



BMM Ispat Ltd.,

ENVIRONMENTAL MONITORING REPORT



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

STAGE-II

DECEMBER-2021

Prepared by



GLOBAL ENVIRONMENT & MINING SERVICES

NABL & MOEFCC Recognized Laboratory

(Consulting Engineers, Mine Designers, Geologists & Surveyors)
3rd main road, Basaveswara badavane

HOSAPETE – 583201, Dist., Vijayanagara (Karnataka)

Tel : 08394 229433 & 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in

PREFACE

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

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

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

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

for GLOBAL Environment & Mining Services

Place: Hosapete
Date: 05.01.2022


K. Ramakrishna Reddy
(Technical Manager)



1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

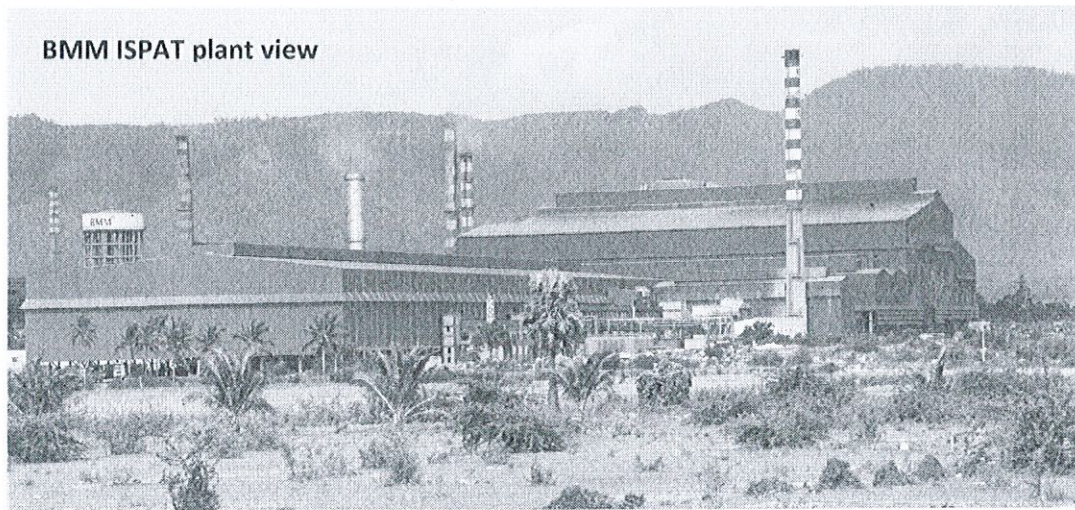
The journey of the BMM Group is a reflection of the path tread by every entrepreneur who believes in the human potential and one's own ability to bring about a life affirming change that transcends time. BMM Group was born out of this committed belief of Late Shri Udaichand Singhi.

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

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

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

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



1.2 PROMOTERS OF THE PROJECT

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

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

BMM ISPAT LIMITED
(Registered Office & Works)
#114, Danapur
Hosapete - 583 222
Bellary Dist., Karnataka
Phone +91 08394-264000, +91 9686550808/09
Fax - 08394 264010

1.3 Site Location

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

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

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

Out of the above units, presently **4 x 500 TPD Sponge Iron Plants** and **1X70 MW Thermal Power Plants** have been commissioned on August 2011. Beneficiation plant-2, Pellet Plant-2 are commissioned on March 2012. 2X70 MW Thermal based power plants have commissioned on Jan 2013, EAF, Steel Making Shop, CCM, Rolling Mill, Oxygen plants are commissioned on August 2015. Remaining units are under various stages of implementation. Hence environmental pollution monitoring is being carried out for 4 x 500 TPD sponge iron plants, 1X70 MW Thermal Power Plant, 1.3MTPA Beneficiation, 1.2MTPA Pellet Plant, 2X70MW Power plant, SMS, and RML.

1.4 The report includes environmental monitoring data collected at above site for the month of **DECEMBER-2021**. The Parameters monitored are:

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

2.0 SCOPE AND METHODOLOGY

2.1 PREAMBLE

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

2.2 AMBIENT AIR QUALITY

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

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

Purpose

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

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

Principle of the method

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

Sampling

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

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

Analysis

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

2.2.2 **Particulate Matter (PM_{2.5}) (size less than 2.5µm).**

Purpose

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

Reference Method: USEPA 2001 Method of Measurement of Air Pollution:
Particulate Matter (PM_{2.5}) cyclonic flow technique.

Principle

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

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

2.2.3 Sulphur Dioxide (SO₂).

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

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

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

Sampling

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

Analysis

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

2.2.4 Nitrogen Di Oxide (NO₂):

Purpose

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

Principle of the method

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

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

2.2.5 Ozone (Chemical method)

Purpose

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

Principle of the method

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

Sampling

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

Analysis

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

2.2.6 Ammonia (NH₃)

Purpose

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

Principle of the method

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

Sampling

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

Analysis

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

2.2.7 Benzo(a)Pyrene

Purpose

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

Principle of the Method

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

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

Sampling

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

Sample Processing

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

Filtration

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

Sample injection

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

2.2.8 Benzene

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

Principle of the Method

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

Gas Chromatograph

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

Sampling

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

Analytical Procedure

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

2.2.9 Carbon Monoxide (CO)

Principle:

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

Non dispersive Infrared (NDIR) Gas Analyser

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

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

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

Purpose

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

Principle of the method

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

Sampling procedure

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

of sampling, record the flow meter reading and take out the filter media from the sampler and put in a container or envelope.

3.0 Fugitive Emission Monitoring

Fugitive air quality was monitored 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.

5.0 Data Analysis

5.1 BUFFERZONE AMBIENT AIR QUALITY STATUS

Ambient air Quality Monitoring was monitored 6 villages samples were collected from the analyzed for as per NAAQ Standards weekly twice Sampling PM10, PM2.5, SO2, NO2.

Danapur Village (A1)

At this location, average of PM10, PM2.5, SO2, NO2 values Average 66.68, 18.44, 9.84 & 12.98 $\mu\text{g}/\text{m}^3$ respectively. All above the values were found within the Limits. And the results given in **Annexure-1**.

Mariyammanahalli Village (A2)

At this location, average of PM10, PM2.5, SO2, NO2 values Average 61.09, 16.81, 9.66 & 12.89 $\mu\text{g}/\text{m}^3$ respectively. All above the values were found within the Limits. And the results given in **Annexure-2**.

Hanumanahalli Village (A3)

At this location, average of PM10, PM2.5, SO2, NO2 values Average 70.49, 20.54, 9.79 & 13.03 $\mu\text{g}/\text{m}^3$ respectively. All above the values were found within the Limits. Results given in **Annexure-3**.

Galemmanagudi Village (A4)

At this location, average of PM10, PM2.5, SO2, NO2 values Average 65.40, 17.12, 10.11 & 13.28 $\mu\text{g}/\text{m}^3$ respectively. All above the values were found within the Limits. Results given in **Annexure-4**.

Gunda Village (A5)

At this location, average of PM10, PM2.5, SO2, NO2 values Average 51.37, 13.65, 7.93 & 10.10 $\mu\text{g}/\text{m}^3$ respectively. All above the values were found within the Limits. Results given in **Annexure-5**.

Gunda Tanda Village (A6)

At this location, average of PM10, PM2.5, SO2, NO2 values Average 47.53, 12.43, 8.27 & 10.22 $\mu\text{g}/\text{m}^3$ respectively. All above the values were found within the Limits. Results given in **Annexure-6**.

5.2 FUGITIVE DUST CONCENTRATION

Fortnightly fugitive air quality was monitored all plant area SPM value minimum 284.22 $\mu\text{g}/\text{m}^3$, maximum value 1854.39 $\mu\text{g}/\text{m}^3$ and average value 871.55 $\mu\text{g}/\text{m}^3$. The Fugitive air quality 1st& 2nd Fortnight Results given in **Annexure-7 & Annexure-8**.

5.3 STACK MONITORING

Stack emission level was monitored all chimneys' PM values (mg/Nm^3) 1st and 2nd Fortnight Minimum Value 29.50 mg/Nm^3 , Maximum Value 61.70 mg/Nm^3 & Average Value 43.60 mg/Nm^3 . 1st& 2nd Fortnight Results are given in **Annexure-9 & Annexure-21**.

5.4 CONCLUSION

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



GLOBAL ENVIRONMENT & MINING SERVICES

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,

HOSAPETE - 583201, Dist., Vijayanagara (Karnataka)

Ph : +918394 229433, 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



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/FY22/RO38
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 : **December-2021**
Location : **A1-Danapur Village**
Duration of Monitoring : 24 Hour
Report Issued Date : **05.01.2022**
Report Number : **ULR-TC532321000001294F**

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
01.12.2021	02.12.2021	4142	75.59	100	20.73	60	9.72	80	12.76	80
02.12.2021	03.12.2021	4185	68.64		18.34		11.06		14.35	
08.12.2021	09.12.2021	4369	70.33		20.80		9.83		11.79	
09.12.2021	10.12.2021	4390	78.52		23.14		9.50		14.22	
13.12.2021	14.12.2021	4445	59.48		13.24		10.72		13.01	
14.12.2021	15.12.2021	4464	63.48		19.92		10.05		12.04	
22.12.2021	23.12.2021	4586	54.16		12.26		9.50		12.16	
23.12.2021	24.12.2021	4609	63.20		19.11		8.38		13.49	
Average			66.68		18.44		9.84		12.98	

INFERENCE

As per NAAQMS Standards (2009),

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

Rukmini G
Analysed By
Rukmini G
Chemist

J.M.T
Verified By
J. M. Thippeswamy
Senior chemist

Note:

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



GLOBAL ENVIRONMENT & MINING SERVICES

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,

HOSAPETE - 583201, Dist., Vijayanagara (Karnataka)

Ph : +918394 229433, 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



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/FY22/RO38
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 : **December-2021**
Location : **A2 -Mariyammanahalli Village**
Duration of Monitoring : 24 Hour
Report Issued Date : **05.01.2022**
Report Number : **ULR-TC532321000001295F**

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
01.12.2021	02.12.2021	4143	58.16	100	13.57	60	8.71	80	12.52	80
02.12.2021	03.12.2021	4186	56.93		15.08		9.38		14.71	
08.12.2021	09.12.2021	4370	67.24		22.17		9.61		12.04	
09.12.2021	10.12.2021	4391	63.51		27.02		10.28		12.28	
13.12.2021	14.12.2021	4446	65.12		17.97		9.83		14.22	
14.12.2021	15.12.2021	4465	68.66		15.02		9.27		12.89	
22.12.2021	23.12.2021	4587	58.26		12.13		10.28		13.25	
23.12.2021	24.12.2021	4610	50.82		11.53		9.94		11.18	
Average			61.09		16.81		9.66		12.89	

INFERENCE

As per NAAQMS Standards (2009),

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

Rukmini G
Analysed By
Rukmini G
Chemist

J.M.T
Verified By
J. M. Thippeswamy
Senior chemist

Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total Liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
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GLOBAL ENVIRONMENT & MINING SERVICES

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,

HOSAPETE - 583201, Dist., Vijayanagara (Karnataka)

Ph : +918394 229433, 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



TC-5323

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference : WO/ADMIN/FY22/RO38
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 : **December-2021**
Location : **A3-Hanumanahalli Village**
Duration of Monitoring : 24 Hour
Report Issued Date : **05.01.2022**
Report Number : **ULR-TC532321000001296F**

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
01.12.2021	02.12.2021	4144	73.33	100	22.19	60	10.17	80	15.00	80
02.12.2021	03.12.2021	4187	76.82		19.04		9.05		12.46	
08.12.2021	09.12.2021	4371	61.41		16.64		8.27		13.18	
09.12.2021	10.12.2021	4392	68.06		21.76		10.17		12.22	
13.12.2021	14.12.2021	4447	75.87		25.87		8.82		13.18	
14.12.2021	15.12.2021	4466	61.77		14.61		9.83		12.10	
22.12.2021	23.12.2021	4588	74.40		20.87		9.61		11.49	
23.12.2021	24.12.2021	4611	72.23		23.34		12.40		14.64	
Average			70.49		20.54		9.79		13.03	

INFERENCE

As per NAAQMS Standards (2009),

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

Rukmini G
Analysed By
Rukmini G
Chemist

J.M.G
Verified By
J. M. Thippeswamy
Senior chemist



Note:

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3rd Main Road, Basaveswara Badavane,

HOSAPETE - 583201, Dist., Vijayanagara (Karnataka)

Ph : +918394 229433, 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



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/FY22/RO38
 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 : December-2021
 Location : A4-Galemmanagudi Village
 Duration of Monitoring : 24 Hour
 Report Issue Date : 05.01.2022
 Report Number : ULR-TC532321000001336F

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.12.2021	04.12.2021	4229	65.40	100	16.35	60	12.29	80	15.48	80
04.12.2021	05.12.2021	4269	70.13		22.62		9.94		13.67	
10.12.2021	11.12.2021	4406	72.17		19.80		9.83		13.43	
11.12.2021	12.12.2021	4433	67.95		18.25		7.93		12.34	
16.12.2021	17.12.2021	4507	58.51		14.09		11.62		12.58	
17.12.2021	18.12.2021	4548	63.17		17.45		10.72		13.67	
24.12.2021	25.12.2021	4628	58.85		12.97		9.50		11.85	
25.12.2021	26.12.2021	4890	67.01		15.45		9.05		13.18	
Average			65.40		17.12		10.11		13.28	

INFERENCE

As per NAAQMS Standards (2009),

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

Rukmini G
 Analysed By
 Rukmini G
 Chemist

J.M.T
 Verified By
 J. M. Thippeswamy
 Senior chemist



Note:

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(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,

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Ph : +918394 229433, 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



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/FY22/RO38
 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 : December-2021
 Location : A5-Gunda Village
 Duration of Monitoring : 24 Hour
 Report Issue Date : 05.01.2022
 Report Number : ULR-TC532321000001337F

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
03.12.2021	04.12.2021	4230	55.45	100	14.73	60	7.82	80	9.56	80
04.12.2021	05.12.2021	4270	47.67		10.20		8.15		10.04	
10.12.2021	11.12.2021	4407	58.89		13.61		7.71		10.28	
11.12.2021	12.12.2021	4434	52.62		11.94		8.27		9.80	
16.12.2021	17.12.2021	4508	56.96		15.54		7.48		10.28	
17.12.2021	18.12.2021	4549	49.85		11.56		8.18		10.89	
24.12.2021	25.12.2021	4629	46.19		14.85		6.81		8.95	
25.12.2021	26.12.2021	4891	43.37		16.78		9.05		11.01	
Average			51.37		13.65		7.93		10.10	

INFERENCE

As per NAAQMS Standards (2009),

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

Rukmini G
 Analysed By
 Rukmini G
 Chemist

J.M. S
 Verified By
 J. M. Thippeswamy
 Senior chemist

Note:

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(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,

HOSAPETE - 583201, Dist., Vijayanagara (Karnataka)

Ph : +918394 229433, 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



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/FY22/R038
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 : **December-2021**
Location : **A6-Gunda Tanda Village**
Duration of Monitoring : 24 Hour
Report Issue Date : **05.01.2022**
Report Number : **ULR-TC532321000001338F**

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
03.12.2021	04.12.2021	4231	43.85	100	11.73	60	8.38	80	10.16	80
04.12.2021	05.12.2021	4271	52.03		13.96		7.60		9.43	
10.12.2021	11.12.2021	4408	47.79		10.12		8.60		10.64	
11.12.2021	12.12.2021	4435	50.74		10.07		7.26		10.40	
16.12.2021	17.12.2021	4509	43.80		13.69		8.71		10.89	
17.12.2021	18.12.2021	4550	48.50		15.26		9.38		11.01	
24.12.2021	25.12.2021	4630	44.29		12.82		7.37		9.56	
25.12.2021	26.12.2021	4892	49.25		11.84		8.82		9.68	
Average			47.53		12.43		8.27		10.22	

INFERENCE

As per NAAQMS Standards (2009),

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

Rukmini G
Analysed By
Rukmini G
Chemist

J.M.T
Verified By
J. M. Thippeswamy
Senior chemist

Note:

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(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,

HOSAPETE - 583201, Dist., Vijayanagara (Karnataka)

Ph : +918394 229433, 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



TC-5323

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

FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY22/RO38
- 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 : **DECEMBER-2021 (1st Fort Night)**
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Method adopted : IS 5182 (Part 4): 1999 RA 2014
- 9 Report Issued Date : **05.01.2022**
- 10 Report Number : **ULR-TC532321000001293F**

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)	4137	01.12.2021	02.12.2021	561.34	2000
2.	Iron Ore Hopper (Near Monsoon Shed)	4138	01.12.2021	02.12.2021	679.97	2000
3.	Concentrate Thickner	4139	01.12.2021	02.12.2021	605.53	2000
II. Pellet Plant-I						
4.	PR-6	4140	01.12.2021	02.12.2021	284.22	2000
5.	Annual Cooler	4141	01.12.2021	02.12.2021	1628.65	2000
6.	Additive Grinding Building	4180	02.12.2021	03.12.2021	1619.81	2000
III. Sponge Iron Division -2 (Kiln 1 & 2)						
7.	Control room	4181	02.12.2021	03.12.2021	421.75	2000
8.	Near Weigh bridge (dispatch)	4182	02.12.2021	03.12.2021	903.48	2000
9.	Pellet Storage bin	4183	02.12.2021	03.12.2021	1709.16	2000
IV. Sponge Iron Division -2 (Kiln 3 & 4)						
10.	Near Control room	4184	02.12.2021	03.12.2021	922.08	2000
11.	Near Coal crusher	4224	03.12.2021	04.12.2021	547.52	2000
12.	Near Product bin	4225	03.12.2021	04.12.2021	1155.40	2000
V. Wagon Tipper/RMHS						
13.	Near Tipping point	4226	03.12.2021	04.12.2021	659.18	2000
14.	Monsoon Shed (CPU)	4227	03.12.2021	04.12.2021	468.49	2000
15.	MCC Room (2 nd Gate)	4228	03.12.2021	04.12.2021	580.72	2000
VI. Power Plant-70 MW						
16.	70MW-DM Plant (Near R.O. Plant)	4264	04.12.2021	05.12.2021	403.21	2000
17.	Coal Screen (near gate weigh bridge)	4265	04.12.2021	05.12.2021	667.62	2000
18.	CFBC boiler	4266	04.12.2021	05.12.2021	660.28	2000
VII. 2X70MW Power Plant						
19.	Near Boiler	4404	10.12.2021	11.12.2021	306.59	500
20.	Near Coal storage Shed	4405	10.12.2021	11.12.2021	422.41	500

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

Rukmini B
Analysed By
Rukmini G
Chemist

J.M.T
Verified By
J. M. Thippeswamy
Senior chemist

Note:

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(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,

HOSAPETE - 583201, Dist., Vijayanagara (Karnataka)

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e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



TC-5323

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

FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY22/RO38
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	:	DECEMBER-2021 (2nd Fort Night)
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	05.01.2022
10	Report Number	:	ULR-TC532321000001451F

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)	4502	16.12.2021	17.12.2021	506.17	2000
2.	Iron Ore Hopper (Near Monsoon Shed)	4503	16.12.2021	17.12.2021	1322.91	2000
3.	Concentrate Thickner	4504	16.12.2021	17.12.2021	668.14	2000
II. Pellet Plant-II						
4.	PR-6	4505	16.12.2021	17.12.2021	605.90	2000
5.	Annual Cooler	4506	16.12.2021	17.12.2021	915.41	2000
6.	Additive Grinding Building	4543	17.12.2021	18.12.2021	1736.35	2000
III. Sponge Iron Division -2 (Kiln 1 & 2)						
7.	Control room	4544	17.12.2021	18.12.2021	1610.45	2000
8.	Near Weigh bridge (dispatch)	4545	17.12.2021	18.12.2021	591.39	2000
9.	Pellet Storage bin	4546	17.12.2021	18.12.2021	946.96	2000
IV. Sponge Iron Division -2 (Kiln 3 & 4)						
10.	Near Control room	4547	17.12.2021	18.12.2021	1854.39	2000
11.	Near Coal crusher	4581	22.12.2021	23.12.2021	1227.81	2000
12.	Near Product bin	4582	22.12.2021	23.12.2021	1298.37	2000
V. Wagon Tipper/RMHS						
13.	Near Tipping point	4583	22.12.2021	23.12.2021	1364.18	2000
14.	Monsoon Shed (CPU)	4584	22.12.2021	23.12.2021	852.88	2000
15.	MCC Room (2 nd Gate)	4585	22.12.2021	23.12.2021	696.56	2000
VI. Power Plant-70 MW						
16.	70MW-DM Plant (Near R.O. Plant)	4604	23.12.2021	24.12.2021	443.50	2000
17.	Coal Screen (near gate weigh bridge)	4605	23.12.2021	24.12.2021	1126.01	2000
18.	CFBC boiler	4606	23.12.2021	24.12.2021	980.56	2000
VII. 2X70MW Power Plant						
19.	Near Boiler	4607	23.12.2021	24.12.2021	436.45	500
20.	Near Coal storage Shed	4608	23.12.2021	24.12.2021	470.16	500

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

Rukmini G
Analysed By
Rukmini G
Chemist

J.M.T
Verified By
J. M. Thippeswamy
Senior chemist

Note:

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Ph : +918394 229433, 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



TC-5323

ANNEXURE-09
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY22/R038
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07
5	Discipline	:	Chemical
6	Group	:	Atmospheric Pollution
7	Sample Type	:	Stack Monitoring
8	Sampling Location	:	SID Axis 1 & 2
9	Month of Sampling	:	DECEMBER-2021
10	Date of Sample Received	:	02.12.2021 & 22.12.2021
11	Date of Sample Analysis	:	03.12.2021 & 23.12.2021
12	Date Sample Analysis Completion	:	04.12.2021 & 24.12.2021
13	Report Issued Date	:	05.01.2022
14	Report Number	:	ULR-TC532321000001311F

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	
				02.12.2021	22.12.2021	
	Date of Monitoring					
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	4188	4589	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	32	33	-
3	Velocity of Fuel Gas	IS: 11255 (Part 1) - 1985 (RA 2014)	m/sec	144	142	-
4	Gas flow rate at Stack Condition	IS: 11255 (Part 03) 1985 (RA 2014)	m ³ /hr	7.81	8.10	-
5	Gas flow rate at NTP	IS: 11255 (Part 03) 1985 (RA 2014)	Nm ³ /hr	198766	201647	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	145380	152002	-
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	59.50	48.60	100
8	Nitrogen Dioxide	IS: 11255 (Part 7): 2005 (RA 2017)	mg/Nm ³	288.86	397.54	NS
9	Carbon Monoxide	GEMS/SOP/69	%	137.35	106.60	NS
				0.012	0.016	1%

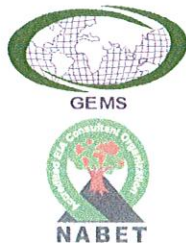
Note: NS- Not Specified. RA: Reaffirmed. INFERENCE: The Measured Values are within the limits.

Rukmini G
Analysed By
Rukmini G
Chemist

J.M. Thippeswamy
Verified By
J. M. Thippeswamy
Senior chemist

Note:

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3rd Main Road, Basaveswara Badavane,

HOSAPETE - 583201, Dist., Vijayanagara (Karnataka)

Ph : +918394 229433, 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



TC-5323

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

Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY22/RO38
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07
5	Discipline	: Chemical
6	Group	: Atmospheric Pollution
7	Sample Type	: Stack Monitoring
8	Sampling Location	: SID Axis 3&4
9	Month of Sampling	: DECEMBER-2021
10	Date of Sample Received	: 06.12.2021 & 28.12.2021
11	Date of Sample Analysis	: 07.12.2021 & 29.12.2021
12	Date Sample Analysis Completion	: 08.12.2021 & 30.12.2021
13	Report Issued Date	: 05.01.2022
14	Report Number	: ULR-TC532321000001368F

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	
				06.12.2021	28.12.2021	
	Date of Monitoring					
	Sample Code			4318	4913	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	30	30	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	133	135	-
3	Velocity of Fuel Gas	IS: 11255 (Part 1) - 1985 (RA 2014)	m/sec	8.09	7.62	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	205892	193931	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	153658	144022	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	61.70	53.20	100
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	331.11	427.33	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	79.95	22.55	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.015	0.039	1%

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

Rukmini G
Analysed By
Rukmini G
Chemist

J.M.S
Verified By
J. M. Thippeswamy
Senior chemist

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e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



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/FY22/R038
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07
5	Discipline	: Chemical
6	Group	: Atmospheric Pollution
7	Sample Type	: Stack Monitoring
8	Sampling Location	: Pellet Plant-2 ESP
9	Month of Sampling	: DECEMBER-2021
10	Date of Sample Received	: 01.12.2021 & 27.12.2021
11	Date of Sample Analysis	: 02.12.2021 & 28.12.2021
12	Date Sample Analysis Completion	: 03.12.2021 & 29.12.2021
13	Report Issued Date	: 05.01.2022
14	Report Number	: ULR-TC532321000001297F

Stack Details

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

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 st Fort Night	2 nd Fort Night	
				01.12.2021	27.12.2021	
	Date of Monitoring					
	Sample Code			4145	4904	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	30	30	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	108	105	-
3	Velocity of Fuel Gas	IS: 11255 (Part 1) - 1985 (RA 2014)	m/sec	7.03	7.00	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	384866	383223	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	306074	307187	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	48.0	55.10	100
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	177.32	165.88	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm ³	241.90	200.90	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.017	0.013	-

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

Rukmini G
Analysed By
Rukmini G
Chemist

J.M.S
Verified By
J. M. Thippeswamy
Senior chemist

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Ph : +918394 229433, 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



TC-5323

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

Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY22/RO38
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler VSS 1SL.No. 304 DTB 07
5	Discipline	: Chemical
6	Group	: Atmospheric Pollution
7	Sample Type	: Stack Monitoring
8	Sampling Location	: 1x70 MW-CFBC Boiler ESP
9	Month of Sampling	: DECEMBER-2021
10	Date of Sample Received	: 07.12.2021 & 25.12.2021
11	Date of Sample Analysis	: 08.12.2021 & 26.12.2021
12	Date Sample Analysis Completion	: 09.12.2021 & 27.12.2021
13	Report Issued Date	: 05.01.2022
14	Report Number	: ULR-TC532321000001373F

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	
				07.12.2021	25.12.2021	
	Date of Monitoring					
	Sample Code			4336	4893	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	29	31	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	134	131	-
3	Velocity of Fuel Gas	IS: 11255 (Part 1) - 1985 (RA 2014)	m/sec	7.57	7.13	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	192658	181460	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	142955	136544	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	29.50	38.40	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	231.66	194.48	600
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	313.65	239.85	300
9	Carbon Monoxide	GEMS/SOP/69	%	0.019	0.015	-

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

Rukmini G
Analysed By
Rukmini G
Chemist

J.M.TS
Verified By
J. M. Thippeswamy
Senior chemist

Note:

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e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



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/FY22/RO38
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07
5	Discipline	: Chemical
6	Group	: Atmospheric Pollution
7	Sample Type	: Stack Monitoring
8	Sampling Location	: 2X 70 MW CFBC Boiler ESP
9	Month of Sampling	: DECEMBER-2021
10	Date of Sample Received	: -
11	Date of Sample Analysis	: -
12	Date Sample Analysis Completion	: -
13	Report Issued Date	: 05.01.2022
14	Report Number	: -

Stack Details

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

Emission Details

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

Note: NS- Not Specified. RA: Reaffirmed

J.M.T.

Verified By
J. M. Thippeswamy
Senior chemist



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3rd Main Road, Basaveswara Badavane,

HOSAPETE - 583201, Dist., Vijayanagara (Karnataka)

Ph : +918394 229433, 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



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/FY22/R038
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler VSS 1Sl.No. 304 DTB 07
5	Discipline	: Chemical
6	Group	: Atmospheric Pollution
7	Sample Type	: Stack Monitoring
8	Month of Sampling	: DECEMBER-2021 (1st Fort Night)
9	Date of Sample Received	: -
10	Date of Sample Analysis	: -
11	Date Sample Analysis Completion	: -
12	Report Issued Date	: 05.01.2022
13	Report Number	: -

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	-	-	---	-	-	-	30	1.20	-	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	-	-	-

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.

J.M.S
Verified By
J. M. Thippeswamy
Senior chemist

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e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



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/FY22/RO38
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07
5	Discipline	: Chemical
6	Group	: Atmospheric Pollution
7	Sample Type	: Stack Monitoring
8	Month of Sampling	: DECEMBER-2021 (1st Fort Night)
9	Date of Sample Received	: -
10	Date of Sample Analysis	: -
11	Date Sample Analysis Completion	: -
12	Report Issued Date	: 05.01.2022
13	Report Number	: -

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	Additive grinding mill	-	-	---	-	-	-	30	1.20	-	50
4	Mixer building	-	-	---	-	-	-	30	1.20	-	50
5	Pellet discharge point	-	-	---	-	-	-	30	1.20	-	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	Additive grinding mill	-	-	-
4	Mixer building	-	-	-
5	Pellet discharge point	-	-	-

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.

J.M.T.

Verified By
J. M. Thippeswamy
Senior chemist

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e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



TC-5323

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

Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY22/RO38
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07
5	Discipline	: Chemical
6	Group	: Atmospheric Pollution
7	Sample Type	: Stack Monitoring
8	Month of Sampling	: DECEMBER-2021 (1st Fort Night)
9	Date of Sample Received	: 02.12.2021, 03.12.2021 & 04.12.2021
10	Date of Sample Analysis	: 03.12.2021, 04.12.2021 & 05.12.2021
11	Date Sample Analysis Completion	: 04.12.2021, 05.12.2021 & 06.12.2021
12	Report Issued Date	: 05.01.2022
13	Report Number	: ULR-TC532321000001312F

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											
6	Cooler Discharge -1	02.12.2021	4189	---	31	38	7.84	30	1.20	41.9	50
7	Cooler Discharge -2	03.12.2021	4232	---	29	38	6.58	30	1.20	38.3	50
8	Coal stock house	-	-	---	-	-	-	30	1.20	-	50
9	Production Separation bin1&2	03.12.2021	4233	---	30	40	7.24	30	1.20	43.2	50
10	Production Separation bin3&4	04.12.2021	4273	---	29	36	6.28	30	1.20	38.9	50
11	Transfer House	-	-	---	-	-	-	30	1.20	-	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
6	Cooler Discharge -1	31925	31206	-
7	Cooler Discharge -2	26794	26019	-
8	Coal stock house	-	-	-
9	Production Separation bin-1&2	29482	28540	-
10	Production Separation bin-3&4	25572	24993	-
11	Transfer House	-	-	-

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.

Rukmini G
Analysed By
Rukmini G
Chemist

J.M.G
Verified By
J. M. Thippeswamy
Senior chemist

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(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,

HOSAPETE - 583201, Dist., Vijayanagara (Karnataka)

Ph : +918394 229433, 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



TC-5323

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

Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY22/RO38
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler VSS 1Sl.No. 304 DTB 07
5	Discipline	: Chemical
6	Group	: Atmospheric Pollution
7	Sample Type	: Stack Monitoring
8	Month of Sampling	: DECEMBER-2021 (1st Fort Night)
9	Date of Sample Received	: 06.12.2021
10	Date of Sample Analysis	: 07.12.2021
11	Date Sample Analysis Completion	: 08.12.2021
12	Report Issued Date	: 05.01.2022
13	Report Number	: ULR-TC532321000001369F

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											
12	Coal Primary Screen	-	-	---	-	-	-	30	1.20	-	50
13	Coal Stock House -1 & coal stock house-2	-	-	---	-	-	-	30	1.20	-	50
14	Cooler Discharge -1	06.12.2021	4319	---	29	37	6.67	30	1.20	43.70	50
15	Cooler Discharge -2 & PSB transfer tower	-	-	---	-	-	-	30	1.20	-	50
16	Production Bunker & Intermediate bin	-	-	---	-	-	-	30	1.20	-	50
17	Production Separation bin	-	-	---	-	-	-	30	1.20	-	50
18	Pellet Stock house	-	-	---	-	-	-	30	1.20	-	50
19	Dolochar Stock House 1 & 2	-	-	---	-	-	-	30	1.20	-	50
20	CPU Building	-	-	---	-	-	-	30	1.20	-	50

Sl. No	2X500 TPD Sponge Iron Kiln 3&4	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
12	Coal Primary Screen	-	-	-
13	Coal Stock House -1 & coal stock house-2	-	-	-
14	Cooler Discharge -1	27160	26460	-
15	Cooler Discharge -2 & PSB transfer tower	-	-	-
16	Production Bunker & Intermediate bin	-	-	-
17	Production Separation bin	-	-	-
18	Pellet Stock house	-	-	-
19	Dolochar Stock House 1 & 2	-	-	-
20	CPU Building	-	-	-

INFERENCE: The Measured Values are within the limits.

Rukmini G
Analysed By
Rukmini G
Chemist

J.M.T.S
Verified By
J. M. Thippeswamy
Senior chemist

Note:

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



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

Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY22/RO38
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler VSS 1Sl.No. 304 DTB 07
5	Discipline	: Chemical
6	Group	: Atmospheric Pollution
7	Sample Type	: Stack Monitoring
8	Month of Sampling	: DECEMBER-2021 (2nd Fort Night)
9	Date of Sample Received	: -
10	Date of Sample Analysis	: -
11	Date Sample Analysis Completion	: -
12	Report Issued Date	: 05.01.2022
13	Report Number	: -

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	-	-	---	-	-	-	30	1.20	-	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	-	-	-

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.

J.M.T.S

Verified By
J. M. Thippeswamy
Senior chemist



Note:

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e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



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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/FY22/RO38
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07
5	Discipline	: Chemical
6	Group	: Atmospheric Pollution
7	Sample Type	: Stack Monitoring
8	Month of Sampling	: DECEMBER-2021 (2nd Fort Night)
9	Date of Sample Received	: -
10	Date of Sample Analysis	: -
11	Date Sample Analysis Completion	: -
12	Report Issued Date	: 05.01.2022
13	Report Number	: -

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	Additive grinding mill	-	-	---	-	-	-	30	1.20	-	50
4	Mixer building	-	-	---	-	-	-	30	1.20	-	50
5	Pellet discharge point	-	-	---	-	-	-	30	1.20	-	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	Additive grinding mill	-	-	-
4	Mixer building	-	-	-
5	Pellet discharge point	-	-	-

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.

J.M.T.S.
Verified By
J. M. Thippeswamy
 Senior chemist



Note:

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e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



TC-5323

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/FY22/R038
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07
5	Discipline	: Chemical
6	Group	: Atmospheric Pollution
7	Sample Type	: Stack Monitoring
8	Month of Sampling	: DECEMBER-2021 (2nd Fort Night)
9	Date of Sample Received	: 16.12.2021, 17.12.2021 & 22.12.2021
10	Date of Sample Analysis	: 17.12.2021, 18.12.2021 & 23.12.2021
11	Date Sample Analysis Completion	: 18.12.2021, 19.12.2021 & 24.12.2021
12	Report Issued Date	: 05.01.2022
13	Report Number	: ULR-TC532321000001452F

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											
6	Cooler Discharge -1	16.12.2021	4510	---	28	36	6.85	30	1.20	34.3	50
7	Cooler Discharge -2	16.12.2021	4511	---	29	39	6.72	30	1.20	37.9	50
8	Coal stock house	22.12.2021	4590	---	31	36	6.77	30	1.20	41.2	50
9	Production Separation bin-1&2	17.12.2021	4551	---	30	38	6.97	30	1.20	39.4	50
10	Production Separation bin-3&4	17.12.2021	4552	---	29	40	6.08	30	1.20	36.5	50
11	Transfer House	22.12.2021	4594	---	35	38	7.67	30	1.20	43.5	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
6	Cooler Discharge -1	27893	27171	-
7	Cooler Discharge -2	27364	26487	-
8	Coal stock house	27568	27122	-
9	Production Separation bin-1&2	28382	27652	-
10	Production Separation bin-3&4	24758	23888	-
11	Transfer House	31232	30931	-

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.

Rukmini G
Analysed By
Rukmini G
Chemist

J.M.S
Verified By
J. M. Thippeswamy
Senior chemist

Note:

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e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in



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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/FY22/RO38
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler VSS 1SI.No. 304 DTB 07
5	Discipline	: Chemical
6	Group	: Atmospheric Pollution
7	Sample Type	: Stack Monitoring
8	Month of Sampling	: DECEMBER-2021 (2nd Fort Night)
9	Date of Sample Received	: 28.12.2021 & 29.12.2021
10	Date of Sample Analysis	: 29.12.2021 & 30.12.2021
11	Date Sample Analysis Completion	: 30.12.2021 & 31.12.2021
12	Report Issued Date	: 05.01.2022
13	Report Number	: ULR-TC532321000001495F

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											
12	Coal Primary Screen	-	-	---	-	-	-	30	1.20	-	50
13	Coal Stock House -1 & coal stock house-2	-	-	---	-	-	-	30	1.20	-	50
14	Cooler Discharge -1	28.12.2021	4914	---	31	36	6.58	30	1.20	39.60	50
15	Cooler Discharge -2 & PSB transfer tower	29.12.2021	4918	---	30	39	6.29	30	1.20	42.50	50
16	Production Bunker & Intermediate bin	-	-	---	-	-	-	30	1.20	-	50
17	Production Separation bin	-	-	---	-	-	-	30	1.20	-	50
18	Pellet Stock house	-	-	---	-	-	-	30	1.20	-	50
19	Dolochar Stock House 1 & 2	-	-	---	-	-	-	30	1.20	-	50
20	CPU Building	-	-	---	-	-	-	30	1.20	-	50

Sl. No	2X500 TPD Sponge Iron Kiln 3&4	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
12	Coal Primary Screen	-	-	-
13	Coal Stock House -1 & coal stock house-2	-	-	-
14	Cooler Discharge -1	26794	26360	-
15	Cooler Discharge -2 & PSB transfer tower	22111	21473	-
16	Production Bunker & Intermediate bin	-	-	-
17	Production Separation bin	-	-	-
18	Pellet Stock house	-	-	-
19	Dolochar Stock House 1 & 2	-	-	-
20	CPU Building	-	-	-

INFERENCE: The Measured Values are within the limits.

Rukmini G
Analysed By
Rukmini G
Chemist

J.M.T
Verified By
J. M. Thippeswami
Senior chemist

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