

## **ENVIRONMENTAL MONITORING REPORT**



*at*

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

### **Stage – I**

### **MARCH-2023**

**Prepared by**

**M/s. Premier Analytical Laboratories**

Near Ganesh Gas Godown, Beside Govt.Primary School,  
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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. Premier Analytical Laboratories, 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.

**Place: Hosapete**  
**Date: 06.04.2023**



  
**K. Suvarna**  
**(Quality Manager)**

## 1.0 INTRODUCTION

M/s. BMM Ispat Ltd, (BMMIL) is a 2.0 million tons integrated steel plant, manufacturing steel with its state of art in advanced technology and protecting environment. It is committed produce quality product, in environmentally friendly technology. Adopting sufficient air pollution control equipment's, recycling and reusing all the water with 'Zero' discharge facility, generating valuable electric power with waste heat recovery boilers (WHRB) and resource optimizing and minimizing the energy needs through re-utilizing char for CFBC boilers.

M/s. BMM ISPAT Ltd., Presently operating the following units under Stage-I units (Manufacturing units coming under 2.0 MTPA integrated steel plant is monitored and are reported separately);

Sl.No.	Units	Capacity
1	Beneficiation Plant	1.3 MTPA
2	Pellet Plant	1.2 MTPA
3	Sponge Iron Division -1	2 x 100 TPD
4	Induction furnace (billets)	9000 tonnes/month
5	Rolling Mill (TMT rods)	9000 tonnes/month
6	Captive Power Plant	25 MW

The report includes environmental monitoring data collected at above site and its surrounding areas, for the month of **MARCH-2023**. The Parameters monitored are:

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



## 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 2.5 $\mu$ m) PM2.5.

#### 2.2.1 PARTICULATE MATTER (PM10)(size less than 10 $\mu$ m).

##### 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 20.3X25.4 cm (8X10 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 center 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



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(PM2.5)(size less than 2.5µm).**

### **Purpose**

The purpose of this protocol is to provide guidelines for monitoring and analysis of Particulate Matter PM2.5 in ambient air.

**Reference Method:** USEPA 2001 Method of Measurement of Air Pollution: Particulate Matter (PM2.5) 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 PM2.5 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 PM2.5 size ranges divided by the actual volume of air sampled, and is expressed in µg/m<sup>3</sup>. 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 (SO<sub>2</sub>).

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

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

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

#### Sampling

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

#### Analysis

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

### 2.2.4 Nitrogen Di Oxide (NO<sub>2</sub>):

#### 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 (NO<sub>2</sub>) is collected by bubbling air through a solution of sodium hydroxide and sodium arsenite. The concentration of nitrite ion (NO<sub>2</sub>) produced during sampling is determined calorimetrically by reacting the nitrite ion with phosphoric acid, sulfanilamide, and N-(1-naphthyl)-ethylenediamine di-hydrochloride (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 (NH<sub>3</sub>)**

##### **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



The ammonium sulphate formed in the sample is analyzed 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 (1.2m<sup>3</sup>/min) sampling method capable of detecting sub.ng/m<sup>3</sup> concentration of PAH in 24 hours sample (i.e., collected in 3 shifts of 8 hour each with 480 m<sup>3</sup> 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

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 2 $\mu$ l 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/ $\mu$ l 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/ $\mu$ l 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 (CS<sub>2</sub>). The substances desorbed in the CS<sub>2</sub> 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  $\mu$ m or below and with a stationary phase film thickness less than 1.5  $\mu$ m as follows or equivalent may be recommended.



### **Sampling**

Selection of Sorbent Tube '- Samples are collected in glass sampling tube filled with a 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 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.

## **2.2.9 Carbon Monoxide (CO)**

### **Principle:**

Samples containing carbon monoxide in the range of 0 to 100 mg/l are analyzed 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 litre 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.

#### **2.3 NOISE LEVELS**

##### **Measuring Equipment**

The measurements should be made with a sound level meter as specified in IS :9779-1981 The A-weighting network and fast response should be used. The sound level should be measured at the place and time of the annoyance.

##### **Conditions of Measurement**

Ambient and work zone Noise level measurement was carried out using a sound level meter (Equinox-107) during day and night times. The measurements were carried out 1 m away from the source and 1 m away from the edge of the roads.

Outdoor measurements should be made at 1.2 to 1-5 m above the ground and, if practical, at least 3.5 m from walls, buildings or other sound reflecting structures. When circumstances indicate, measurements may be made at greater heights and closer to the

wall (for example 0-5 m in front of an open window), provided this is specified and taken into consideration.

Indoor measurements should be made at a distance of at least 1 m from the walls, 1-2 to 1.5 m above the floor, and about 1.5 m from the window(s). In order to reduce disturbances from standing waves, the sound levels measured indoors should be averaged over 0-5 m of each of at least 3 positions. This is especially important when measuring low-frequency noise. The arithmetic average of the readings determines the value to be taken.

The statistical analysis can be based on analogue or digital recordings of the sound level. For estimating purposes, it may in some cases be sufficient to determine the statistical distribution by observing the sound level meter readings at intervals of time by a sampling technique,

The class intervals for the sound level must be chosen according to the character of the noise; in most cases an interval of 5 dB will be appropriate.

## 2.4 WATER SAMPLING

### **Collection and Preservation of Samples**

Collection and preservation of water and wastewater samples; the general principles also apply to the sampling of solids or semisolid matrices.

Ensure that all sampling equipment is clean and quality-assured before use. Use sample containers that are clean and free of contaminants. Bake at 450°C all bottles to be used for organic analysis sampling.

**Record of sample shall be as follows:**

#### **General information**

- Sample identification number
- Location
- Sample collector
- Date and hour
- Sample type (Grab or composite)

### **Collection of Samples**

#### **Ground Water:**

**Grab samples:** Grab samples are single collected at a specific spot at a site over a short period of time (typically seconds or minutes).

**Surface water:**

**Composite Sampling:** Composite samples vertically over the depth of a water body in one location or horizontally along a specific water depth.

**Sewage treatment plant water.**

**Integrated Sampling:** For certain purposes, the information needed is best provided by analyzing mixtures of grab samples collected from different points simultaneously.

**2.5 Fugitive Emission Monitoring**

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

**2.6 Stack monitoring method**

Stack Monitoring was Monitored 32 Samples Collected from Vayubodhan Stack sampler VSS 1 stack monitoring kit was used for drawing the flue gas. Sulphur dioxide and oxides of nitrogen in the flue gas were sampled by bubbling flue gas in 3% H<sub>2</sub>O<sub>2</sub> and 0.1N NaOH solution respectively and the analysis 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.

**Stack Emissions Monitoring Methodology**

**Pre-Sampling Activities**

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

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

**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.



### **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.

## **2.7 DATA ANALYSIS**

### **2.7.1 BUFFERZONE AMBIENT AIR QUALITY STATUS**

#### **Danapur Village (A1)**

At this location, average of PM10, PM2.5, SO<sub>2</sub>, NO<sub>2</sub> values Average 79.73, 30.57, 12.74 & 16.67 µg/m<sup>3</sup> 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, SO<sub>2</sub>, NO<sub>2</sub> values Average 80.56, 34.09, 10.67 & 15.67 µg/m<sup>3</sup> 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, SO<sub>2</sub>, NO<sub>2</sub> values Average 76.79, 32.82, 8.84 & 13.21 µg/m<sup>3</sup> 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, SO<sub>2</sub>, NO<sub>2</sub> values Average 74.57, 21.99, 8.70 & 11.89 µg/m<sup>3</sup> 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, SO<sub>2</sub>, NO<sub>2</sub> values Average 71.90, 27.53, 9.24 & 13.36 µg/m<sup>3</sup> 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, SO<sub>2</sub>, NO<sub>2</sub> values Average 67.82, 23.44, 8.26 & 12.13 µg/m<sup>3</sup> respectively. All above the values were found within the Limits. Results given in **Annexure-6**.

## **2.8 FUGITIVE DUST CONCENTRATION**

Fortnightly fugitive air quality was monitored all plant area SPM value minimum  $516.55\mu\text{g}/\text{m}^3$ , maximum value  $1893.14\mu\text{g}/\text{m}^3$ , and average value  $1429.38\mu\text{g}/\text{m}^3$ . The Fugitive air quality 1<sup>st</sup> & 2<sup>nd</sup> Fortnight Results given in **Annexure-7 & Annexure-8**.

## **2.9 STACK MONITORING**

Stack emission level was monitored as per the statutory requirement on twice in month. Stack emission level was monitored all chimneys' PM values ( $\text{mg}/\text{Nm}^3$ ) 1<sup>st</sup> and 2<sup>nd</sup> Fort Night Minimum Value  $16.03\text{ mg}/\text{Nm}^3$ , Maximum Value  $43.78\text{ mg}/\text{Nm}^3$  & Average Value  $28.09\text{ mg}/\text{Nm}^3$ . The Stack Emission Results given in **Annexure-9 to Annexure-19**.

## **3.0 AMBIENT 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 / SL-4001) The Day & Night time noise level values were ranging between 40.50 to 70.80 dB (A) and 37.50 to 64.60 dB (A). The noise level status is given in **Annexure-20 to Annexure-22**.

**3.1** Water Sample Collected at 18 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-23 to Annexure-34**.

## **3.2 CONCLUSION**

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





Leaders in Environment  
Monitoring



TC-6193

# PREMIER ANALYTICAL LABORATORIES

(Environment Monitoring & Minerals Testing Services)

ISO 9001 : 2015, 45001 : 2018 Certified & NABL Accredited Testing Laboratory (TC-6193)

Near Old Ganesh Gas Godown, Beside Govt. Primary School,  
Amaravathi, HOSAPETE - 583 201, Ballari Dist., Karnataka.

Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

### ANNEXURE-01

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY23/R073  
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 : MARCH-2023  
Location : A1-Danapur Village  
Duration of Monitoring : 24 Hour  
Report Issued Date : 06.04.2023  
Report Number : ULR-TC619323000001110F

### RESULTS

Parameters			PM <sub>10</sub> [µg/m <sup>3</sup> ]		PM <sub>2.5</sub> [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]	
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
01.03.2023	02.03.2023	5124	73.37	100	27.30	60	12.73	80	14.17	80
02.03.2023	03.03.2023	5135	86.42		32.20		14.98		17.11	
06.03.2023	07.03.2023	5189	73.67		29.41		14.64		20.05	
07.03.2023	08.03.2023	5201	83.71		22.64		12.05		16.84	
20.03.2023	21.03.2023	5438	75.73		36.78		10.92		15.77	
21.03.2023	22.03.2023	5456	87.74		39.64		14.19		18.98	
29.03.2023	30.03.2023	5655	73.34		25.64		9.57		12.70	
30.03.2023	31.03.2023	5676	83.86		30.97		12.84		17.77	
Average			79.73		30.57		12.74		16.67	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / AAS-217 BL	Enviro instruments / EI-133
3	Serial No	R.D.S. / 14-A-142	PM2.5/PM10 Sampler / 158-K-20
4	Calibration Date	01.04.2022	04.04.2023
5	Calibration Due Date	31.03.2023	03.04.2024

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

Reviewed by



Authorised Signatory  
K. Suvarna  
Quality Manager

Note : 1. The result listed above pertain only to the tested samples & applicable parameters. 2. Total liability of our Laboratory is limited to the Invoice amount. 3. This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law & should not be used in advertising media without prior written permission. 4. Sampling is not done by us unless otherwise specified. 5. The sample will be preserved for maximum period : 1) Water - 15 days, 2) Ores - 3 months, 3) Air - Discarded after analysis.





# PREMIER ANALYTICAL LABORATORIES

(Environment Monitoring & Minerals Testing Services)

ISO 9001 : 2015, ISO 45001 : 2018 Certified Laboratory

Near Old Ganesh Gas Godown, Beside Govt. Primary School,  
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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 : MARCH-2023  
Location : A1-Danapur Village  
Duration of Monitoring : 1 Hour  
Report Issued Date : 06.04.2023

### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	01.03.2023	5124	0.09	4.0
2	02.03.2023	5135	0.16	
3	06.03.2023	5189	0.10	
4	07.03.2023	5201	0.07	
5	20.03.2023	5438	0.08	
6	21.03.2023	5456	0.14	
7	29.03.2023	5655	0.17	
8	30.03.2023	5676	0.13	

**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	09.07.2022
5	Calibration Due Date	08.07.2023

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
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*K. Suvana*  
Authorised Signatory  
**K. Suvana**  
Quality Manager

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TC-6193

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Amaravathi, HOSAPETE - 583 201, Ballari Dist., Karnataka.

Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-02

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY23/R073  
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 : MARCH-2023  
Location : A2-Mariyammahalli Village  
Duration of Monitoring : 24 Hour  
Report Issued Date : 06.04.2023  
Report Number : ULR-TC619323000001111F

#### RESULTS

Parameters			PM <sub>10</sub> [µg/m <sup>3</sup> ]		PM <sub>2.5</sub> [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]	
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
01.03.2023	02.03.2023	5125	75.76	100	20.53	60	8.00	80	12.43	80
02.03.2023	03.03.2023	5136	81.45		29.62		10.59		16.04	
06.03.2023	07.03.2023	5190	84.40		24.87		7.21		10.69	
07.03.2023	08.03.2023	5202	77.40		26.28		10.25		14.43	
20.03.2023	21.03.2023	5439	85.46		37.30		12.95		17.77	
21.03.2023	22.03.2023	5457	83.59		34.84		10.70		16.84	
29.03.2023	30.03.2023	5656	73.17		39.43		11.94		17.91	
30.03.2023	31.03.2023	5677	83.23		59.87		13.74		19.24	
Average			80.56		34.09		10.67		15.67	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / APM - 460BL	Enviro instruments / EI-133
3	Serial No	R.D.S./330-DTF-2005	PM2.5 / PM10 Sampler / 159-K-20
4	Calibration Date	01.04.2022	04.04.2023
5	Calibration Due Date	31.03.2023	03.04.2024

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

Reviewed by



Authorised Signatory  
**K. Suvama**  
Quality Manager

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-02

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY23/R073  
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 : MARCH-2023  
Location : A2-Mariyammahalli Village  
Duration of Monitoring : 1 Hour  
Report Issued Date : 06.04.2023

### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	01.03.2023	5125	0.09	4.0
2	02.03.2023	5136	0.13	
3	06.03.2023	5190	0.17	
4	07.03.2023	5202	0.13	
5	20.03.2023	5439	0.17	
6	21.03.2023	5457	0.10	
7	29.03.2023	5656	0.08	
8	30.03.2023	5677	0.12	

**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	09.07.2022
5	Calibration Due Date	08.07.2023

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
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*K. Suvama*  
Authorised Signatory  
**K. Suvama**  
Quality Manager

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-03

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
 Customer Reference : WO/ADMIN/FY23/R073  
 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 : MARCH-2023  
 Location : A3-Hanumanahalli Village  
 Duration of Monitoring : 24 Hour  
 Report Issued Date : 06.04.2023  
 Report Number : ULR-TC619323000001112F

### RESULTS

Parameters			PM <sub>10</sub> [µg/m <sup>3</sup> ]		PM <sub>2.5</sub> [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]	
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
01.03.2023	02.03.2023	5126	76.12	100	24.59	60	9.80	80	14.30	80
02.03.2023	03.03.2023	5137	85.57		31.35		8.56		12.29	
06.03.2023	07.03.2023	5191	80.36		33.06		7.43		11.09	
07.03.2023	08.03.2023	5203	75.45		37.18		9.12		15.10	
20.03.2023	21.03.2023	5440	82.29		41.11		8.67		12.16	
21.03.2023	22.03.2023	5458	61.02		42.38		10.02		15.77	
29.03.2023	30.03.2023	5657	82.01		19.67		7.55		11.49	
30.03.2023	31.03.2023	5678	71.47		33.19		9.57		13.50	
Average			76.79		32.82		8.84		13.21	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Greentech instruments / GTI -151	Enviro instruments / EI-133
3	Serial No	R.D.S./242-DTC-2020	PM2.5 /PM10 Sampler / 160-K-20
4	Calibration Date	01.04.2022	04.04.2023
5	Calibration Due Date	31.03.2023	03.04.2024

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



Authorised Signatory  
**K. Suvarna**  
 Quality Manager

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-03

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY23/R073  
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 : MARCH-2023  
Location : A3-Hanumanahalli Village  
Duration of Monitoring : 1 Hour  
Report Issued Date : 06.04.2023

### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	01.03.2023	5126	0.16	4.0
2	02.03.2023	5137	0.09	
3	06.03.2023	5191	0.13	
4	07.03.2023	5203	0.11	
5	20.03.2023	5440	0.17	
6	21.03.2023	5458	0.08	
7	29.03.2023	5657	0.21	
8	30.03.2023	5678	0.15	

**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	09.07.2022
5	Calibration Due Date	08.07.2023

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
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*K. Suvama*  
Authorised Signatory  
**K. Suvama**  
Quality Manager

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-04

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	: WO/ADMIN/FY23/RO73
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	: MARCH-2023
Location	: A4-Galemmanagudi Village
Duration of Monitoring	: 24 Hour
Report Issue Date	: 06.04.2023
Report Number	: ULR-TC619323000001113F

### RESULTS

Parameters			PM <sub>10</sub> [µg/m <sup>3</sup> ]		PM <sub>2.5</sub> [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]	
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
03.03.2023	04.03.2023	5153	77.42	100	23.01	60	9.69	80	14.83	80
04.03.2023	05.03.2023	5168	61.20		18.23		8.00		12.43	
08.03.2023	09.03.2023	5226	77.10		19.17		9.57		13.63	
09.03.2023	10.03.2023	5258	81.52		26.90		7.66		12.16	
23.03.2023	24.03.2023	5478	71.69		21.90		6.31		10.16	
24.03.2023	25.03.2023	5518	80.17		24.91		9.24		13.50	
27.03.2023	28.03.2023	5596	68.77		19.71		11.04		16.04	
28.03.2023	28.03.2023	5621	78.73		22.10		8.11		11.89	
Average			74.57		21.99		8.70		11.89	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Ecotech instruments / AAS-217 BL	Enviro instruments / APM-550 G
3	Serial No	R.D.S. / 14-A-141	PM2.5 / PM10 Sampler / 06-DTF-2011
4	Calibration Date	01.04.2022	01.04.2022
5	Calibration Due Date	31.03.2023	31.03.2023

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



Authorised Signatory  
K. Suvama  
Quality Manager

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## TEST REPORT

ANNEXURE-04

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY23/R073  
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 : MARCH-2023  
Location : A4-Galemmanagudi Village  
Duration of Monitoring : 1 Hour  
Report Issued Date : 06.04.2023

### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	03.03.2023	5153	0.19	4.0
2	04.03.2023	5168	0.11	
3	08.03.2023	5226	0.18	
4	09.03.2023	5258	0.12	
5	23.03.2023	5478	0.06	
6	24.03.2023	5518	0.10	
7	27.03.2023	5596	0.13	
8	28.03.2023	5621	0.15	

**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	09.07.2022
5	Calibration Due Date	08.07.2023

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
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*K. Suvama*  
Authorised Signatory  
**K. Suvama**  
Quality Manager

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(Environment Monitoring & Minerals Testing Services)

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-05

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
 Customer Reference : WO/ADMIN/FY23/R073  
 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 : MARCH-2023  
 Location : A5-Gunda Village  
 Duration of Monitoring : 24 Hour  
 Report Issue Date : 06.04.2023  
 Report Number : ULR-TC619323000001114F

### RESULTS

Parameters			PM10 [µg/m <sup>3</sup> ]		PM2.5 [µg/m <sup>3</sup> ]		SO2 [µg/m <sup>3</sup> ]		NO2 [µg/m <sup>3</sup> ]	
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
03.03.2023	04.03.2023	5154	75.79	100	19.89	60	8.11	80	12.16	80
04.03.2023	05.03.2023	5169	74.99		26.08		10.36		14.97	
08.03.2023	09.03.2023	5227	77.86		39.65		7.66		11.36	
09.03.2023	10.03.2023	5259	62.92		19.28		8.78		13.10	
23.03.2023	24.03.2023	5479	78.19		32.81		11.04		15.37	
24.03.2023	25.03.2023	5519	65.98		39.18		9.01		13.36	
27.03.2023	28.03.2023	5598	78.92		24.99		8.45		12.29	
28.03.2023	28.03.2023	5622	60.54		18.40		10.47		14.30	
Average			71.90		27.53		9.24		13.36	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Greentech instruments / GTI -154	Enviro instruments / APM-550 Mini
3	Serial No	R.D.S./263-OCT-2020	PM2.5 /PM10 Sampler / 08-DK-2011
4	Calibration Date	01.04.2022	01.04.2022
5	Calibration Due Date	31.03.2023	31.03.2023

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

Reviewed by



Authorised Signatory  
K. Suvarna  
Quality Manager

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-05

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY23/R073  
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 : MARCH-2023  
Location : A5-Gunda Village  
Duration of Monitoring : 1 Hour  
Report Issued Date : 06.04.2023

### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	03.03.2023	5154	<0.01	4.0
2	04.03.2023	5169	<0.01	
3	08.03.2023	5227	0.08	
4	09.03.2023	5259	<0.01	
5	23.03.2023	5479	<0.01	
6	24.03.2023	5519	<0.01	
7	27.03.2023	5598	<0.01	
8	28.03.2023	5622	0.09	

Note: CO - GEMS/SOP/S6/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	09.07.2022
5	Calibration Due Date	08.07.2023

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
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Authorised Signatory  
**K. Suvama**  
Quality Manager

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# PREMIER ANALYTICAL LABORATORIES

(Environment Monitoring & Minerals Testing Services)

ISO 9001 : 2015, 45001 : 2018 Certified & NABL Accredited Testing Laboratory (TC-6193)

Near Old Ganesh Gas Godown, Beside Govt. Primary School,

Amaravathi, HOSAPETE - 583 201, Ballari Dist., Karnataka.

Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-06

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
 Customer Reference : WO/ADMIN/FY23/R073  
 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 : MARCH-2023  
 Location : A6-Gunda Tanda Village  
 Duration of Monitoring : 24 Hour  
 Report Issue Date : 06.04.2023  
 Report Number : ULR-TC619323000001115F

### RESULTS

Parameters			PM <sub>10</sub> [µg/m <sup>3</sup> ]		PM <sub>2.5</sub> [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]	
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
03.03.2023	04.03.2023	5155	71.29	100	21.65	60	8.45	80	12.56	80
04.03.2023	05.03.2023	5170	61.68		17.20		7.10		10.69	
08.03.2023	09.03.2023	5228	74.21		20.31		7.66		11.76	
09.03.2023	10.03.2023	5260	67.67		22.54		6.53		10.29	
23.03.2023	24.03.2023	5480	74.46		20.99		9.46		12.83	
24.03.2023	25.03.2023	5520	70.65		20.96		10.25		15.10	
27.03.2023	28.03.2023	5599	52.68		32.16		7.43		10.82	
28.03.2023	28.03.2023	5623	69.91		31.69		9.24		12.96	
Average			67.82		23.44		8.26		12.13	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Ecotech instruments / APM-460	Enviro instruments / APM-550 G
3	Serial No	R.D.S./325-DTT-2005	PM2.5 / PM10 Sampler / 06-DTF-2011
4	Calibration Date	01.04.2022	01.04.2022
5	Calibration Due Date	31.03.2023	31.03.2023

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

Reviewed by



Authorized Signatory  
**K. Suvama**  
 Quality Manager

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## TEST REPORT

ANNEXURE-06

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY23/R073  
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 : MARCH-2023  
Location : A6-Gunda Tanda Village  
Duration of Monitoring : 1 Hour  
Report Issued Date : 06.04.2023

### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	03.03.2023	5155	<0.01	4.0
2	04.03.2023	5170	<0.01	
3	08.03.2023	5228	0.06	
4	09.03.2023	5260	<0.01	
5	23.03.2023	5480	0.07	
6	24.03.2023	5520	<0.01	
7	27.03.2023	5599	<0.01	
8	28.03.2023	5623	0.05	

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	09.07.2022
5	Calibration Due Date	08.07.2023

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
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*K. Suvama*  
Authorised Signatory  
K. Suvama  
Quality Manager

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## TEST REPORT

ANNEXURE-07

### FORTNIGHTLY FUGITIVE AIR QUALITY MONITORING DATA

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY23/RO73
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	:	MARCH-2023(1 <sup>st</sup> Fort Night)
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	06.04.2023
10	Report Number	:	PAL/BMM/2022-23/1128

### RESULTS

Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ( $\mu\text{g}/\text{m}^3$ )	Standard
<b>I. Beneficiation Plant-1</b>						
1.	Main Canteen	5210	07.03.2023	08.03.2023	1436.43	2000
2.	Main Crusher	5208	07.03.2023	08.03.2023	1326.34	2000
3.	Iron Ore Screen	5209	07.03.2023	08.03.2023	1682.33	2000
<b>II. Pellet Plant-1</b>						
4.	Near Pellet Plant	5211	07.03.2023	08.03.2023	2987.28	2000
5.	Annual Cooler Pellet Discharge bin	5212	07.03.2023	08.03.2023	3577.85	2000
6.	Pellet Stock Yard	5233	08.03.2023	09.03.2023	2099.75	2000
<b>III. Sponge Iron Division-1(kiln 1 &amp; 2)</b>						
7.	Control Room SID-1	5265	09.03.2023	10.03.2023	1242.55	2000
8.	Near Product bin	5266	09.03.2023	10.03.2023	2769.39	2000
9.	Coal Feeding Area	5267	09.03.2023	10.03.2023	5695.00	2000
<b>IV. Induction Furnace &amp; Rolling Mill - 1</b>						
10.	IF Office	5234	08.03.2023	09.03.2023	1221.63	2000
11.	TMT Stock Yard	5235	08.03.2023	09.03.2023	1317.97	2000
12.	RML Gasifier	5236	08.03.2023	09.03.2023	1650.19	2000
<b>V. Power Plant 25 MW-1</b>						
13.	25 MW ESP	5628	09.03.2023	10.03.2023	1044.30	2000
14.	25 MW ACC	5285	10.03.2023	11.03.2023	1619.09	2000
<b>VI. Site Services</b>						
15.	PGP- coal handling system	5237	08.03.2023	09.03.2023	1392.68	2000
16.	IF Slag Crusher	5269	09.03.2023	10.03.2023	1253.80	2000
17.	Main Gate	5286	10.03.2023	11.03.2023	1616.26	2000
18.	Fly ash Dump	5196	06.03.2023	07.03.2023	2318.21	2000

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

SL NO	INSTRUMENT DETAILS	GEMS-01	GEMS-02	GEMS-03	GEMS-04	GEMS-05
1	Instrument Name	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler
2	Make & Model	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151
3	Serial No	RDS / 241-DTC-2020	RDS / 243-DTL-2020	RDS / 244-DTL-2020	RDS / 193-DTH-2019	RDS / 197-DTH-2019
4	Calibration Date	01.04.2022	01.04.2022	01.04.2022	01.04.2022	01.04.2022
5	Calibration Due Date	31.03.2023	31.03.2023	31.03.2023	31.03.2023	31.03.2023



*K. Suvama*  
Authorised Signatory  
**K. Suvama**  
Quality Manager

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## TEST REPORT

ANNEXURE-08

### FORTNIGHTLY FUGITIVE AIR QUALITY MONITORING DATA

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY23/RO73
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	:	<b>MARCH-2023(2<sup>nd</sup> Fort Night)</b>
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	<b>06.04.2023</b>
10	Report Number	:	<b>PAL/BMM/2022-23/1129</b>

### RESULTS

Sl. NO.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ( $\mu\text{g}/\text{m}^3$ )	Standard
<b>I. Beneficiation Plant-1</b>						
1.	Main Canteen	5486	23.03.2023	24.03.2023	1077.87	2000
2.	Main Crusher	5484	23.03.2023	24.03.2023	1306.21	2000
3.	Iron Ore Screen	5485	23.03.2023	24.03.2023	1625.80	2000
<b>II. Pellet Plant-I</b>						
4.	Near Pellet Plant	5487	23.03.2023	24.03.2023	1766.15	2000
5.	Annual Cooler Pellet Discharge bin	5488	23.03.2023	24.03.2023	976.26	2000
6.	Pellet Stock Yard	5524	24.03.2023	25.03.2023	1754.69	2000
<b>III. Sponge Iron Division-1(kiln 1 &amp; 2)</b>						
7.	Control Room SID-I	5559	25.03.2023	26.03.2023	2047.22	2000
8.	Near Product bin	5560	25.03.2023	26.03.2023	1219.63	2000
9.	Coal Feeding Area	5561	25.03.2023	26.03.2023	2763.76	2000
<b>IV. Induction Furnace &amp; Rolling Mill - 1</b>						
10.	IF Office	5525	24.03.2023	25.03.2023	2462.74	2000
11.	TMT Stock Yard	5526	24.03.2023	25.03.2023	2089.91	2000
12.	RML Gasifier	5527	24.03.2023	25.03.2023	1284.19	2000
<b>V. Power Plant 25 MW-1</b>						
13.	25 MW ESP	5563	25.03.2023	26.03.2023	932.78	2000
14.	25 MW ACC	5603	27.03.2023	28.03.2023	796.00	2000
<b>VI. Site Services</b>						
15.	PGP- Coal handling system	5528	24.03.2023	28.03.2023	1078.63	2000
16.	IF Slag Crusher	5562	25.03.2023	26.03.2023	1471.89	2000
17.	Main Gate	5604	27.03.2023	28.03.2023	516.55	2000
18.	Fly ash Dump	5466	21.03.2023	22.03.2023	705.41	2000

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

Sl. NO	INSTRUMENT DETAILS	GEMS-01	GEMS-02	GEMS-03	GEMS-04	GEMS-05
1	Instrument Name	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler
2	Make & Model	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151
3	Serial No	RDS / 241-DTC-2020	RDS / 243-DTL-2020	RDS / 244-DTL-2020	RDS / 193-DTH-2019	RDS / 197-DTH-2019
4	Calibration Date	01.04.2022	01.04.2022	01.04.2022	01.04.2022	01.04.2022
5	Calibration Due Date	31.03.2023	31.03.2023	31.03.2023	31.03.2023	31.03.2023



*K. Suvarna*  
Authorised Signatory  
**K. Suvarna**  
Quality Manager

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### TEST REPORT

ANNEXURE-09

#### Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY23/RO73
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhan Stack sampler/ VSS-1  
Sl.No: Stack Monitoring Kit/ 304-DTB-2007
- 5 Instrument Details : Calibration Date: 03.03.2023  
Calibration Due Date: 03.03.2024
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Sampling Location : Pellet Plant-1 ESP
- 10 Month of Sampling : MARCH-2023
- 11 Date of Sample Received : 08.03.2023 & 18.03.2023
- 12 Date of Sample Analysis : 08.03.2023 & 20.03.2023
- 13 Date Sample Analysis Completion : 09.03.2023 & 20.03.2023
- 14 Report Issued Date : 06.04.2023
- 15 Report Number : ULR-TC619323000001116F

#### 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	Result		Permissible Limit
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				07.03.2023	18.03.2023	
	Date of Monitoring			5204	5422	
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	32	30	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	84	86	-
3	Velocity of Fuel Gas	IS: 11255 (Part 1) - 1985 (RA 2014)	m/sec	6.15	5.92	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m <sup>3</sup> /hr	336689	324098	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm <sup>3</sup> /hr	281601	269205	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	37.47	39.66	150
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm <sup>3</sup>	75.20	68.40	100
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	38.68	33.45	50

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

Reviewed by



Authorised Signatory  
**K. Suvama**  
Quality Manager

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## TEST REPORT

ANNEXURE-09

### Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/RO73
3	Sample collected by	: GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VSS-1 Sl.No: Stack Monitoring Kit/ 304-DTB-2007
5	Instrument Details	: Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: Pellet Plant-1 ESP
10	Month of Sampling	: MARCH-2023
11	Date of Sample Received	: 08.03.2023 & 18.03.2023
12	Date of Sample Analysis	: 08.03.2023 & 20.03.2023
13	Date Sample Analysis Completion	: 09.03.2023 & 20.03.2023
14	Report Issued Date	: 06.04.2023
15	Report Number	: PAL/BMM/2022-23/1116

### 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	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
				07.03.2023	18.03.2023	
9	Carbon Monoxide	GEMS/SOP/69	%	5204	5422	-
				0.017	0.017	-

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



*K. Suvama*  
Authorised Signatory  
K. Suvama  
Quality Manager

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

### ANNEXURE-10

#### Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY23/RO73
3	Sample collected by	:	GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ VSS-1 Sl.No: Stack Monitoring Kit/ 304-DTB-2007
5	Instrument Details	:	Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	:	2X110 TPD Sponge iron plant Kiln 1 & 2
10	Month of Sampling	:	MARCH-2023
11	Date of Sample Received	:	15.03.2023&18.03.2023
12	Date of Sample Analysis	:	15.03.2023&18.03.2023
13	Date Sample Analysis Completion	:	16.03.2023&20.03.2023
14	Report Issued Date	:	06.04.2023
15	Report Number	:	ULR-TC619323000001117F

#### Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	60.0
3	Stack Diameter (mtr)	2.00

#### Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
				14.03.2023	17.02.2023	
	Date of Monitoring					
	Sample Code			5346	5401	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	30	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	172	175	-
3	Velocity of Fuel Gas	IS: 11255 (Part 1) - 1985 (RA 2014)	m/sec	6.39	6.24	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m³/hr	72279	70582	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm³/hr	48415	46950	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm³	43.78	29.25	150
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm³	63.40	55.62	100
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm³	42.70	36.70	50

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

Reviewed by



→ K. Suvama  
Authorised Signatory  
K. Suvama  
Quality Manager

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## TEST REPORT

ANNEXURE-10

### Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY23/RO73
3	Sample collected by	:	GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ VSS-1 Sl.No: Stack Monitoring Kit/ 304-DTB-2007
5	Instrument Details	:	Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	:	2X110 TPD Sponge iron plant Kiln 1 & 2
10	Month of Sampling	:	MARCH-2023
11	Date of Sample Received	:	15.03.2023&18.03.2023
12	Date of Sample Analysis	:	15.03.2023&18.03.2023
13	Date Sample Analysis Completion	:	16.03.2023&20.03.2023
14	Report Issued Date	:	06.04.2023
15	Report Number	:	PAL/BMM/2022-23/1117

### Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	60.0
3	Stack Diameter (mtr)	2.00

### Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				14.03.2023	17.02.2023	
9	Carbon Monoxide	GEMS/SOP/69	%	5346	5401	-
				0.364	0.458	

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



*K. Suvarna*  
Authorised Signatory  
**K. Suvarna**  
Quality Manager

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-11

### Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District
2	Customer Reference	:	WO/ADMIN/FY23/R073
3	Sample collected by	:	GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ <b>VSS-1</b> Sl.No: Stack Monitoring Kit/ <b>304-DTB-2007</b>
5	Instrument Details	:	Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	:	<b>Induction Furnace 1 &amp; 2</b>
10	Month of Sampling	:	<b>MARCH-2023</b>
11	Date of Sample Received	:	-
12	Date of Sample Analysis	:	-
13	Date Sample Analysis Completion	:	-
14	Report Issued Date	:	<b>06.04.2023</b>
15	Report Number	:	-

### Stack Details

1	Fuel Used	Electric Power
2	Stack Height (mtr)	30.0
3	Stack Diameter (mtr)	1.0

### Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				-	-	
	Date of Monitoring			-	-	
	Sample Code			-	-	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	Under Maintenance		-
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) (RA 2014)	m <sup>3</sup> /hr			-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm <sup>3</sup> /hr			-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>			<b>100</b>
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm <sup>3</sup>			<b>NS</b>
8	Nitrogen Dioxide	IS: 11255 (Part 7): 2005 (RA 2017)	mg/Nm <sup>3</sup>			<b>NS</b>

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

Reviewed by



Authorised Signatory  
**K. Suvana**  
Quality Manager

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## TEST REPORT

ANNEXURE-12

### Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District
2	Customer Reference	: WO/ADMIN/FY23/R073
3	Sample collected by	: GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VSS-1 Sl.No: Stack Monitoring Kit/ 304-DTB-2007
5	Instrument Details	: Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: Rolling mill reheating furnace
10	Month of Sampling	: MARCH-2023
11	Date of Sample Received	: 14.03.2023 & 25.03.2023
12	Date of Sample Analysis	: 14.03.2023 & 27.03.2023
13	Date Sample Analysis Completion	: 15.03.2023 & 28.03.2023
14	Report Issued Date	: 06.04.2023
15	Report Number	: ULR-TC619323000001118F

### 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
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				13.03.2023	25.03.2023	
	Date of Monitoring					
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	5328	5556	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	30	33	-
3	Velocity of Fuel Gas	IS: 11255 (Part 1) - 1985 (RA 2014)	m/sec	367	363	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m <sup>3</sup> /hr	7.73	7.48	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm <sup>3</sup> /hr	13990	13537	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	6509	6342	-
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm <sup>3</sup>	112.30	123.20	100
8	Nitrogen Dioxide	IS: 11255 (Part 7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	34.50	41.30	270
				309.0	317.0	50

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

Reviewed by



Authorised Signatory  
**K. Suvarna**  
Quality Manager

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## TEST REPORT

ANNEXURE-12

### Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District
2	Customer Reference	: WO/ADMIN/FY23/R073
3	Sample collected by	: GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VSS-1 Sl.No: Stack Monitoring Kit/ 304-DTB-2007
5	Instrument Details	: Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: Rolling mill reheating furnace
10	Month of Sampling	: MARCH-2023
11	Date of Sample Received	: 14.03.2023 & 25.03.2023
12	Date of Sample Analysis	: 14.03.2023 & 27.03.2023
13	Date Sample Analysis Completion	: 15.03.2023 & 28.03.2023
14	Report Issued Date	: 06.04.2023
15	Report Number	: PAL/BMM/2022-23/1118

### 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
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				13.03.2023	25.03.2023	
9	Carbon Monoxide	GEMS/SOP/69	%	5328	5556	-
				0.177	0.102	

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



*K. Suvarna*  
Authorised Signatory  
**K. Suvarna**  
Quality Manager

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## TEST REPORT

ANNEXURE-13

### Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District
2	Customer Reference	:	WO/ADMIN/FY23/R073
3	Sample collected by	:	GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ <b>VSS-1</b> Sl.No: Stack Monitoring Kit/ <b>304-DTB-2007</b>
5	Instrument Details	:	Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	:	<b>AFBC Boiler ESP (25 MW Power Plant)</b>
10	Month of Sampling	:	<b>MARCH-2023</b>
11	Date of Sample Received	:	-
12	Date of Sample Analysis	:	-
13	Date Sample Analysis Completion	:	-
14	Report Issued Date	:	<b>06.04.2023</b>
15	Report Number	:	

### 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 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
	Date of Monitoring Sample Code			-	-	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	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) (RA 2014)	m <sup>3</sup> /hr			-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm <sup>3</sup> /hr			-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>			50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm <sup>3</sup>			600
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>			300

Note: NS- Not Specified. RA: Reaffirmed,

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Authorised Signatory  
**K. Suvarna**  
Quality Manager

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## TEST REPORT

ANNEXURE-14

### Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/RO73
3	Sample collected by	: GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VSS-1 Sl.No: Stack Monitoring Kit/ 304-DTB-2007
5	Instrument Details	: Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Date of Analysis Completion	: MARCH-2023 (1 <sup>st</sup> Fort Night)
10	Date of Sample Received	: 10.03.2023, 11.03.2023 & 11.03.2023
11	Date of Sample Analysis	: 10.03.2023, 11.03.2023 & 13.03.2023
12	Date Sample Analysis Completion	: 11.03.2023, 13.03.2023 & 13.03.2023
13	Report Issued Date	: 06.04.2023
14	Report Number	: ULR-TC619323000001119F

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 <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant											
1	Ore Crushing & Screening	10.03.2023	5284	-	32	42	4.88	30	0.40	20.98	50
2	Ore Fines Hopper Bottom	11.03.2023	5304	-	30	40	4.92	30	0.40	19.68	50
3	Main Crusher (RMHS)	09.03.2023	5264	-	33	43	4.57	25	0.50	16.03	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
1	Ore Crushing & Screening	2208	2084	-
2	Ore Fines Hopper Bottom	2226	2117	-
3	Main Crusher (RMHS)	3231	3052	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	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)

S

Reviewed by



*K. Suvama*

Authorised Signatory  
**K. Suvama**

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## TEST REPORT

ANNEXURE-15

### Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY23/RO73
3	Sample collected by	:	GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ <b>VSS-1</b> Sl.No: Stack Monitoring Kit/ <b>304-DTB-2007</b>
5	Instrument Details	:	Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Date of Analysis Completion	:	<b>MARCH-2023 (1<sup>st</sup> Fort Night)</b>
10	Date of Sample Received	:	08.03.2023 & 09.03.2023
11	Date of Sample Analysis	:	08.03.2023 & 09.03.2023
12	Date Sample Analysis Completion	:	09.03.2023 & 10.03.2023
13	Report Issued Date	:	<b>06.04.2023</b>
14	Report Number	:	<b>ULR-TC619323000001120F</b>

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 <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant -I											
4	Mixed Area	07.03.2023	5205	---	33	37	4.75	3.0	0.30	23.11	50
5	Pellet Discharge Point	08.03.2023	5231	---	34	43	5.06	7.0	0.50	33.23	50
6	Production Transfer Point (AGB)	07.03.2023	5206	---	33	38	4.35	6.5	0.60	30.51	50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
4	Mixed Area	1209	1162	-
5	Pellet Discharge Point	3577	3377	-
6	Product Transfer Point (AGB)	4428	4235	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	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)

Reviewed by



Authorised Signatory  
**K. Suvana**  
Quality Manager

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## TEST REPORT

ANNEXURE-16

### Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY23/RO73
3	Sample collected by	:	GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ <b>VSS-1</b> Sl.No: Stack Monitoring Kit/ <b>304-DTB-2007</b>
5	Instrument Details	:	Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Date of Analysis Completion	:	<b>MARCH-2023 (1<sup>st</sup> Fort Night)</b>
10	Date of Sample Received	:	16.03.2023
11	Date of Sample Analysis	:	16.03.2023
12	Date Sample Analysis Completion	:	17.03.2023
13	Report Issued Date	:	<b>06.04.2023</b>
14	Report Number	:	<b>ULR-TC619323000001121F</b>

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 <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
2 X 100 TPD Sponge Iron Kiln 1 & 2											
7	Cooler Discharge -1	15.03.2023	5361	---	31	36	4.30	30	1.20	27.91	50
8	Cooler Discharge -2	15.03.2023	5362	---	32	37	4.51	30	1.20	30.52	50
9	Coal Crusher	-	-	---	-	-	-	30	1.20	-	50
10	Production Separation Bin (PSB)	15.03.2023	5363	---	33	38	4.69	30	1.20	33.00	50
11	Intermediate Bin	15.03.2023	5364	---	33	39	4.87	30	1.20	29.59	50

Sl. No	2 X 100 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
7	Cooler Discharge -1	17510	16869	-
8	Cooler Discharge -2	18365	17619	-
9	Coal Crusher	-	-	-
10	Production Separation Bin (PSB)	19098	18208	-
11	Intermediate Bin	19831	18839	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	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)

Reviewed by



Authorised Signatory  
**K. Suvarna**  
Quality Manager

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## TEST REPORT

ANNEXURE-17

### Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY23/RO73
3	Sample collected by	:	GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ <b>VSS-1</b> Sl.No: Stack Monitoring Kit/ <b>304-DTB-2007</b>
5	Instrument Details	:	Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Date of Analysis Completion	:	<b>MARCH-2023 (2<sup>ND</sup> Fort Night)</b>
10	Date of Sample Received	:	17.03.2023
11	Date of Sample Analysis	:	17.03.2023
12	Date Sample Analysis Completion	:	18.03.2023
13	Report Issued Date	:	<b>06.04.2023</b>
14	Report Number	:	<b>ULR-TC619323000001122F</b>

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 <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant											
1	Ore Crushing & Screening	16.03.2023	5383	---	32	37	4.88	30	0.40	21.99	50
2	Ore Fines Hopper Bottom	16.03.2023	5384	---	33	38	4.84	30	0.40	23.37	50
3	Main Crusher (RMHS)	16.03.2023	5385	---	31	36	4.94	25	0.50	16.98	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
1	Ore Crushing & Screening	2208	2120	-
2	Ore Fines Hopper Bottom	2190	2093	-
3	Main Crusher (RMHS)	3492	3370	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	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)

Reviewed by



Authorised Signatory  
**K. Suvama**  
Quality Manager

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## TEST REPORT

ANNEXURE-18

### Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/RO73
3	Sample collected by	: GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	: Vayubodhan Stack sampler/ <b>VSS-1</b> Sl.No: Stack Monitoring Kit/ <b>304-DTB-2007</b>
5	Instrument Details	: Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Date of Analysis Completion	: <b>MARCH-2023 (2<sup>ND</sup> Fort Night)</b>
10	Date of Sample Received	: 18.03.2023 & 21.03.2023
11	Date of Sample Analysis	: 20.03.2023 & 21.03.2023
12	Date Sample Analysis Completion	: 20.03.2023 & 23.03.2023
13	Report Issued Date	: <b>06.04.2023</b>
14	Report Number	: <b>ULR-TC619323000001123F</b>

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 <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant-I											
4	Mixed Area	20.03.2023	5442	---	32	38	4.81	3.0	0.30	34.55	50
5	Pellet Discharge Point	18.03.2023	5424	---	33	41	4.96	7.0	0.50	31.24	50
6	Production Transfer Point (AGB)	20.03.2023	5443	---	32	39	4.51	6.5	0.60	31.14	50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
4	Mixed Area	1224	1171	-
5	Pellet Discharge Point	3506	3322	-
6	Production Transfer Point (AGB)	4591	4376	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	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)

Reviewed by



Authorised Signatory  
**K. Suvarna**

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## TEST REPORT

ANNEXURE-19

### Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY23/RO73
3	Sample collected by	:	GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ VSS-1 Sl.No: Stack Monitoring Kit/ 304-DTB-2007
5	Instrument Details	:	Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Date of Analysis Completion	:	MARCH-2023 (2 <sup>ND</sup> Fort Night)
10	Date of Sample Received	:	18.03.2023 & 18.03.2023
11	Date of Sample Analysis	:	20.03.2023 & 20.03.2023
12	Date Sample Analysis Completion	:	21.03.2023 & 21.03.2023
13	Report Issued Date	:	06.04.2023
14	Report Number	:	ULR-TC619323000001124F

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 <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
2 X 100 TPD Sponge Iron Kiln 1 & 2											
7	Cooler Discharge -1	17.03.2023	5402	---	31	36	4.37	30	1.20	27.88	50
8	Cooler Discharge -2	17.03.2023	5403	---	32	38	4.49	30	1.20	28.82	50
9	Coal Crusher	-	-	---	-	-	-	30	1.20	-	50
10	Transfer House-PSB	17.03.2023	5404	---	33	39	4.74	30	1.20	33.56	50
11	Intermediate Bin	18.03.2023	5423	---	33	38	4.51	30	1.20	28.27	50

Sl. No	2 X 100 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
7	Cooler Discharge -1	17795	17166	-
8	Cooler Discharge -2	18283	17501	-
9	Coal Crusher	-	-	-
10	Transfer House-PSB	19301	18381	-
11	Intermediate Bin	18365	17539	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	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)

Reviewed by



Authorised Signatory  
R. Suvarna  
Quality Manager

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## TEST REPORT AMBIENT NOISE LEVEL MONITORING REPORT

ANNEXURE-20

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY23/RO73  
Sample collected by : Global Environment & Mining Services  
Discipline : Chemical  
Group : Atmospheric Pollution  
Sample Type : Noise Level Monitoring  
Particulars of Sample Collected : Equinox-107  
Sl. No: 110706604  
Instrument Details : Calibration Date: 24.05.2022  
Calibration Due Date: 23.05.2023  
Month : MARCH-2023  
Report Issue Date : 06.04.2023  
Method Adopted : IS 9989-1981 Reaffirmed 2014  
Report No : ULR-TC619323000001125F

Sl. No	Location	Date of Monitoring	Noise Level dB (A)					
			Day Time		Standard	Night Time		Standard
			Min	Max		Min	Max	
1	Main Gate	01.03.2023	49.6	67.7	75	43.4	62.8	70
2	Near ATM	01.03.2023	45.9	52.8	75	44.9	55.1	70
3	Transit House	02.03.2023	52.7	58.9	75	45.8	56.4	70
4	CAAQMS Station	02.03.2023	51.9	63.4	75	43.1	60.9	70
5	Gunda Road	03.03.2023	42.5	62.8	75	44.6	53.5	70
6	Gunda Railway Station	03.03.2023	42.8	48.6	75	39.5	51.8	70
7	Bagging Shed	04.03.2023	56.1	68.5	75	48.8	62.4	70
8	Railway Siding	04.03.2023	43.7	54.1	75	40.5	58.3	70
9	4th Gate	06.03.2023	41.2	51.3	75	39.8	49.8	70
10	Bricks Plant	06.03.2023	40.9	53.8	75	39.1	52.5	70
11	Kempuhalla (Wagon Tippler)	07.03.2023	47.2	56.7	75	38.9	49.6	70
12	Danapura Bridge	07.03.2023	41.3	53.4	75	42.7	49.1	70
13	2nd Gate	08.03.2023	53.8	63.8	75	40.5	61.5	70
14	Project Store	08.03.2023	55.5	64.9	75	41.6	60.7	70
15	Dispatch (Truck Parking Area)	09.03.2023	57.1	69.1	75	45.1	64.6	70

**INFERENCE** As per CPCB Standards,  
Report Status: - Measured Values for the above parameters are within the limit.

Reviewed by



Authorised Signatory  
**K. Suvama**  
Quality Manager

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## TEST REPORT AMBIENT NOISE LEVEL MONITORING REPORT

ANNEXURE-21

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
 Customer Reference : WO/ADMIN/FY23/R073  
 Sample collected by : Global Environment & Mining Services  
 Discipline : Chemical  
 Group : Atmospheric Pollution  
 Sample Type : Noise Level Monitoring  
 Particulars of Sample Collected : Equinox-107  
 Instrument Details : Sl. No: 110706604  
 : Calibration Date: 24.05.2022  
 : Calibration Due Date: 23.05.2023  
 Month : MARCH-2023  
 Report Issue Date : 06.04.2023  
 Method Adopted : IS 9989-1981 Reaffirmed 2014  
 Report No : ULR-TC619323000001126F

Sl. No	Location	Date of Monitoring	Noise Level dB (A)					
			Day Time		Standard	Night Time		Standard
			Min	Max		Min	Max	
1	Main Gate	16.03.2023	57.1	69.1	75	47.3	51.4	70
2	Near ATM	16.03.2023	47.4	57.5	75	38.5	55.8	70
3	Transit House	17.03.2023	56.5	68.7	75	41.7	53.7	70
4	CAAQMS Station	17.03.2023	52.3	59.3	75	43.5	52.6	70
5	Gunda Road	18.03.2023	48.4	58.5	75	39.8	44.9	70
6	Gunda Railway Station	18.03.2023	46.1	52.1	75	38.9	42.4	70
7	Bagging Shed	20.03.2023	40.5	48.4	75	49.8	61.5	70
8	Railway Siding	20.03.2023	56.8	70.8	75	43.7	51.7	70
9	4th Gate	21.03.2023	43.7	54.1	75	40.5	50.9	70
10	Bricks Plant	21.03.2023	41.2	51.3	75	39.9	46.2	70
11	Kempuhalla (Wagon Tippler)	23.03.2023	40.9	53.8	75	38.8	47.5	70
12	Danapura Bridge	23.03.2023	47.2	56.7	75	37.5	48.2	70
13	2nd Gate	24.03.2023	41.3	53.4	75	40.1	56.3	70
14	Project Store	24.03.2023	53.8	63.8	75	45.6	57.4	70
15	Dispatch (Truck Parking Area)	24.03.2023	55.5	64.9	75	50.7	60.2	70

**INFERENCE** As per CPCB Standards,  
 Report Status: - Measured Values for the above parameters are within the limit.

Reviewed by



Authorised Signatory  
 R. Suvarna  
 Quality Manager

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### TEST REPORT AMBIENT NOISE LEVEL MONITORING REPORT

ANNEXURE-22

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY23/R073  
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: 02.11.2022  
Calibration Due Date: 01.11.2023  
Month : MARCH-2023  
Report Issue Date : 06.04.2023  
Method Adopted : IS 9989-1981 Reaffirmed 2014  
Report No : ULR-TC619323000001127F

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	09.03.2023	42.9	55.6	51.71	55	36.9	42.6	38.41	45
2	MariyammanaHalli	10.03.2023	44.5	53.9	50.01		39.2	41.9	39.68	
3	HanumanaHalli	11.03.2023	39.4	51.0	45.92		36.4	43.3	40.25	
4	Galemmanagudi	13.03.2023	41.3	54.1	50.12		37.1	44.1	40.64	
5	GundaVillage	14.03.2023	41.3	52.7	48.13		36.8	42.4	40.10	
6	GundaTanda Village	15.03.2023	40.7	49.5	44.67		37.1	42.1	39.82	

**INFERENCE** As per CPCB Standards,  
Report Status: - Measured Values for the above parameters are within the limit.

#### 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

Reviewed by



Authorised Signatory  
**K. Suvarna**  
Quality Manager

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## TEST REPORT

ANNEXURE-23

### Analysis Report of Water Quality Data

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY23/RO73
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	:	5305
10	Date of Sampling	:	11.03.2023
11	Sample Received	:	11.03.2023
12	Date of Analysis	:	11.03.2023
13	Date of Analysis Completion	:	17.03.2023
14	Report Issue Date	:	06.04.2023
15	Report Number	:	ULR-TC619323000001129F

### Results

Sl. No.	Parameters	Protocol APHA 23rd Edition 2017	Unit	Danapur Village (GW1)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	4500 H+ B (Pg. No.4-95 to 4-99)	-	7.11	6.5 to 8.5	NR
2.	Conductivity	2510 A (Pg. No.2-56 to 2-58)	µS/cm	2400	-	-
3.	Total Dissolved Solids	2540 C (Pg. No.2-69 to 2-70)	mg/L	1536	500	2000
4.	Turbidity (NTU)	2130 B (Pg. No.2-13 to 2-15)	NTU	0.3	1	5
5.	Total Suspended Solids	2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO <sub>4</sub>	4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	179.14	200	400
7.	Phosphorus as P	4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	344.70	-	-
9.	Potassium as K	K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	113.60	75	200
11.	Magnesium as Mg	3500-B Mg By calculation (Pg. No.3-86)	mg/L	63.91	30	100
12.	Total Hardness as CaCO <sub>3</sub>	2340 C (Page No. 2-48 to 2-50)	mg/L	547.04	200	600
13.	Chloride as Cl	4500 Cl- (Page No. 4-75 to 4-76)	mg/L	479.28	250	1000
14.	Color	2120 C (Pg. No. 2-7 to 2-8)	Hazen	<5	5	15
15.	Nitrate Nitrogen as NO <sub>3</sub>	4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	9.62	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	2320 B (Pg. No.2-37 to 2-39)	mg/L	508.80	200	600
17.	Acidity as CaCO <sub>3</sub>	2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.12	0.30	NR

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

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

Reviewed by



Authorised Signatory  
K. Suvarna  
Quality Manager

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## TEST REPORT

ANNEXURE-23

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, HosapeteTaluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/R073
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	: 5305
10	Date of Sampling	: 11.03.2023
11	Sample Received	: 11.03.2023
12	Date of Analysis	: 11.03.2023
13	Date of Analysis Completion	: 17.03.2023
14	Report Issue Date	: 06.04.2023

### Results

Sl. No	Parameters	Protocol	Unit	DanapurVillage (GW1)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.65	1	1.5
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	<0.001	0.003	NR
3.	Total Coli form count	APHA 23 <sup>rd</sup> Edition 9222-B (p.no.9-82) Membrane filter technique	MPN/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	APHA 23 <sup>rd</sup> Edition 9222 (p.no.9-82) Membrane filter technique	MPN/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-
5.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
6.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
7.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.263	0.05	1.50
8.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.246	5	15
9.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
10.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
11.	Chromium as Cr	APHA 23 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.05	0.05	NR

Note: Ab: Absent, NR: No Relaxation



*K. Suvama*

Authorised Signatory

**K. Suvama**

Quality Manager

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TC-6193

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(Environment Monitoring & Minerals Testing Services)

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Amaravathi, HOSAPETE - 583 201, Ballari Dist., Karnataka.

Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-24

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/RO73
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	: 5307
10	Date of Sampling	: 11.03.2023
11	Sample Received	: 11.03.2023
12	Date of Analysis	: 11.03.2023
13	Date of Analysis Completion	: 17.03.2023
14	Report Issue Date	: 06.04.2023
15	Report Number	: ULR-TC619323000001130F

### Results

Sl. No	Parameters	Protocol APHA 23 <sup>rd</sup> Edition 2017	Unit	Hanumanahalli Village (GW2)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	4500 H+ B (Pg. No.4-95 to 4-99)	-	7.28	6.5 to 8.5	NR
2.	Conductivity	2510 A (Pg. No.2-56 to 2-58)	µS/cm	2600	-	-
3.	Total Dissolved Solids	2540 C (Pg. No.2-69 to 2-70)	mg/L	1664	500	2000
4.	Turbidity (NTU)	2130 B (Pg. No.2-13 to 2-15)	NTU	0.2	1	5
5.	Total Suspended Solids	2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO <sub>4</sub>	4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	176.75	200	400
7.	Phosphorus as P	4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	514.95	-	-
9.	Potassium as K	K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	100.80	75	200
11.	Magnesium as Mg	3500-B Mg By calculation (Pg. No.3-86)	mg/L	75.23	30	100
12.	Total Hardness as CaCO <sub>3</sub>	2340 C (Page No. 2-48 to 2-50)	mg/L	561.60	200	600
13.	Chloride as Cl	4500 Cl- (Page No. 4-75 to 4-76)	mg/L	599.10	250	1000
14.	Color	2120 C (Pg. No. 2-7 to 2-8)	Hazen	<5	5	15
15.	Nitrate Nitrogen as NO <sub>3</sub>	4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	18.82	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	2320 B (Pg. No.2-37 to 2-39)	mg/L	520.32	200	600
17.	Acidity as CaCO <sub>3</sub>	2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.14	0.30	NR

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

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

Reviewed by



Authorised Signatory  
K. Suvama  
Quality Manager

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(Environment Monitoring & Minerals Testing Services)

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-24

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/R073
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	: 5307
10	Date of Sampling	: 11.03.2023
11	Sample Received	: 11.03.2023
12	Date of Analysis	: 11.03.2023
13	Date of Analysis Completion	: 17.03.2023
14	Report Issue Date	: 06.04.2023

### Results

Sl. No	Parameters	Protocol	Unit	Hanumanahalli Village (GW2)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.72	1	1.5
2.	Cadmium as Cd	APHA-23RD Edition-3111-B (Pg No.3-20 to 3-21)	mg/L	<0.001	0.003	NR
3.	Total Coli form count	APHA 23 <sup>rd</sup> Edition 9222-B (p.no.9-82) Membrane filter technique	MPN/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	APHA 23 <sup>rd</sup> Edition 9222 (p.no.9-82) Membrane filter technique	MPN/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-
5.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
6.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
7.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.323	0.05	1.50
8.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.092	5	15
9.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
10.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
11.	Chromium as Cr	APHA 23 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.05	0.05	NR

Note: Ab: Absent, NR: No Relaxation



*[Signature]*  
Authorised Signatory  
K. Suvarna  
Quality Manager

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-25

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/RO73
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	: 5308
10	Date of Sampling	: 11.03.2023
11	Sample Received	: 11.03.2023
12	Date of Analysis	: 11.03.2023
13	Date of Analysis Completion	: 17.03.2023
14	Report Issue Date	: 06.04.2023
15	Report Number	: ULR-TC619323000001131F

### Results

Sl. No	Parameters	Protocol APHA 23 <sup>rd</sup> Edition 2017	Unit	Galemmana Gudi Village (GW3)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	4500 H+ B (Pg. No.4-95 to 4-99)	-	7.39	6.5 to 8.5	NR
2.	Conductivity	2510 A (Pg. No.2-56 to 2-58)	μS/cm	2000	-	-
3.	Total Dissolved Solids	2540 C (Pg. No.2-69 to 2-70)	mg/L	1280	500	2000
4.	Turbidity (NTU)	2130 B (Pg. No.2-13 to 2-15)	NTU	0.5	1	5
5.	Total Suspended Solids	2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO <sub>4</sub>	4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	115.16	200	400
7.	Phosphorus as P	4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	153.15	-	-
9.	Potassium as K	K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	112.0	75	200
11.	Magnesium as Mg	3500-B Mg By calculation (Pg. No.3-86)	mg/L	62.36	30	100
12.	Total Hardness as CaCO <sub>3</sub>	2340 C (Page No. 2-48 to 2-50)	mg/L	536.64	200	600
13.	Chloride as Cl	4500 Cl- (Page No. 4-75 to 4-76)	mg/L	391.72	250	1000
14.	Color	2120 C (Pg. No. 2-7 to 2-8)	Hazen	<5	5	15
15.	Nitrate Nitrogen as NO <sub>3</sub>	4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	8.58	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	2320 B (Pg. No.2-37 to 2-39)	mg/L	491.52	200	600
17.	Acidity as CaCO <sub>3</sub>	2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.16	0.30	NR

Note: GW3: GalemmanaGudi Village. NR-No relaxation. Ab-Absent.

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



Authorised Signatory  
**K. Suvarna**  
Quality Manager

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-25

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/RO73
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	: <b>5308</b>
10	Date of Sampling	: 11.03.2023
11	Sample Received	: 11.03.2023
12	Date of Analysis	: 11.03.2023
13	Date of Analysis Completion	: 17.03.2023
14	Report Issue Date	: <b>06.04.2023</b>

### Results

Sl. No	Parameters	Protocol	Unit	GalemmanaGudi Village (GW3)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	<b>0.96</b>	1	1.5
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	<b>&lt;0.001</b>	0.003	NR
3.	Total Coli form count	APHA 23 <sup>rd</sup> Edition 9222-B (p.no.9-82) Membrane filter technique	MPN/ 100 ml	<b>Ab</b>	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	APHA 23 <sup>rd</sup> Edition 9222 (p.no.9-82) Membrane filter technique	MPN/ 100 ml	<b>Ab</b>	Shall not be detectable in any 100ml sample	-
5.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.02</b>	0.02	NR
6.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.1</b>	0.10	0.30
7.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>0.264</b>	0.05	1.50
8.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>0.112</b>	5	15
9.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.01</b>	0.01	NR
10.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<b>&lt;0.01</b>	0.01	0.05
11.	Chromium as Cr	APHA 23 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<b>&lt;0.05</b>	0.05	NR

Note: Ab: Absent, NR: No Relaxation



*K. Suvama*  
Authorised Signatory  
**K. Suvama**  
Quality Manager

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## TEST REPORT

ANNEXURE-26

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/RO73
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	: 5306
10	Date of Sampling	: 11.03.2023
11	Sample Received	: 11.03.2023
12	Date of Analysis	: 11.03.2023
13	Date of Analysis Completion	: 17.03.2023
14	Report Issue Date	: 06.04.2023
15	Report Number	: ULR-TC619323000001132F

### Results

Sl. No	Parameters	Protocol APHA 23rd Edition 2017	Unit	Mariyammana Halli Village (GW4)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	4500 H+ B (Pg. No.4-95 to 4-99)	-	7.80	6.5 to 8.5	NR
2.	Conductivity	2510 A (Pg. No.2-56 to 2-58)	µS/cm	2100	-	-
3.	Total Dissolved Solids	2540 C (Pg. No.2-69 to 2-70)	mg/L	1344	500	2000
4.	Turbidity (NTU)	2130 B (Pg. No.2-13 to 2-15)	NTU	0.4	1	5
5.	Total Suspended Solids	2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO <sub>4</sub>	4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	206.65	200	400
7.	Phosphorus as P	4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	419.20	-	-
9.	Potassium as K	K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	106.50	75	200
11.	Magnesium as Mg	3500-B Mg By calculation (Pg. No.3-86)	mg/L	56.46	30	100
12.	Total Hardness as CaCO <sub>3</sub>	2340 C (Page No. 2-48 to 2-50)	mg/L	498.60	200	600
13.	Chloride as Cl	4500 Cl- (Page No. 4-75 to 4-76)	mg/L	321.40	250	1000
14.	Color	2120 C (Pg. No. 2-7 to 2-8)	Hazen	<5	5	15
15.	Nitrate Nitrogen as NO <sub>3</sub>	4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	10.60	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	2320 B (Pg. No.2-37 to 2-39)	mg/L	485.76	200	600
17.	Acidity as CaCO <sub>3</sub>	2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.17	0.30	NR

Note: GW4: Mariyammana Halli Village. NR-No relaxation. Ab-Absent.

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

Reviewed by



Authorised Signatory  
A. Suvama  
Quality Manager

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-26

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/R073
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	: <b>5306</b>
10	Date of Sampling	: 11.03.2023
11	Sample Received	: 11.03.2023
12	Date of Analysis	: 11.03.2023
13	Date of Analysis Completion	: 17.03.2023
14	Report Issue Date	: <b>06.04.2023</b>

### Results

Sl. No	Parameters	Protocol	Unit	Mariyammana Halli Village (GW4)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	<b>0.063</b>	1	1.5
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	<b>&lt;0.001</b>	0.003	NR
3.	Total Coli form count	APHA 23 <sup>rd</sup> Edition 9222-B (p.no.9-82) Membrane filter technique	MPN/ 100 ml	<b>Ab</b>	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	APHA 23 <sup>rd</sup> Edition 9222 (p.no.9-82) Membrane filter technique	MPN/ 100 ml	<b>Ab</b>	Shall not be detectable in any 100ml sample	-
5.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.02</b>	0.02	NR
6.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.1</b>	0.10	0.30
7.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>0.334</b>	0.05	1.50
8.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>0.075</b>	5	15
9.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.01</b>	0.01	NR
10.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<b>&lt;0.01</b>	0.01	0.05
11.	Chromium as Cr	APHA 23 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<b>&lt;0.05</b>	0.05	NR

Note: Ab: Absent, NR: No Relaxation



*[Signature]*

Authorised Signatory  
**K. Suvarna**  
Quality Manager

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# PREMIER ANALYTICAL LABORATORIES

(Environment Monitoring & Minerals Testing Services)  
ISO 9001 : 2015, 45001 : 2018 Certified & NABL Accredited Testing Laboratory (TC-6193)  
Near Old Ganesh Gas Godown, Beside Govt. Primary School,  
Amaravathi, HOSAPETE - 583 201, Ballari Dist., Karnataka.  
Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-27

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/R073
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	: 5309
10	Date of Sampling	: 11.03.2023
11	Sample Received	: 11.03.2023
12	Date of Analysis	: 11.03.2023
13	Date of Analysis Completion	: 17.03.2023
14	Report Issue Date	: 06.04.2023
15	Report Number	: ULR-TC619323000001133F

### Results

Sl. No	Parameters	Protocol APHA 23 <sup>rd</sup> Edition 2017	Unit	GundaThanda (GW5)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	4500 H+ B (Pg. No.4-95 to 4-99)	-	7.31	6.5 to 8.5	NR
2.	Conductivity	2510 A (Pg. No.2-56 to 2-58)	μS/cm	1160	-	-
3.	Total Dissolved Solids	2540 C (Pg. No.2-69 to 2-70)	mg/L	742	500	2000
4.	Turbidity (NTU)	2130 B (Pg. No.2-13 to 2-15)	NTU	0.3	1	5
5.	Total Suspended Solids	2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO <sub>4</sub>	4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	57.28	200	400
7.	Phosphorus as P	4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	100.88	-	-
9.	Potassium as K	K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	72.80	75	200
11.	Magnesium as Mg	3500-B Mg By calculation (Pg. No.3-86)	mg/L	39.67	30	100
12.	Total Hardness as CaCO <sub>3</sub>	2340 C (Page No. 2-48 to 2-50)	mg/L	345.28	200	600
13.	Chloride as Cl	4500 Cl- (Page No. 4-75 to 4-76)	mg/L	142.86	250	1000
14.	Color	2120 C (Pg. No. 2-7 to 2-8)	Hazen	<5	5	15
15.	Nitrate Nitrogen as NO <sub>3</sub>	4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	7.52	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	2320 B (Pg. No.2-37 to 2-39)	mg/L	336.0	200	600
17.	Acidity as CaCO <sub>3</sub>	2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.16	0.30	NR

Note: GW5: GundaThanda. NR-No relaxation. Ab-Absent.

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



Authorised Signatory  
**K. Suvama**  
Quality Manager

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-27

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/R073
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	: 5309
10	Date of Sampling	: 11.03.2023
11	Sample Received	: 11.03.2023
12	Date of Analysis	: 11.03.2023
13	Date of Analysis Completion	: 17.03.2023
14	Report Issue Date	: 06.04.2023

### Results

Sl. No	Parameters	Protocol	Unit	GundaThanda (GW5)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.58	1	1.5
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	<0.001	0.003	NR
3.	Total Coli form count	APHA 23 <sup>rd</sup> Edition 9222-B (p.no.9-82) Membrane filter technique	MPN/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	APHA 23 <sup>rd</sup> Edition 9222 (p.no.9-82) Membrane filter technique	MPN/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-
5.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
6.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
7.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.247	0.05	1.50
8.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.132	5	15
9.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
10.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
11.	Chromium as Cr	APHA 23rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.05	0.05	NR

Note: Ab: Absent, NR: No Relaxation



*[Signature]*  
Authorised Signatory  
**K. Suvarna**  
Quality Manager

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Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-28

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/R073
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	: <b>5310</b>
10	Date of Sampling	: 11.03.2023
11	Sample Received	: 11.03.2023
12	Date of Analysis	: 11.03.2023
13	Date of Analysis Completion	: 17.03.2023
14	Report Issue Date	: <b>06.04.2023</b>
15	Report Number	: <b>ULR-TC619323000001134F</b>

### Results

Sl. No	Parameters	Protocol APHA 23rd Edition 2017	Unit	Gunda Village (GW6)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	4500 H+ B (Pg. No.4-95 to 4-99)	-	<b>7.47</b>	6.5 to 8.5	NR
2.	Conductivity	2510 A (Pg. No.2-56 to 2-58)	μS/cm	<b>910</b>	-	-
3.	Total Dissolved Solids	2540 C (Pg. No.2-69 to 2-70)	mg/L	<b>582</b>	500	2000
4.	Turbidity (NTU)	2130 B (Pg. No.2-13 to 2-15)	NTU	<b>0.6</b>	1	5
5.	Total Suspended Solids	2540 D (Pg. No.2-70 to 2-71)	mg/L	<b>&lt;1.0</b>	-	-
6.	Sulphate as SO <sub>4</sub>	4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	<b>29.41</b>	200	400
7.	Phosphorus as P	4500-P D (Page No. 4-163 to 4-164)	mg/L	<b>Nil</b>	-	-
8.	Sodium as Na	Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	<b>95.11</b>	-	-
9.	Potassium as K	K 3500 B (Pg. No.3-89 to 3-90)	mg/L	<b>0.0</b>	-	-
10.	Calcium as Ca	3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	<b>54.4</b>	75	200
11.	Magnesium as Mg	3500-B Mg By calculation (Pg. No.3-86)	mg/L	<b>27.0</b>	30	100
12.	Total Hardness as CaCO <sub>3</sub>	2340 C (Page No. 2-48 to 2-50)	mg/L	<b>247.52</b>	200	600
13.	Chloride as Cl	4500 Cl- (Page No. 4-75 to 4-76)	mg/L	<b>92.17</b>	250	1000
14.	Color	2120 C (Pg. No. 2-7 to 2-8)	Hazen	<b>&lt;5</b>	5	15
15.	Nitrate Nitrogen as NO <sub>3</sub>	4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	<b>10.22</b>	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	2320 B (Pg. No.2-37 to 2-39)	mg/L	<b>243.84</b>	200	600
17.	Acidity as CaCO <sub>3</sub>	2320 B (Pg. No.2-34 to 2-36)	mg/L	<b>Nil</b>	-	-
18.	Total Iron as Fe	3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	<b>0.14</b>	0.30	NR

Note: GW6: Gunda Village. NR-No relaxation. Ab-Absent.

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



Authorised Signatory  
**K. Suvama**  
Quality Manager

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## TEST REPORT

ANNEXURE-28

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/R073
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	: <b>5310</b>
10	Date of Sampling	: 11.03.2023
11	Sample Received	: 11.03.2023
12	Date of Analysis	: 11.03.2023
13	Date of Analysis Completion	: 17.03.2023
14	Report Issue Date	: <b>06.04.2023</b>

### Results

Sl. No	Parameters	Protocol	Unit	Gunda Village (GW6)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	<b>0.74</b>	1	1.5
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	<b>&lt;0.001</b>	0.003	NR
3.	Total Coli form count	APHA 23 <sup>rd</sup> Edition 9222-B (p.no.9-82) Membrane filter technique	MPN/ 100 ml	<b>Ab</b>	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	APHA 23 <sup>rd</sup> Edition 9222 (p.no.9-82) Membrane filter technique	MPN/ 100 ml	<b>Ab</b>	Shall not be detectable in any 100ml sample	-
5.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.02</b>	0.02	NR
6.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.1</b>	0.10	0.30
7.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>0.286</b>	0.05	1.50
8.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>0.141</b>	5	15
9.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.01</b>	0.01	NR
10.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<b>&lt;0.01</b>	0.01	0.05
11.	Chromium as Cr	APHA 23 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<b>&lt;0.05</b>	0.05	NR

Note: Ab: Absent, NR: No Relaxation



*K. Suvarna*  
Authorised Signatory  
K. Suvarna  
Quality Manager

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## TEST REPORT

ANNEXURE-29

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/RO73
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	: 5311
10	Date of Sampling	: 11.03.2023
11	Sample Received	: 11.03.2023
12	Date of Analysis	: 11.03.2023
13	Date of Analysis Completion	: 17.03.2023
14	Report Issue Date	: 06.04.2023
15	Report Number	: PAL/BMM/2022-23/1140

### 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)	-	7.16	6.5 to 8.5	NR
2.	Conductivity	APHA 23rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	76	-	-
3.	Total Dissolved Solids	APHA 23rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	48	500	2000
4.	Turbidity (NTU)	APHA 23rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	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 <sub>4</sub>	APHA 23rd Edition 2017 4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	5.62	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	6.94	-	-
9.	Potassium as K	APHA 23rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	4.0	75	200
11.	Magnesium as Mg	APHA 23rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	1.61	30	100
12.	Total Hardness as CaCO <sub>3</sub>	APHA 23rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	16.64	200	600



*K. Suvarna*  
Authorised Signatory  
**K. Suvarna**  
Quality Manager

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## TEST REPORT

Sl. No	Parameters	Protocol	Unit	RO Drinking Water	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
13.	Chloride as Cl	APHA 23 <sup>rd</sup> Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	27.65	250	1000
14.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.14	1	1.5
15.	Nitrate Nitrogen as NO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	0.42	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	17.28	200	600
17.	Acidity as CaCO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23 <sup>rd</sup> 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 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.211	0.05	1.50
22.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.085	5	15
23.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 <sup>rd</sup> 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 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.05	0.05	NR
26.	Mercury as Hg	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	Nil	0.001	NR

Note: W: 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.
-----------	--



*K. Suvarna*  
Authorised Signatory  
K. Suvarna  
Quality Manager

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## TEST REPORT

### ANNEXURE-29

Sl. No	Parameters	Protocol	Unit	RO Drinking Water	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
27	colour	IS: 3025 (PART 4)- 1984, RA-2012 Platinum cobalt Method	Hazen	<5	5	15
28	Odour	IS: 3025 (PART 5)- 1983, RA-2012, True Odour	-	Agreeable	Agreeable	Agreeable
29	Total Residual chlorine	IS:3025 (part 26)-1986, RA-2003, Iodometric method	mg/L	Nil	0.2	1.0
30	Oil & Grease	Clause 6 of IS 3025 (Part 39) Infrared	mg/L	Nil	0.5	No Relaxation
31	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	<0.001	0.003	NR
32	Selenium as Se	APHA 23 <sup>rd</sup> Edition 3114 B. Direct Air Acetylene Flame Method	mg/L	<0.05	0.01	No Relaxation
33	Cyanides (as CN)	APHA 23 <sup>rd</sup> Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	NA	0.05	No Relaxation
34	Phenolic Compound as phenols	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	1.0	-
35	Anionic detergents (as MBAS)	APHA 23 <sup>rd</sup> Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	0.2	1.0
36	Boron as B	APHA 23 <sup>rd</sup> Edition 2017 4500 B-B (p.no.4-25 to 4-26)	mg/L	<0.5	0.5	1.0
37	Escherichia coli count	APHA 23 <sup>rd</sup> Edition 9222 (p.no.9-82) Membrane filter technique	MPN/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation,



*K. Suvana*  
Authorised Signatory  
**K. Suvana**  
Quality Manager

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# PREMIER ANALYTICAL LABORATORIES

(Environment Monitoring & Minerals Testing Services)  
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Amaravathi, HOSAPETE - 583 201, Ballari Dist., Karnataka.  
Tel. : 08394 - 228683 / email : premierlabhpt@gmail.com

## TEST REPORT

ANNEXURE-30

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/RO73
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	: <b>Sewage Treatment Plant (Outlet)</b>
9	Date of Sampling	: 04.03.2023&11.03.2023
10	Sample Received	: 04.03.2023&11.03.2023
11	Date of Analysis	: 06.03.2023&11.03.2023
12	Date of Analysis Completion	: 10.03.2023&17.03.2023
13	Report Issue Date	: <b>06.04.2023</b>
14	Report Number	: <b>ULR-TC619323000001135F</b>

Sl. No.	Parameters	Protocol APHA 23 <sup>rd</sup> Edition 2017	Unit	Results			As per KSPCB Std
				STP 45 KLD	STP-1 90 KLD	STP-2 90 KLD	
		<b>Sample code</b>	-	<b>5176</b>	<b>5312</b>	<b>5313</b>	
1.	pH	4500 H+ B (Pg. No.4-95 to 4-99)	-	7.49	7.20	7.29	6.5 to 8.5
2.	Total Suspended Solids	2540 D (Pg. No.2-70 to 2-71)	mg/L	6.10	7.22	8.02	<10
3.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	2.0	6.0	8.0	<10
4.	Chemical Oxygen Demand as COD	5220 C (Pg. No.5-18 to 5-19)	mg/L	17.04	22.40	24.632	<50
5.	Oil & Grease	5520 B (Pg. No.5-41 to 5-42)	mg/L	0.80	1.20	1.0	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

Reviewed by



Authorised Signatory  
**K. Suvama**  
Quality Manager

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## TEST REPORT

ANNEXURE-30

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/RO73
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	: <b>Sewage Treatment Plant (Outlet)</b>
9	Date of Sampling	: 04.03.2023&11.03.2023
10	Sample Received	: 04.03.2023&11.03.2023
11	Date of Analysis	: 06.03.2023&11.03.2023
12	Date of Analysis Completion	: 10.03.2023&17.03.2023
13	Report Issue Date	: <b>06.04.2023</b>

Sl. No.	Parameters	Protocol	Unit	Results			As per KSPCB Std
				STP 45 KLD	STP-1 90 KLD	STP-2 90 KLD	
		<b>Sample code</b>	-	5176	5312	5313	
1.	Color	APHA 23 <sup>RD</sup> Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	7	8	10	-
2.	Odour	IS: 3025 (PART 5)- 1983, RA-2012, True Odour	-	Agree able	Agree able	Agree able	-
3.	Cyanides (as CN)	APHA 23 <sup>RD</sup> Edition 4500 CN (Pg. No.4-45 to 4-46)	mg/L	BDL	BDL	BDL	-
4.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	BDL	-
5.	Chromium (as Cr <sup>6+</sup> )	APHA-23 <sup>RD</sup> 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	1.62	1.52	1.44	<5.0

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



*[Signature]*  
Authorised Signatory  
**K. Suvama**  
Quality Manager

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## TEST REPORT

ANNEXURE-31

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY23/RO73
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	: <b>Waste Water</b>
9	Date of Sampling	: 11.03.2023
10	Sample Received	: 11.03.2023
11	Date of Analysis	: 11.03.2023
12	Date of Analysis Completion	: 17.03.2023
13	Report Issue Date	: <b>06.04.2023</b>
14	Report Number	: <b>ULR-TC619323000001136F</b>

### Results

Results						
Sl. No.	Parameters	Protocol APHA 23 <sup>rd</sup> Edition 2017	Unit	Results		As per KSPCB Std
				Neutralization Pit 70 MW Power Plant	Neutralization Pit 2x70 MW Power Plant	
Sample Code				5314	5315	
1.	pH	4500 H+ B (Pg. No.4-95 to 4-99)	-	7.94	7.60	6.5 to 9.0
2.	Total Suspended Solids	2540 D (Pg. No.2-70 to 2-71)	mg/L	17.32	20.10	100
3.	Chemical Oxygen Demand as COD	5220 C (Pg. No.5-18 to 5-19)	mg/L	35.68	17.84	250
4.	Oil & Grease	5520 B (Pg. No.5-41 to 5-42)	mg/L	2.0	2.40	10

Note: BDL-Below detectable Limit.

INFERENCE: The Measured values are within the Limit.

Reviewed by



Authorised Signatory  
**K. Suvama**  
Quality Manager

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## TEST REPORT

ANNEXURE-32

### 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/FY23/RO73
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	:	<b>Surface Water</b>
9	Date of Sampling	:	11.03.2023
10	Sample Received	:	11.03.2023
11	Date of Analysis	:	11.03.2023
12	Date of Analysis Completion	:	17.03.2023
13	Report Issue Date	:	<b>06.04.2023</b>
14	Report Number	:	<b>ULR-TC619323000001137F</b>

### Results

Sl. No.	Parameters	Protocol APHA 23rd Edition 2017	Unit	Results		IS 2296 - 1982 CLASS - B
				Danayakanakere Upstream	Danayakanakere Downstream	
			Sample code	5316	5317	
1.	pH	4500 H+ B (Pg. No.4-95 to 4-99)	-	7.46	7.43	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	4500F D (Pg. No.4-90 to 4-91)	mg/L	0.26	0.29	1.5

Note: BDL-Below detectable Limit.

INFERENCE: The Measured values are within the Limit.

Reviewed by



Authorised Signatory  
**K. Suvarna**  
Quality Manager

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### TEST REPORT

ANNEXURE-32

#### 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/FY23/R073
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	: <b>Surface Water</b>
9	Date of Sampling	: 11.03.2023
10	Sample Received	: 11.03.2023
11	Date of Analysis	: 11.03.2023
12	Date of Analysis Completion	: 17.03.2023
13	Report Issue Date	: <b>06.04.2023</b>

Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS -B
				Danayakanakere Upstream	Danayakanakere Downstream	
Sample code			5316	5317		
1.	Dissolved Oxygen	APHA 23 <sup>RD</sup> Edition 4500 C (Pg. No.4-146)	mg/L	5.2	6.8	>5.0
2.	Color	APHA 23 <sup>RD</sup> Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	6	5	300
3.	Cyanides (as CN)	APHA 23 <sup>RD</sup> Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	BDL	BDL	0.05
4.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	0.005
5.	Chromium (as Cr <sup>6+</sup> )	APHA-23 <sup>RD</sup> Edition-3500 Cr B (Pg. No.3-71 to 3-72)	mg/L	<0.001	<0.001	1.0
6.	Anionic detergents (as MBAS)	APHA 23 <sup>RD</sup> Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	BDL	1.0
7.	Arsenic as As	APHA-23 <sup>RD</sup> Edition-3114 -B (Pg. No.3 -36 to 3-40)	mg/L	<0.1	<0.1	0.2
8.	Total Coliform Organisms					
	Total Coli forms	APHA 23 <sup>RD</sup> Edition 9221-C (Pg. No.9-72 to 9-74)	MPN/ 100 ml	Absent	Absent	500
	Escherichia coli or E. coli	APHA 23 <sup>RD</sup> Edition 9221-F (Pg. No.9-78 to 9-79)	MPN/ 100 ml	Absent	Absent	-

Note: BDL-Below detectable Limit.

INFERENCE: The Measured values are within the Limit.



*K. Suvama*  
Authorised Signatory  
**K. Suvama**  
Quality Manager

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## TEST REPORT

ANNEXURE-33

### 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/FY23/R073
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	: <b>Surface Water</b>
9	Date of Sampling	: 11.03.2023
10	Sample Received	: 11.03.2023
11	Date of Analysis	: 11.03.2023
12	Date of Analysis Completion	: 17.03.2023
13	Report Issue Date	: <b>06.04.2023</b>
14	Report Number	: <b>ULR-TC619323000001138F</b>

### Results

Sl. No.	Parameters	Protocol APHA 23 <sup>rd</sup> Edition 2017	Unit	Results		IS 2296 - 1982 CLASS -B
				KempuHalla Upstream	KempuHalla Downstream	
			Sample code	5318	5319	
1.	pH	4500 H+ B (Pg. No.4-95 to 4-99)	-	7.75	7.79	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	4500F-D (Pg. No.4-90 to 4-91)	mg/L	0.56	0.59	1.5

Note: BDL-Below detectable Limit.

INFERENCE: The measured values are within the Limit.

Reviewed by



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**K. Suvarna**  
Quality Manager

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## TEST REPORT

ANNEXURE-33

### 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/FY23/R073
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	: <b>Surface Water</b>
9	Date of Sampling	: 11.03.2023
10	Sample Received	: 11.03.2023
11	Date of Analysis	: 11.03.2023
12	Date of Analysis Completion	: 17.03.2023
13	Report Issue Date	: <b>06.04.2023</b>

Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS -B
				KempuHalla Upstream	KempuHalla Downstream	
		<b>Sample code</b>		<b>5318</b>	<b>5319</b>	
1.	Dissolved Oxygen	APHA 23 <sup>RD</sup> Edition 4500 C (Pg. No.4-146)	mg/L	<b>6.0</b>	<b>7.2</b>	>5.0
2.	Color	APHA 23 <sup>RD</sup> Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	<b>5</b>	<b>6</b>	300
3.	Cyanides (as CN)	APHA 23 <sup>RD</sup> Edition 4500 CN (Pg. No.4-45 to 4-46)	mg/L	<b>BDL</b>	<b>BDL</b>	0.05
4.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	<b>BDL</b>	<b>BDL</b>	0.005
5.	Chromium (as Cr <sup>6+</sup> )	APHA-23 <sup>RD</sup> Edition-3500 Cr B (Pg. No.3-71 to 3-72)	mg/L	<b>&lt;0.001</b>	<b>&lt;0.001</b>	1.0
6.	Anionic detergents (as MBAS)	APHA 23 <sup>RD</sup> Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	<b>BDL</b>	<b>BDL</b>	1.0
7.	Arsenic as As	APHA-23 <sup>RD</sup> Edition-3114 -B (Pg. No.3 -36 to 3-40)	mg/L	<b>&lt;0.1</b>	<b>&lt;0.1</b>	0.2
8.	<b>Total Coliform Organisms,</b>					
	Total Coli forms	APHA 23 <sup>RD</sup> Edition 9221-C (Pg. No.9-72 to 9-74)	MPN/ 100 ml	<b>Absent</b>	<b>Absent</b>	500
	Escherichia coli or E. coli	APHA 23 <sup>RD</sup> Edition 9221-F (Pg. No.9-78 to 9-79)	MPN/ 100 ml	<b>Absent</b>	<b>Absent</b>	-

Note: BDL-Below detectable Limit

INFERENCE: The measured values are within the Limit.



*K. Suvama*  
Authorised Signatory  
**K. Suvama**  
Quality Manager

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### TEST REPORT

ANNEXURE-34

### 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/FY23/RO73
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	: <b>Surface Water</b>
9	Date of Sampling	: 11.03.2023
10	Sample Received	: 11.03.2023
11	Date of Analysis	: 11.03.2023
12	Date of Analysis Completion	: 17.03.2023
13	Report Issue Date	: <b>06.04.2023</b>
14	Report Number	: <b>ULR-TC619323000001139F</b>

### Results

Sl. No.	Parameters	Protocol APHA 23rd Edition 2017	Unit	Results	IS 2296 -1982 CLASS -B
				Tungabhadra dam	
				<b>Sample Code</b>	<b>5320</b>
1.	pH	4500 H+ B (Pg. No.4-95 to 4-99)	-	<b>7.52</b>	6.5-8.5
2.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	<b>2.0</b>	3.0
3.	Fluorides as F	4500F D (Pg. No.4-90 to 4-91)	mg/L	<b>0.22</b>	1.5

Note: BDL-Below detectable Limit.

INFERENCE: The measured values are within the Limit.



Reviewed by

Authorised Signatory  
**K. Suvarna**  
Quality Manager

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## TEST REPORT

ANNEXURE-34

### 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/FY23/RO73
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	: <b>Surface Water</b>
9	Date of Sampling	: 11.03.2023
10	Sample Received	: 11.03.2023
11	Date of Analysis	: 11.03.2023
12	Date of Analysis Completion	: 17.03.2023
13	Report Issue Date	: <b>06.04.2023</b>

Sl. No.	Parameters	Protocol	Unit	Results	IS 2296 -1982 CLASS -B
				Tungabhadra dam	
Sample Code				5320	
1.	Dissolved Oxygen	APHA 23 <sup>RD</sup> Edition 4500 C (Pg. No.4-146)	mg/L	7.6	>5.0
2.	Color	APHA 23 <sup>RD</sup> Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	6	300
3.	Cyanides (as CN)	APHA 23 <sup>RD</sup> Edition 4500 CN (Pg. No.4-45 to 4-46)	mg/L	BDL	0.05
4.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	0.005
5.	Chromium (as Cr <sup>6+</sup> )	APHA-23 <sup>RD</sup> Edition-3500 Cr B (Pg. No.3-71 to 3-72)	mg/L	<0.001	1.0
6.	Anionic detergents (as MBAS)	APHA 23 <sup>RD</sup> Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	1.0
7.	Arsenic as As	APHA-23 <sup>RD</sup> Edition-3114 -B (Pg. No.3 -36 to 3-40)	mg/L	<0.1	<0.1
8.	Total Coliform Organisms,				
	Total Coli forms	APHA 23RD Edition 9221-C (Pg. No.9-72 to 9-74)	MPN/ 100 ml	Absent	500
	Escherichia coli or E. coli	APHA 23RD Edition 9221-F (Pg. No.9-78 to 9-79)	MPN/ 100 ml	Absent	-

Note: BDL-Below detectable Limit

INFERENCE: The measured values are within the Limit.



*B. Suvarna*  
Authorised Signatory  
**K. Suvarna**  
Quality Manager

Note : 1. The result listed above pertain only to the tested samples & applicable parameters. 2. Total liability of our Laboratory is limited to the Invoice amount. 3. This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law & should not be used in advertising media without prior written permission. 4. Sampling is not done by us unless otherwise specified.