	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<1.0	5	15
23.	Lead as Pb	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23rd Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR

Note: GW2: Hanumanahalli Village. NR-No relaxation.

INFERENCE

As per Standards IS: 10500:2012

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

Analysed By
Priyanka B M
 Chemist

Authorised Signatory
K. Ramakrishna Reddy
 Technical Manager



Note:

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ANNEXURE-42
GEMS-LD/TF/23/01


Analysis Report of Water Quality Data


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	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical/Biological
7	Group	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 2249
10	Date of Sampling	: 13.07.2024
11	Sample Received	: 13.07.2024
12	Date of Analysis	: 15.07.2024
13	Date of Analysis Completion	: 20.07.2024
14	Report Issue Date	: 02.08.2024
15	Report Number	: GEMS/WATER/2024-2025/1303

Results

Sl. No	Parameters	Protocol	Unit	Hanumanahalli Village (GW2)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Color	APHA-23RD Edition-2120 C (Pg No. 2 -7 to 2-8)	Hazen	<5	5	15
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
3.	Total Coli form count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation


Analysed By
Priyanka B M
Chemist


Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

ANNEXURE-43
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

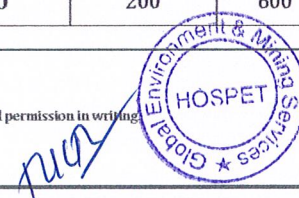
1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 2250
10	Date of Sampling	: 13.07.2024
11	Sample Received	: 13.07.2024
12	Date of Analysis	: 15.07.2024
13	Date of Analysis Completion	: 20.07.2024
14	Report Issue Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001304F

Results

Sl. No	Parameters	Protocol	Unit	Galemmana Gudi Village (GW3)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.51	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	2800	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1680	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.2	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	272.48	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	183.4	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	149.22	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	54.61	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	597.8	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	589.82	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	1.27	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	20.28	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	572.0	200	600

Note:

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TC-5323

ANNEXURE-43

17.	Acidity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23 rd Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.19	0.30	NR
19.	Nickel as Ni	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<1.0	5	15
23.	Lead as Pb	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 rd Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23 rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR

Note: GW3: Galemmana Gudi Village. NR-No relaxation.

INFERENCE

As per Standards IS: 10500:2012

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

Priyanka B M
Analysed By
Priyanka B M
 Chemist

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



Note:

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ANNEXURE-43
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

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	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical/Biological
7	Group	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 2250
10	Date of Sampling	: 13.07.2024
11	Sample Received	: 13.07.2024
12	Date of Analysis	: 15.07.2024
13	Date of Analysis Completion	: 20.07.2024
14	Report Issue Date	: 02.08.2024
15.	Report Number	: GEMS/WATER/2024-2025/1304

Results

Sl. No	Parameters	Protocol	Unit	Galemmana Gudi Village (GW3)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Color	APHA-23RD Edition-2120 C (Pg No. 2 -7 to 2-8)	Hazen	<5	5	15
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
3.	Total Coli form count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

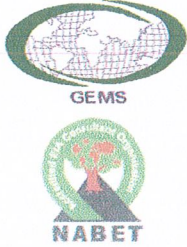
Note: Ab: Absent, NR: No Relaxation

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

ANNEXURE-44
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 2248
10	Date of Sampling	: 13.07.2024
11	Sample Received	: 13.07.2024
12	Date of Analysis	: 15.07.2024
13	Date of Analysis Completion	: 20.07.2024
14	Report Issue Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001302F

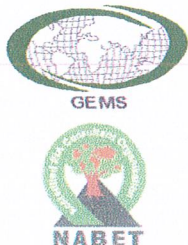
Results

Sl. No	Parameters	Protocol	Unit	Mariyammana Halli Village (GW4)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.09	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	2900	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1740	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.2	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	320.77	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	305.35	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	137.23	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	54.75	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	568.4	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	506.88	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.87	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	18.26	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	594.0	200	600

Note:

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TC-5323

ANNEXURE-44

17.	Acidity as CaCO ₃	APHA 22nd Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23rd Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.16	0.30	NR
19.	Nickel as Ni	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<1.0	5	15
23.	Lead as Pb	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 rd Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR

Note: GW4: Mariyammanahalli Village. NR-No relaxation

INFERENCE	As per Standards IS: 10500:2012 Report Status: - Measured Values for the above parameters are within the limit.
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Analysed By
Priyanka B M
 Chemist

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 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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ANNEXURE-44
GEMS-LD/TF/23/01


Analysis Report of Water Quality Data

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	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical/Biological
7	Group	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 2248
10	Date of Sampling	: 13.07.2024
11	Sample Received	: 13.07.2024
12	Date of Analysis	: 15.07.2024
13	Date of Analysis Completion	: 20.07.2024
14	Report Issue Date	: 02.08.2024
15	Report Number	: GEMS/WATER/2024-2025/1302

Results

Sl. No	Parameters	Protocol	Unit	Mariyammana Halli Village (GW4)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Color	APHA-23RD Edition-2120 C (Pg No. 2 -7 to 2-8)	Hazen	<5	5	15
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
3.	Total Coli form count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation


Analysed By
Priyanka B M
Chemist


Authorised Signatory
K. Ramakrishna Reddy
Technical Manager


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ANNEXURE-45
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

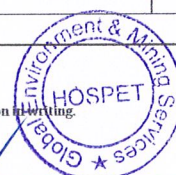
1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 2251
10	Date of Sampling	: 13.07.2024
11	Sample Received	: 13.07.2024
12	Date of Analysis	: 15.07.2024
13	Date of Analysis Completion	: 20.07.2024
14	Report Issue Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001305F

Results

Sl. No	Parameters	Protocol	Unit	Gunda Thanda (GW5)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.32	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	1060	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	636	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.3	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	132.63	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	72.86	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	62.73	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	28.57	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	274.4	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	103.7	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.82	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	15.62	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	341.0	200	600

Note:

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TC-5323

ANNEXURE-45

17.	Acidity as CaCO ₃	APHA 22nd Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23rd Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.15	0.30	NR
19.	Nickel as Ni	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.220	0.05	1.50
22.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.109	5	15
23.	Lead as Pb	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 rd Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR

Note: GW5: Gunda Thanda. NR-No relaxation.

INFERENCE

As per Standards IS: 10500:2012

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

Analysed By
Priyanka B M
 Chemist

Authorised Signatory
K. Ramakrishna Reddy
 Technical Manager



Note:

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ANNEXURE-45
GEMS-LD/TF/23/01


Analysis Report of Water Quality Data

- 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 : Grab Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical/Biological
- 7 Group : Pollution & Environment
- 8 Sample Type : Ground Water
- 9 Sample Code : 2251
- 10 Date of Sampling : 13.07.2024
- 11 Sample Received : 13.07.2024
- 12 Date of Analysis : 15.07.2024
- 13 Date of Analysis Completion : 20.07.2024
- 14 Report Issue Date : 02.08.2024
15. Report Number : GEMS/WATER/2024-2025/1305

Results

Sl. No	Parameters	Protocol	Unit	Gunda Thanda (GW5)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Color	APHA-23RD Edition-2120 C (Pg No. 2 -7 to 2-8)	Hazen	<5	5	15
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
3.	Total Coli form count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation


Analysed By
 Priyanka B M
 Chemist


Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



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TC-5323

ANNEXURE-46
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 2252
10	Date of Sampling	: 13.07.2024
11	Sample Received	: 13.07.2024
12	Date of Analysis	: 15.07.2024
13	Date of Analysis Completion	: 20.07.2024
14	Report Issue Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001306F

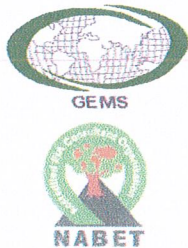
Results

Sl. No	Parameters	Protocol	Unit	G.Naglapura (GW6)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.76	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	1120	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	672	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.2	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	48.26	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	113.95	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	66.75	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	33.27	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	303.8	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	101.37	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.92	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	14.68	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	451.0	200	600

Note:

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TC-5323

ANNEXURE-46

17.	Acidity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23 rd Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.12	0.30	NR
19.	Nickel as Ni	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.175	0.05	1.50
22.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.099	5	15
23.	Lead as Pb	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 rd Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23 rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR

Note: GW6: G.Nagalapura. NR-No relaxation.

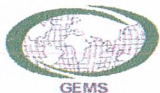
INFERENCE	As per Standards IS: 10500:2012 Report Status: - Measured Values for the above parameters are within the limit.
------------------	----------------------------------------------------------------------------------------------------------------------------------

Analysed By
Priyanka B M
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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ANNEXURE-46
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

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	:	Grab Sampling
5	Sampling Procedure	:	GEMS-LD/SOP/32
6	Discipline	:	Chemical/Biological
7	Group	:	Pollution & Environment
8	Sample Type	:	Ground Water
9	Sample Code	:	2252
10	Date of Sampling	:	13.07.2024
11	Sample Received	:	13.07.2024
12	Date of Analysis	:	15.07.2024
13	Date of Analysis Completion	:	20.07.2024
14	Report Issue Date	:	02.08.2024
15.	Report Number	:	GEMS/WATER/2024-2025/1306

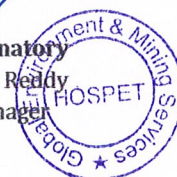
Results

Sl. No	Parameters	Protocol	Unit	G. Naglapura (GW6)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Color	APHA-23RD Edition-2120 C (Pg No. 2 -7 to 2-8)	Hazen	<5	5	15
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
3.	Total Coli form count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

ANNEXURE-47
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: RO Drinking Water
9	Sample Code	: 2253
10	Date of Sampling	: 13.07.2024
11	Sample Received	: 13.07.2024
12	Date of Analysis	: 15.07.2024
13	Date of Analysis Completion	: 20.07.2024
14	Report Issue Date	: 02.08.2024
15	Report Number	: ULR-TC532324000001307F

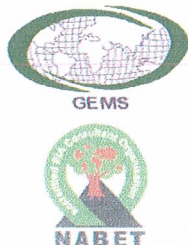
Results

Sl. No	Parameters	Protocol	Unit	RO Drinking Water	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.87	6.5 to 8.5	NR
2.	Conductivity	APHA 23rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	160	-	-
3.	Total Dissolved Solids	APHA 23rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	96	500	2000
4.	Turbidity (NTU)	APHA 23rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.0	1	5
5.	Total Suspended Solids	APHA 23rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	15.81	200	400
7.	Phosphorus as P	APHA 23rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	0.00	-	-
9.	Potassium as K	APHA 23rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.00	-	-
10.	Calcium as Ca	APHA 23rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	11.78	75	200
11.	Magnesium as Mg	APHA 23rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	4.75	30	100
12.	Total Hardness as CaCO ₃	APHA 23rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	49.0	200	600
13.	Chloride as Cl	APHA 23rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	32.25	250	1000
14.	Fluoride as F	APHA 23rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.47	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	2.26	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	44.0	200	600

Note:

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17.	Acidity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23 rd Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.09	0.30	NR
19.	Nickel as Ni	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	5	15
23.	Lead as Pb	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 rd Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23 rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR
26.	Mercury as Hg	APHA 23 rd Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.001	0.001	NR

Note: W6: RO Drinking Water. NR-No relaxation. Ab-Absent.

INFERENCE

As per Standards IS: 10500:2012

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

Priyanka B M
Analysed By
Priyanka B M
 Chemist

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



Note:

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ANNEXURE-47
GEMS-LD/TF/23/01


Analysis Report of Water Quality Data

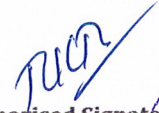
- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Grab Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical/Biological
- 7 Group : Pollution & Environment
- 8 Sample Type : RO Drinking Water
- 9 Sample Code : 2253
- 10 Date of Sampling : 13.07.2024
- 11 Sample Received : 13.07.2024
- 12 Date of Analysis : 15.07.2024
- 13 Date of Analysis Completion : 20.07.2024
- 14 Report Issue Date : 02.08.2024
15. Report Number : GEMS/RO/2024-2025/1307

Results

Sl. No	Parameters	Protocol	Unit	RO Drinking Water	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	colour	IS: 3025 (PART 4)- 1984, RA-2012 Platinum cobalt Method	Hazen	<5	5	15
2.	Odour	IS: 3025 (PART 5)- 1983, RA-2012, True Odour	-	Agreeable	Agreeable	Agreeable
3.	Total Residual chlorine	IS:3025 (part 26)-1986, RA-2003, Iodometric method	mg/L	Nil	0.2	1.0
4.	Oil & Grease	Clause 6 of IS 3025 (Part 39) Infrared	mg/L	Nil	0.5	No Relaxation
5.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
6.	Selenium as Se	APHA 23 rd Edition 3114 B. Direct Air Acetylene Flame Method	mg/L	BDL	0.01	No Relaxation
7.	Cyanides (as CN)	APHA 23 rd Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	BDL	0.05	No Relaxation
8.	Phenolic Compound as phenols	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	1.0	-
9.	Anionic detergents (as MBAS)	APHA 23 rd Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	0.2	1.0
10.	Boron as B	APHA 23 rd Edition 2017 4500 B-B (p.no.4-25 to 4-26)	mg/L	BDL	0.5	1.0
11.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

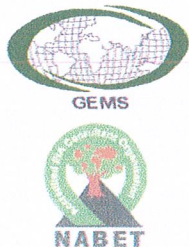
Note: Ab: Absent, NR: No Relaxation,


Analysed By
 Priyanka B M
 Chemist


Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



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Website : www.globalmining.in



TC-5323

ANNEXURE-48
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Pollution & Environment
- 8 Sample Type : Sewage Treatment Plant (Outlet)
- 9 Date of Sampling : 11.07.2024
- 10 Sample Received : 12.07.2024
- 11 Date of Analysis : 12.07.2024
- 12 Date of Analysis Completion : 16.07.2024
- 13 Report Issue Date : 02.08.2024
- 14 Report Number : ULR-TC532324000001251F

Sl. No.	Parameters	Protocol	Unit	Results			As per KSPCB Std
				STP 45 KLD	STP-1 90 KLD	STP-2 90 KLD	
		Sample code	-	2184	2185	2186	
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.47	7.54	7.31	6.5 to 8.5
2.	Total Suspended Solids	APHA 23rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	10.0	6.0	8.0	<20
3.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	6.0	2.0	4.0	<10
4.	Chemical Oxygen Demand as COD	APHA 23rd Edition 2017 5220 C (Pg. No.5-18 to 5-19)	mg/L	34.27	14.11	21.2	<50
5.	Oil & Grease	APHA 23rd Edition 2017 5520 B (Pg. No.5-41 to 5-42)	mg/L	4.0	6.0	4.0	10

Note: BDL-Below detectable Limit. **INFERENCE:** The Measured values are within the Limit.

STP 45 KLD – Near Fortivia

STP-1 90 KLD –Near ISP Area

STP-2 90 KLD –Near Gunda Guest House

Analysed By
Priyanka B M
Chemist

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.
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ANNEXURE-48
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

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	:	Composite Sampling
5	Sampling Procedure	:	GEMS-LD/SOP/32
6	Discipline	:	Chemical
7	Group	:	Pollution & Environment
8	Sample Type	:	Sewage Treatment Plant (Outlet)
9	Date of Sampling	:	11.07.2024
10	Sample Received	:	12.07.2024
11	Date of Analysis	:	12.07.2024
12	Date of Analysis Completion	:	16.07.2024
13	Report Issue Date	:	02.08.2024
14.	Report Number	:	GEMS/RO/2024-2025/1251

Sl. No.	Parameters	Protocol	Unit	Results			As per KSPCB Std
				STP 45 KLD	STP-1 90 KLD	STP-2 90 KLD	
		Sample code	-	2184	2185	2186	
1.	Color	APHA 23 RD Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	4	2	4	-
2.	Odour	IS: 3025 (PART 5)- 1983, RA-2012, True Odour	-	Agree able	Agree able	Agree able	-
3.	Cyanides (as CN)	APHA 23 RD Edition 4500 CN (Pg. No.4-45 to 4-46)	mg/L	BDL	BDL	BDL	-
4.	Phenolic Compounds (as C ₆ H ₅ OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	BDL	-
5.	Chromium (as Cr ⁺⁺)	APHA-23 RD Edition-3500 Cr B (Pg. No.3-71 to 3-72)	mg/L	<0.001	<0.001	<0.001	-
6.	Ammonical nitrogen as N	IS:3025 (part 34)-1988, RA-2014, Nesslerization method	mg/L	1.14	0.72	1.12	-

Note: BDL-Below detectable Limit. INFERENCE: The Measured values are within the Limit.

STP 45 KLD – Near Fortivia

STP-1 90 KLD –Near ISP Area

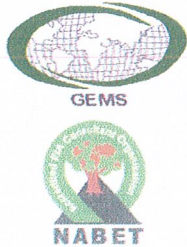
STP-2 90 KLD –Near Gunda Guest House

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

ANNEXURE-49
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Composite Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: Waste Water
9	Date of Sampling	: 13.07.2024
10	Sample Received	: 13.07.2024
11	Date of Analysis	: 15.07.2024
12	Date of Analysis Completion	: 20.07.2024
13	Report Issue Date	: 02.08.2024
14	Report Number	: ULR-TC532324000001308F

Results

Sl. No.	Parameters	Protocol	Unit	Results		As per KSPCB Std
				Neutralization Pit 70 MW Power Plant	Neutralization Pit 2x70 MW Power Plant	
		Sample Code		2254	2255	
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	8.54	8.62	6.5 to 9.0
2.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	10.0	8.0	100
3.	Chemical Oxygen Demand as COD	APHA 23 rd Edition 2017 5220 C (Pg. No.5-18 to 5-19)	mg/L	20.56	123.26	250
4.	Oil & Grease	APHA 23 rd Edition 2017 5520 B (Pg. No.5-41 to 5-42)	mg/L	4.0	6.0	10

Note: BDL-Below detectable Limit.

INFERENCE: The Measured values are within the Limit.

Analysed By
Priyanka B M
 Chemist

Authorised Signatory
K. Ramakrishna Reddy
 Technical Manager

Note:

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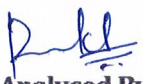
Website: www.globalmining.in


ANNEXURE-50
GEMS-LD/TF/23/01

Analysis Report of Surface Water Quality Data

- 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 : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Pollution & Environment
- 8 Sample Type : **Surface Water**
- 9 Date of Sampling : 13.07.2024
- 10 Sample Received : 13.07.2024
- 11 Date of Analysis : 15.07.2024
- 12 Date of Analysis Completion : 20.07.2024
- 13 Report Issue Date : **02.08.2024**
- 14 Report Number : **GEMS/SW/2024-2025/1310**

Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS -B
				Danayakanakere Upstream	Danayakanakere Downstream	
Sample code				2256	2257	
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.38	7.54	6.5-8.5
2.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	0.00	0.00	3.0
3.	Fluorides as F	APHA 23 RD Edition 4500F- D (Pg. No.4-90 to 4-91)	mg/L	1.01	0.77	1.5
4.	Arsenic as As	APHA-23 RD Edition-3114 –B (Pg. No.3 -36 to 3-40)	mg/L	<0.1	<0.1	0.2
5.	Dissolved Oxygen	APHA 23 RD Edition 4500 C (Pg. No.4-146)	mg/L	6.1	5.9	>5.0
6.	Color	APHA 23 RD Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	10.0	10.0	300
7.	Cyanides (as CN)	APHA 23 RD Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	BDL	BDL	0.05
8.	Phenolic Compounds (as C ₆ H ₅ OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	0.005
9.	Chromium (as Cr ⁶⁺)	APHA-23 RD Edition-3500 Cr B (Pg. No.3-71 to 3-72)	mg/L	<0.001	<0.001	1.0
10.	Anionic detergents (as MBAS)	APHA 23 RD Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	BDL	1.0
11.	Total Coliform Organisms					
	Total Coli forms	IS : 15185 : 2016	MPN/ 100 ml	Absent	Absent	500
	Escherichia coli or E. coli	IS : 15185 : 2016	MPN/ 100 ml	Absent	Absent	-


Analysed By
Priyanka B M
 Chemist


Authorised Signatory
K. Ramakrishna Reddy
 Technical Manager



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ANNEXURE-51
GEMS-LD/TF/23/01

Analysis Report of Surface Water Quality Data

- 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 : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Pollution & Environment
- 8 Sample Type : Surface Water
- 9 Date of Sampling : 13.07.2024
- 10 Sample Received : 13.07.2024
- 11 Date of Analysis : 15.07.2024
- 12 Date of Analysis Completion : 20.07.2024
- 13 Report Issue Date : 02.08.2024
14. Report Number : GEMS/SW/2024-2025/1312

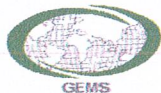
Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS -B
				KempuHalla Upstream	KempuHalla Downstream	
		Sample code		2258	2259	
1.	pH	APHA 23 rd Edition 2017 4500 H ⁺ B (Pg. No.4-95 to 4-99)	-	7.92	7.83	6.5-8.5
2.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	2.0	2.0	3.0
3.	Fluorides as F	APHA 23 rd Edition 4500F- D (Pg. No.4-90 to 4-91)	mg/L	1.12	1.20	1.5
4.	Arsenic as As	APHA-23 rd Edition-3114 -B (Pg. No.3 -36 to 3-40)	mg/L	<0.1	<0.1	0.2
5.	Dissolved Oxygen	APHA 23 rd Edition 4500 C (Pg. No.4-146)	mg/L	6.2	5.4	>5.0
6.	Color	APHA 23 rd Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	15	15	300
7.	Cyanides (as CN)	APHA 23 rd Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	BDL	BDL	0.05
8.	Phenolic Compounds (as C ₆ H ₅ OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	0.005
9.	Chromium (as Cr ⁶⁺)	APHA-23 rd Edition-3500 Cr B (Pg. No.3-71 to 3-72)	mg/L	<0.001	<0.001	1.0
10.	Anionic detergents (as MBAS)	APHA 23 rd Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	BDL	1.0
11.	Total Coliform Organisms,					
	Total Coli forms	IS : 15185 : 2016	MPN/ 100 ml	Absent	Absent	500
	Escherichia coli or E. coli	IS : 15185 : 2016	MPN/ 100 ml	Absent	Absent	-

Priyanka B M
Analysed By
Priyanka B M
 Chemist

K. Ramakrishna Reddy
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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ANNEXURE-52
GEMS-LD/TF/23/01


Analysis Report of Surface Water Quality Data


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	:	Composite Sampling
5	Sampling Procedure	:	GEMS-LD/SOP/32
6	Discipline	:	Chemical/Biological
7	Group	:	Pollution & Environment
8	Sample Type	:	Surface Water
9	Date of Sampling	:	13.07.2024
10	Sample Received	:	13.07.2024
11	Date of Analysis	:	15.07.2024
12	Date of Analysis Completion	:	20.07.2024
13	Report Issue Date	:	02.08.2024
14	Report Number	:	GEMS/SW/2024-2025/1314

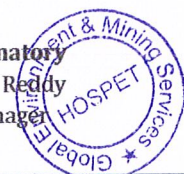
Sl. No.	Parameters	Protocol	Unit	Results	IS 2296 -1982 CLASS -B
				Tungabhadra dam	
Sample Code				2260	
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.67	6.5-8.5
2.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	2.0	3.0
3.	Fluorides as F	APHA 23 RD Edition 4500F-D (Pg. No.4-90 to 4-91)	mg/L	0.00	1.5
4.	Arsenic as As	APHA-23 RD Edition-3114 –B (Pg. No.3 -36 to 3-40)	mg/L	<0.1	0.2
5.	Dissolved Oxygen	APHA 23 RD Edition 4500 C (Pg. No.4-146)	mg/L	5.6	>5.0
6.	Color	APHA 23 RD Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	10	300
7.	Cyanides (as CN)	APHA 23 RD Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	BDL	0.05
8.	Phenolic Compounds (as C ₆ H ₅ OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	0.005
9.	Chromium (as Cr ⁶⁺)	APHA-23 RD Edition-3500 Cr B (Pg. No.3-71 to 3-72)	mg/L	BDL	1.0
10.	Anionic detergents (as MBAS)	APHA 23 RD Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	1.0
11.	Total Coliform Organisms,				
	Total Coli forms	IS : 15185 : 2016	MPN/100 ml	Absent	500
	Escherichia coli or E. coli	IS : 15185 : 2016	MPN/100 ml	Absent	-

Note: BDL-Below detectable Limit

INFERENCE: The measured values are within the Limit.


Analysed By
 Priyanka B M
 Chemist


Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



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