

**SIX MONTHLY COMPLIANCE REPORT
(October 2021 - March 2022)**



Prepared By:
M/s Maan Steel & Power Limited
Jamuria Industrial State, Ikra, P.O. Jamuria,
District- Burdwan, West Bengal

PROJECT DETAILS

The project of Maan Steel & Power Limited is located at **Jamuria** Industrial State, IKRA, P.O. Jamuria, and District **Burdwan** in West Bengal.

Maan Steel & Power Limited was granted Environmental Clearance from GoI, MoEF & CC (Impact Assessment Division) Vide letter No. : **F-No.J-11011/695/2009-IA-II (I), dated 31.12.2010** for expansion of their Sponge Iron plant (57,000 TPA) into Integrated Steel Plant (0.18 MTPA) along with Captive Power Plant (24 MW; WHRB 12 MW & FBC 12 MW) and Ferro Alloy Plant (2 x 9 MVA). The extension of the validity of the Environmental Clearance was obtained up to **30th December 2020** with reference to Proposal no. **IA/WB/IND/6154/2010 Dated 7th November 2017**. The proposal was considered in the 26th meeting of Expert Appraisal Committee [EAC](Industry I) held during 11th -13th December 2017 and hence the committee recommended for the extension with all the other terms and conditions same as mentioned in Environmental Clearance Vide letter No. : F-No.J-11011/695/2009-IA-II (I), dated 31.12.2010.

As part of the compliance of statutory requirement environmental quality monitoring has been carried out by M/s Envirocheck, Kolkata, West Bengal. The detail regarding compliance is given herewith in the following pages for the six monthly period of **October 2021-March 2022**.

Project Location:

The Project Location is shown in satellite image:



COMPLIANCE STATUS ON ENVIRONMENTAL CLEARANCE

EXPANSION OF SPONGE IRON PLANT AT JAMURIA INDUSTRIAL ESTATE, DISTRICT-BURDWAN

Vide letter No. : F-No.J-11011/695/2009-IA-II (I), dated 31.12.2010

A. SPECIFIC CONDITIONS

| Sl. | Compliance conditions | Compliance status |
|-----|---|--|
| i. | Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), gas cleaning plant, venture scrubber, bag filters etc. shall be provided to keep the emission levels below 50mg/Nm ³ by installing energy efficient technology. | Appropriate efforts shall be made to reduce RSPM levels in ambient air. The ambient air quality and stack gas quality levels are examined through regular monitoring. All the major stacks within the factory premises are equipped with Continuous online monitoring facilities and the data are attached in as Annexure 1 . Air pollution control equipment like Electrostatic precipitator (ESP), Bag Filters, ID fans which are installed to keep the emission levels within limits. The details regarding Air Pollution Equipment are given in Annexure 2 . |
| ii. | As proposed, Electrostatic precipitator (ESP) shall be provided to control the particulate emissions from the FBC and WHRB within 50mg/Nm ³ . Fume extraction system shall be provided to the steel melting shop to extract the fumes. Bag filters to control the dust emissions from the induction furnaces and pulse jet bag filters at coal and iron crushing area, stock house and cooler discharge area. | As proposed, Air Pollution Control devices like Electrostatic precipitator (ESP) and Bag filters are already installed within the factory premises to keep the particulate emissions within the standard limit. |

| Sl. | Compliance conditions | Compliance status |
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| iii. | The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 th November, 2009 shall be followed. | The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 th November, 2009 are followed strictly. Ambient Air Quality monitoring for assessing the concentrations of PM ₁₀ , PM _{2.5} , SO _x , NO _x has been done and results are within NAAQ standards. The reports are attached as Annexure 3 . |
| iv. | Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB shall be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30 th May, 2008 should be followed. | Gaseous emission levels including secondary fugitive emissions from all the possible sources is controlled within the latest permissible limits issued by the Ministry and regularly monitored. The latest stack monitoring and Work zone monitoring report is attached as Annexure-4 and 5. |
| v. | Hot gases from DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in waste heat recovery boiler (WHRB). The gas then shall be cleaned in ESP before leaving out into atmosphere through ID fan and stack. | Is being complied with. |

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| vi. | <p>Total water requirement shall not exceed, 1632 m³/ day. Permission from the competent authority shall be obtained to draw the water. Efforts shall further be made to use maximum water from the rain water harvesting sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent should be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage should be treated in septic tank followed by soak pit.</p> | <p>Water requirements for the whole system are within the prescribed limit, and water is replenished from the Ajay River. Additionally, rain water harvesting structure is installed in the plant for optimal water consumption. The waste water from plant is treated and used for domestic purpose and dust suppression. The unit follows zero discharge policy and no industrial waste water is discharged outside the factory premises.</p> |
| vii. | <p>Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other source.</p> | <p>There has already been a suitable effort made to make use of rain water by constructing a Rain water harvesting system within the factory premises and the water is being used for cooling and domestic use.</p> |

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| <p>viii.</p> | <p>Regular monitoring of influent and effluent surface, sub-surface and ground water (including chromite) should be ensured and treated waste water should meet the norms prescribed by the State Pollution Control Board or described under the E (P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, West Bengal Pollution Control Board (WBPCB) and CPCB.</p> | <p>A regular monitoring and analysis of groundwater and effluent water has been conducted by using the appropriate methodology and the reports are attached as Annexure 6 and 7. Leachate study for the effluent generated is carried on and reports are attached as Annexure 8.</p> |
| <p>ix.</p> | <p>The water consumption shall not exceed as per the standard prescribed for the steel plants.</p> | <p>There is no excessive consumption of water and the limit is within the prescribed range. (See Annexure 9).</p> |
| <p>x.</p> | <p>All the coal fines, char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be used for briquette making or disposed off anywhere else. AFBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from beginning. Scrap shall be used in Steel Melting Shop (SMS) and SMS slag and kiln accretions shall be properly utilized. All the other solid waste including broken refractory mass shall be properly disposed off in environment friendly manner.</p> | <p>Slag generated from the furnace is a non-hazardous substance and is used for landfilling and road construction. The Slag and sludge analysis reports are attached as Annexure 10 and 11. The solid wastes generated within the plant are reused in the furnace thus preventing the accumulation of wastes within the plant premises. The Hazardous Waste Authorization details including the details of waste generated is attached in Annexure 12.</p> |
| <p>xi.</p> | <p>Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and its subsequent amendments.</p> | <p>According to the notification, fly ash is properly utilized.</p> |

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| <p>xii.</p> | <p>Vehicular pollution due to transportation of raw material and finished products shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.</p> | <p>Efforts are made to minimize the risk of vehicular pollution due to the transportation of raw materials and finished products. Proper maintenance of all the transport vehicles used is done to prevent vehicular pollution. Water Sprinklers are used to suppress the airborne particulates within the factory premises. It is ensured that vehicles have proper PUC.</p> |
| <p>xiii.</p> | <p>All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads. Facilities for parking of trucks carrying raw coal from the linked coalmines shall be created within the unit.</p> | <p>All internal roads are cemented and equipped with appropriate lighting facilities. Avenue plantation of saplings is carried on utilizing native species along the roads (See Annexure 13). Suitable efforts are being taken to develop facilities for parking of trucks.</p> |
| <p>xiv.</p> | <p>Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste should be submitted to the Ministry's Regional Office at Bhubaneswar, WBPCB and CPCB.</p> | <p>In order to ensure proper handling, storage, disposal and utilization of all non-hazardous solid waste, all necessary efforts are taken. No waste generated is Hazardous in origin and are reused in the landfilling and road making purpose.</p> |
| <p>xv.</p> | <p>A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.</p> | <p>Reduction of solid waste and ensuring its optimal use along with its disposal through suitable effort. Scraps, coal fines are the solid wastes generated in the plant are being feed into the furnace. Therefore, there is no generation of solid waste within the plant premises.</p> |

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| <p>xvi.</p> | <p>Risk & Disaster management Plan along with the mitigation measures shall be prepared and a copy submitted to reduce solid waste, its proper utilization and disposal.</p> | <p>An effective risk management plan and mitigation measures are prepared, implemented, and maintained. See Annexure 14.</p> |
| <p>xvii.</p> | <p>As proposed green belt shall be developed in 33% plant area as per CPCB guidelines in consultation with the DFO.</p> | <p>Green belt is maintained according to the CPCB guidelines.</p> |
| <p>xviii.</p> | <p>All the recommendation made in the Charter on Corporate Social Responsibility for Environmental Protection (CREP) for the steel plants should be implemented.</p> | <p>All the recommendation made in the Charter on Corporate Social Responsibility for Environmental Protection (CREP) for the steel plants are implemented with genuine efforts . The CREP status has been presented in the appropriate format.</p> |
| <p>xix.</p> | <p>At least 5% of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.</p> | <p>Appropriate fund has been allocated for Corporate Social Responsibility. CSR is a regular practice for Maan Steel. See Annexure 15.</p> |

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| xx. | The company shall provide housing for construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project. | Near the plant, proper housing facilities have been constructed with all of the necessary amenities. |
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PART B – GENERAL CONDITIONS

| Sl. | Compliance conditions | Compliance Status |
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| i. | The project authorities must strictly adhere to stipulations made by the West Bengal State Pollution Control Board and the State Government. | Being adhered as per the stipulation made by WBPCB and State Government. Consent to Operate obtained from WBPCB is attached as Annexure-16. |
| ii. | No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment & Forest | Without prior consent from the Ministry of Environment and Forest, no additional expansion or alterations in the plant will be carried out. |
| iii. | The gaseous emissions from various process until shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size & location. | Is being complied with. |
| iv. | At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10, SO2 and NOX are anticipated in consultation with the SPCB. Data | Ambient Air Quality Monitoring being carried on as per direction in consideration of maximum ground level concentration of SPM, SO ₂ , and NO _x . |

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| | on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the SPCB/CPCB once in six months. | Latest Ambient Air Quality monitoring report for PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ and stack monitoring report is enclosed as Annexure 3 and 4. |
| v. | Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose. | Industrial wastewater is properly collected, treated in the Waste water treatment plant present in the plant and there is zero discharge of effluent water in the plant premises. |
| vi. | The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz 75 dBA(daytime)and 70 dBA(nighttime). | The overall noise levels in and around the plant area is kept well within the standards. The latest noise report is attached as Annexure 17. |
| vii. | Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. | Occupational Health Surveillance of the workers is being carried out. Occupational safety is well maintained in the plant. See Annexure 18. |
| viii. | The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table. | The rain water harvesting structure is installed to ensure the water is used to its maximum potential. |
| ix. | The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health | All environmental protection measures and safeguards recommended in the EIA/EMP report are being complied with. Socio-economic development activities in the surrounding villages are being undertaken. |

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| | care etc. | |
| x. | Requisite amount shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the condition stipulated by the MoEF as well as the State Govt. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional office of the Ministry at Bhubaneswar. The funds so provided shall not be diverted for any other purpose. | Requisite amount of the fund earmarked towards the capital cost and recurring cost/ annum for environmental pollution control measures is utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. |
| xi. | A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent. | A copy of clearance letter has been sent to the concerned authority. The EC copies are attached as Annexure 19 . |
| xii. | The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of the monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF at Bhubaneswar. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely PM10, SO2, NOX or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain. | This condition is complied with. |

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| <p>xiii.</p> | <p>The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data to the regional office of MoEF, the respective Zonal Office of CPCB and the SPCB. The regional office of this ministry at Bhubaneswar/ CPCB/ SPCB shall monitor the stipulated condition.</p> | <p>Six monthly reports are submitted to the MoEF and all the other conditions is maintained.</p> |
| <p>xiv.</p> | <p>The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986 as amended subsequently, shall also be put on the website of the company alongwith the status of compliance of environmental conditions and shall be also be sent to the respective Regional Office of the MoEF at Bhubaneswar by e-mail.</p> | <p>The Environmental statement (Form V) is being submitted along with the monitoring data to the concerned State Pollution Control Board as prescribed.</p> |
| <p>xv.</p> | <p>The project proponent shall inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance letter are available with SPCB and may also be seen at website of MOEF at http://envfor.nic.in. this shall be advertised within seven days from the date of issue of the clearance letter, atleast in two local newspaper that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the regional office at Bhubaneswar.</p> | <p>The project proponent has informed the public through the website of MoEF. Apart from that advertisements are given in two local newspapers that are understood by local people. See Annexure 20.</p> |

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| xvi. | Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work. | Complied. |
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DETAILS OF ENVIRONMENTAL MONITORING

1. AMBIENT AIR QUALITY MONITORING

Ambient Air Quality Monitoring Stations

Ambient air quality monitoring has been carried out on 1ST March, 2022 to assess the ambient air quality of Project Site. This will enable to have an analytical understanding about air quality and the changes in the air environment in the study area with respect to the condition prevailing. The location of the ambient air quality monitoring station is given in **Table 1.1**.

Table 1.1 Details of Ambient Air Quality Monitoring Stations

| Sl. No. | Location Code | Location Name/ Description | Environmental Setting |
|---------|---------------|----------------------------|-----------------------|
| 1. | AAQ-1 | Near Main Gate | Steel and Power Plant |
| 2. | AAQ-2 | Near Admin Building | Steel and Power Plant |
| 3 | AAQ-3 | Back Side of the Plant | Steel and Power Plant |
| 4 | AAQ-4 | Near DG Room | Steel and Power Plant |

Ambient Air Quality Monitoring Methodology

Monitoring was conducted in respect of the following parameters:

- Particulate Matter 2.5 (PM_{2.5})
- Particulate Matter 10 (PM₁₀)
- Sulphur Dioxide (SO₂)
- Nitrogen dioxide (NO₂)

The air samples were analyzed as per standard methods specified by Central Pollution Control Board (CPCB) and IS: 5182. The techniques used for ambient air quality monitoring and minimum detectable levels are given in **Table 1.2**.

Fine Particulate Sampler APM 550 instruments have been used for monitoring Particulate Matter 2.5 (PM_{2.5} i.e. <2.5 microns), and Respirable Dust Sampler APM 450 was used for sampling Respirable fraction (<10 microns), gaseous pollutants like SO₂, and NO₂.

Table 1.2 Techniques used for Ambient Air Quality Monitoring

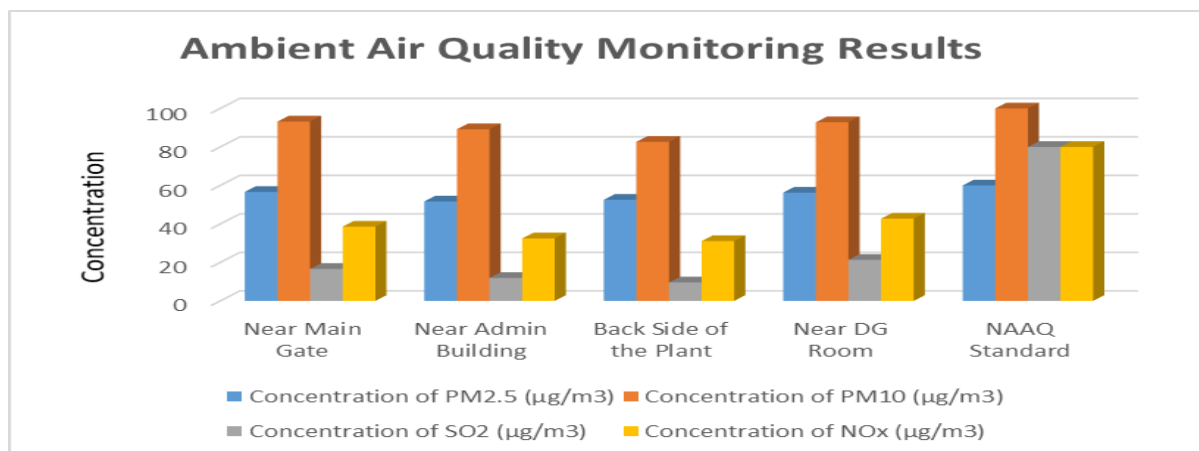
| S. No. | Parameter | Technique | Technical Protocol |
|--------|---|---|--------------------|
| 1 | Particulate Matter 2.5 (PM _{2.5}) | USEPA 1997a, 40 CFR Part 50, Appendix L | IS-5182 (Part-IV) |
| 2 | Particulate Matter 10 (PM ₁₀) | IS 5182 (PART 23) : 2006 | IS-5182 (Part-23) |
| 3 | Sulphur dioxide | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007 : Sec 11 (Vol. 11.07) : 2011 | IS-5182 (Part- II) |
| 4 | Nitrogen dioxide | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec 11 (Vol. 11.07) : 2011 | IS-5182 (Part-VI) |

Ambient Air Quality Monitoring Results

The detailed on-site monitoring results of PM 2.5, PM 10, SO₂ and NO_x are presented in Table 1.3.

Table 1.3 Ambient Air Quality Monitoring Results

| Date of sampling (01.03.2022 – 02.03.2022) | Near Main Gate | Near Admin Building | Back Side of the Plant | Near DG Room | NAAQ Standard |
|--|----------------|---------------------|------------------------|--------------|---------------|
| Concentration of PM _{2.5} (µg/m ³) | 56.64 | 51.68 | 52.54 | 56.25 | 60 |
| Concentration of PM ₁₀ (µg/m ³) | 93.18 | 89.17 | 82.64 | 92.80 | 100 |
| Concentration of SO ₂ (µg/m ³) | 16.64 | 11.94 | 9.60 | 21.33 | 80 |
| Concentration of NO _x (µg/m ³) | 38.58 | 32.46 | 31.09 | 42.74 | 80 |



Discussion on Ambient Air Quality in the Study Area

The level of PM₁₀ and PM_{2.5}, SO₂ and NO_x Near Main Gate, Near Admin Building, Back Side of the Plant, Near DG Room is under the permissible limit (for residential, rural and other areas as stipulated in the National Ambient Air Quality Standards).

2. STACK GAS MONITORING

Stack gas is generated from many combustion sources, including incinerators, kilns and thermal oxidizers. A thermal oxidizer is a process for the treatment of air exhaust and is commonly used during the incineration of waste. When the stack is mixed with air, the exhausting gas is cool enough to be measured by a thermal mass flow meter, thereby getting the benefit of the fast response and wide turn down of the device. Measuring the flow rate of stack gas is required in order to calculate the overall mass of gas over time. This is a requirement for many environmental regulations.

The sample was taken on 1st March, 2022. The details are given in tabular form below:

Table 2.1 Results of the Stack attached to Rotary Kiln(No 3)

| Parameters | Results | Methods |
|---|-----------|---|
| Flue Gas Temperature (°C) | 105.0 | IS : 11255 (Part 1) |
| Barometric Pressure (mm of Hg.) | 760.0 | -- |
| Velocity of Gas flow (m/s) | 8.08 | IS : 11255 (Part 3) |
| Quantity of Gas flow (Nm ³ /hr.) | 208923.33 | IS : 11255 (Part III) |
| Concentration of SO ₂ (mg/Nm ³) | 677.64 | IS 11255 (Part 2) 1985 RA 2003 |
| Concentration of CO ₂ %(v/v) | 11.8 | IS 13270 1992 RA 2003 |
| Concentration of CO %(v/v) | <1.0 | IS 13270 1992 RA 2003 |
| Concentration of Particulate Matter (mg/Nm ³) (at 11.8% CO ₂) | 16.27 | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec 11(Vol3 11.07) : 2011 |
| Concentration of Particulate Matter (mg/Nm ³) (at 12% CO ₂) | 16.54 | |

Table 2.2 Results of the stack attached to Rotary Kiln (No 1 & 2)

| Parameters | Results | Methods |
|--|----------|---|
| Flue Gas Temperature (°C) | 98.0 | IS : 11255 (Part 1) |
| Barometric Pressure (mm of Hg.) | 760.0 | -- |
| Velocity of Gas flow (m/s) | 9.81 | IS : 11255 (Part 3) |
| Quantity of Gas flow (Nm ³ /hr.) | 50083.49 | IS : 11255 (Part III) |
| Concentration of SO ₂ (mg/Nm ³) | 754.93 | IS 11255 (Part 2) 1985 RA 2003 |
| Concentration of CO ₂ %(v/v) | 10.8 | IS 13270 1992 RA 2003 |
| Concentration of CO %(v/v) | <1.0 | IS 13270 1992 RA 2003 |
| Concentration of Particulate Matter (mg/Nm ³) (at 11 % CO ₂) | 37.28 | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec 11(Vol3 11.07) : 2011 |
| Concentration of Particulate Matter (mg/Nm ³) (at 12% CO ₂) | 41.42 | |

Table 2.3 Results of the stack attached to Cooler Discharge of DRI – 1 & 2

| Parameters | Results | Methods |
|---|----------|---|
| Flue Gas Temperature (°C) | 40.0 | IS : 11255 (Part 1) |
| Barometric Pressure (mm of Hg.) | 760.0 | -- |
| Velocity of Gas flow (m/s) | 10.48 | IS : 11255 (Part 3) |
| Quantity of Gas flow (Nm ³ /hr.) | 21331.28 | IS : 11255 (Part III) |
| Concentration of Particulate Matter (mg/Nm ³) | 43.84 | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 |

Table 2.4 Results of Stack attached to Cooler Discharge of DRI –3 (200 TPD) & Product House (common)

| Parameters | Results | Methods |
|---|----------|---|
| Flue Gas Temperature (OC) | 39.0 | IS : 11255 (Part 1) |
| Barometric Pressure (mm of Hg.) | 760.0 | -- |
| Velocity of Gas flow (m/s) | 9.06 | IS : 11255 (Part 3) |
| Quantity of Gas flow (Nm ³ /hr.) | 12680.77 | IS : 11255 (Part III) |
| Concentration of Particulate Matter (mg/Nm ³) | 19.57 | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 |

Table 2.5 Results of Stack attached to Separation House & I-Bin of DRI – 1, 2 & 3 attached to common stack

| Parameters | Results | Methods |
|---|----------|---|
| Flue Gas Temperature (OC) | 39.5 | IS : 11255 (Part 1) |
| Barometric Pressure (mm of Hg.) | 760.0 | -- |
| Velocity of Gas flow (m/s) | 9.50 | IS : 11255 (Part 3) |
| Quantity of Gas flow (Nm ³ /hr.) | 25627.91 | IS : 11255 (Part III) |
| Concentration of Particulate Matter (mg/Nm ³) | 42.70 | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 |

Table 2.6 Results of the Stack attached to Induction Furnace (No.1 & 2)

| Parameters | Results | Methods |
|---|----------|---|
| Flue Gas Temperature (OC) | 50.8 | IS : 11255 (Part 1) |
| Barometric Pressure (mm of Hg.) | 760.0 | -- |
| Velocity of Gas flow (m/s) | 10.66 | IS : 11255 (Part 3) |
| Quantity of Gas flow (Nm ³ /hr.) | 23167.34 | IS : 11255 (Part III) |
| Concentration of Particulate Matter (mg/Nm ³) | 16.20 | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 |

Table 2.7 Results of the Stack attached to D. G. – 500 KVA (SMS Division) (Acoustic Enclosure)

| Parameters | Results | Methods |
|---|---------|---|
| Flue Gas Temperature (°C) | 318.0 | IS : 11255 (Part 1) |
| Barometric Pressure (mm of Hg.) | 760.0 | -- |
| Velocity of Gas flow (m/s) | 18.82 | IS : 11255 (Part 3) |
| Quantity of Gas flow (Nm ³ /hr.) | 1071.56 | IS : 11255 (Part III) |
| Concentration of SO ₂ (mg/Nm ³) | 76.80 | IS 11255 (Part 2) 1985 RA 2003 |
| Concentration of CO ₂ %(v/v) | 8.4 | IS 13270 1992 RA 2003 |
| Concentration of CO %(v/v) | <1.0 | IS 13270 1992 RA 2003 |
| Concentration of Particulate Matter (mg/Nm ³) | 61.52 | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 |

Table 2.8 Results of the Stack attached to AFBC Boiler (CPP)

| Parameters | Results | Methods |
|---|----------|---|
| Flue Gas Temperature (°C) | 128.3 | IS : 11255 (Part 1) |
| Barometric Pressure (mm of Hg.) | 760.0 | -- |
| Velocity of Gas flow (m/s) | 9.09 | IS : 11255 (Part 3) |
| Quantity of Gas flow (Nm ³ /hr.) | 90178.20 | IS : 11255 (Part III) |
| Concentration of SO ₂ (mg/Nm ³) | 458.22 | IS 11255 (Part 2) 1985 RA 2003 |
| Concentration of NO _X (mg/Nm ³) | 210.31 | IS : 11255 (Part 7) 2005 & ASTM D 1608-98 reapproved 2009 : Sec 11 (Vol. 11.07) : 2011 |
| Concentration of CO ₂ %(v/v) | 11.2 | IS 13270 1992 RA 2003 |
| Concentration of CO %(v/v) | <1.0 | IS 13270 1992 RA 2003 |
| Concentration of Particulate Matter (mg/Nm ³) | 22.12 | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 |
| Concentration of Particulate Matter (mg/Nm ³) (at 6% O ₂) | 21.54 | (reapproved 2005) : Sec 11(Vol3 11.07) : 2011 |

Table 2.9 Results of the Stack attached to Induction Furnace (3 & 4) attached to common stack

| Parameters | Results | Methods |
|---|----------|---|
| Flue Gas Temperature (°C) | 54.0 | IS : 11255 (Part 1) |
| Barometric Pressure (mm of Hg.) | 760.0 | -- |
| Velocity of Gas flow (m/s) | 10.77 | IS : 11255 (Part 3) |
| Quantity of Gas flow (Nm ³ /hr.) | 33543.86 | IS : 11255 (Part III) |
| Concentration of Particulate Matter (mg/Nm ³) | 40.80 | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec 11(Vol. 3 11.07) : 2011 |

Table 2.10 Results of the Stack attached to Iron Circuit

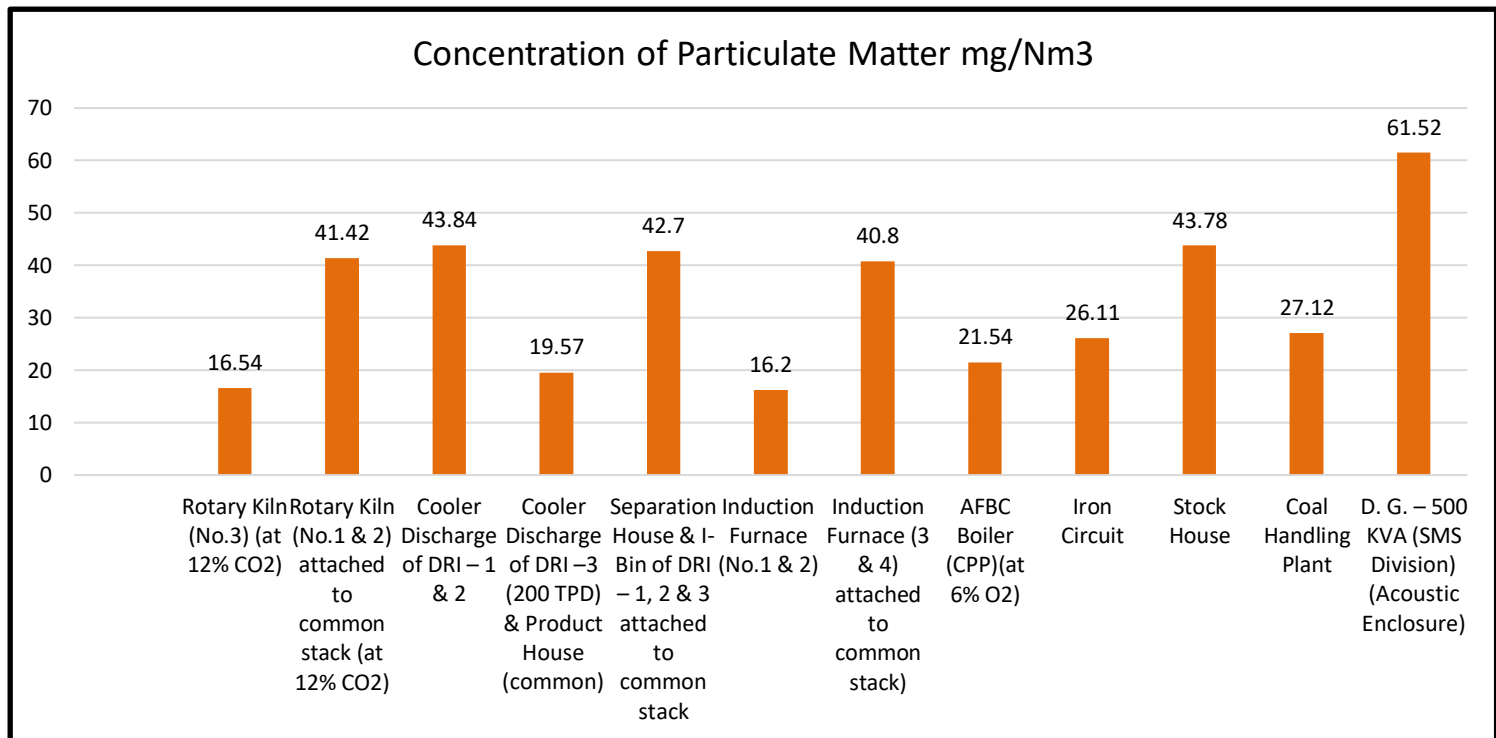
| Parameters | Results | Methods |
|---|----------|---|
| Flue Gas Temperature (°C) | 42.0 | IS : 11255 (Part 1) |
| Barometric Pressure (mm of Hg.) | 760.0 | -- |
| Velocity of Gas flow (m/s) | 7.43 | IS : 11255 (Part 3) |
| Quantity of Gas flow (Nm ³ /hr.) | 11183.12 | IS : 11255 (Part III) |
| Concentration of Particulate Matter (mg/Nm ³) | 26.11 | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec 11(Vol. 3 11.07) : 2011 |

Table 2.11 Results of the Stack attached to Stock House

| Parameters | Results | Methods |
|---|----------|---|
| Flue Gas Temperature (°C) | 42.0 | IS : 11255 (Part 1) |
| Barometric Pressure (mm of Hg.) | 760.0 | -- |
| Velocity of Gas flow (m/s) | 10.50 | IS : 11255 (Part 3) |
| Quantity of Gas flow (Nm ³ /hr.) | 15811.36 | IS : 11255 (Part III) |
| Concentration of Particulate Matter (mg/Nm ³) | 43.78 | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec 11(Vol. 3 11.07) : 2011 |

Table 2.12 Results of the Stack attached to Coal Handling Plant

| Parameters | Results | Methods |
|---|----------|---|
| Flue Gas Temperature (°C) | 38.0 | IS : 11255 (Part 1) |
| Barometric Pressure (mm of Hg.) | 760.0 | -- |
| Velocity of Gas flow (m/s) | 9.04 | IS : 11255 (Part 3) |
| Quantity of Gas flow (Nm ³ /hr.) | 13781.39 | IS : 11255 (Part III) |
| Concentration of Particulate Matter (mg/Nm ³) | 27.12 | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec 11(Vol. 3 11.07) : 2011 |



3. WORK ZONE AIR QUALITY MONITORING

Fugitive emissions are emissions of gases or vapors from pressurized equipment due to leaks and other unintended or irregular releases of gases, mostly from industrial activities. As well as the economic cost of lost commodities, fugitive emissions contribute to air pollution and climate change.

The sampling was done on 2nd March, 2022 for fugitive analysis. The results are given in tabular form.

Table 3.1 Results of Fugitive Air Analysis Near Induction Furnace Area (Inside Shed)

| PARAMETERS | METHOD NO. | RESULTS |
|---|--------------------------|---------|
| Concentration of SPM (µg/m ³) | NIOSH 0500 : 1994 | 380.40 |
| Concentration of RPM (µg/m ³) | IS 5182 (PART 23) : 2006 | 146.10 |

| | | |
|---|---|-------|
| Concentration of SO ₂ (µg/m ³) | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007 : Sec 11 (Vol. 11.07) : 2011 | 16.0 |
| Concentration of NO _x (µg/m ³) | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec 11 (Vol. 11.07) : 2011 | 35.05 |

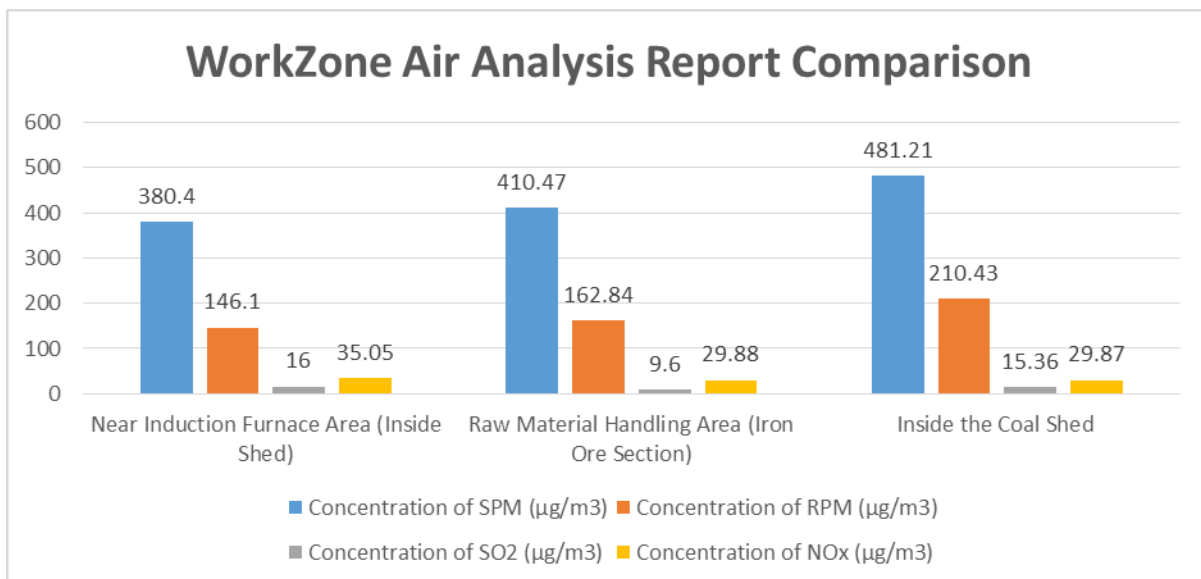
Table 3.2 Results of Fugitive Air analysis near Raw Material Handling Area (Iron Ore Section)

| PARAMETERS | METHOD NO. | RESULTS |
|---|---|---------|
| Concentration of SPM (µg/m ³) | NIOSH 0500 : 1994 | 410.47 |
| Concentration of RPM (µg/m ³) | IS 5182 (PART 23) : 2006 | 162.84 |
| Concentration of SO ₂ (µg/m ³) | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007 : Sec 11 (Vol. 11.07) : 2011 | 9.60 |
| Concentration of NO _x (µg/m ³) | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec 11 (Vol. 11.07) : 2011 | 29.88 |

Table 3.3 Results of Fugitive Air Analysis Inside the Coal Shed

| PARAMETERS | METHOD NO. | RESULTS |
|---|---|---------|
| Concentration of SPM (µg/m ³) | NIOSH 0500 : 1994 | 481.21 |
| Concentration of RPM (µg/m ³) | IS 5182 (PART 23) : 2006 | 210.43 |
| Concentration of SO ₂ (µg/m ³) | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007 : Sec 11 (Vol. 11.07) : 2011 | 15.36 |
| Concentration of NO _x (µg/m ³) | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec 11 (Vol. 11.07) : 2011 | 29.87 |

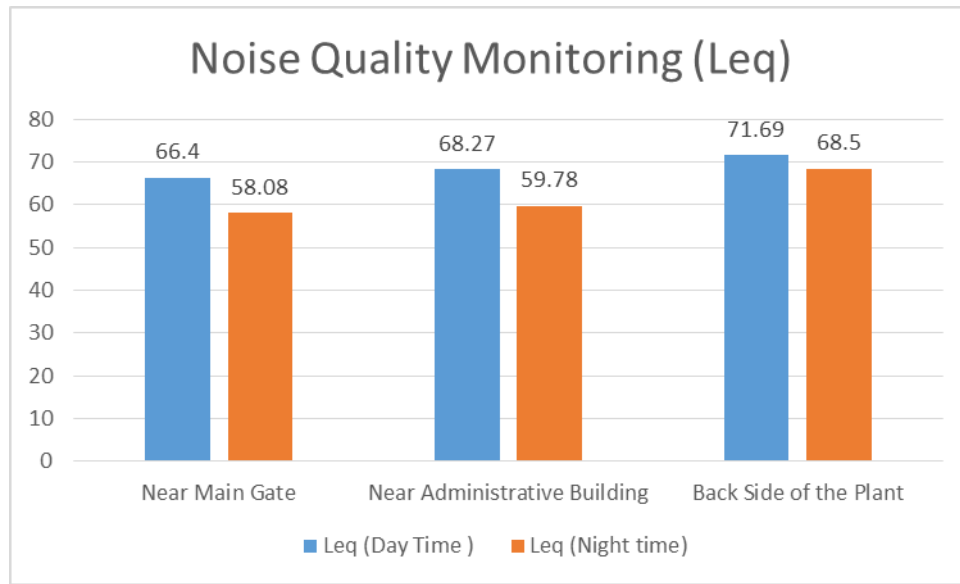
The comparison are given in graphical form



4. AMBIENT NOISE MONITORING

Ambient Noise Monitoring Locations

The main objective of noise monitoring in the study area is to assess the present ambient noise levels in project site due to various construction allied activities and increased vehicular movement. A preliminary reconnaissance survey has been undertaken to identify the major noise generating sources in the area. Ambient noise monitoring was conducted at 3 locations in the month of 1st March, 2022, which is given in **Graphical Presentation**.



The Data are given in Tabular Form:

Table 4.1 Results of Fugitive Air Analysis

| Location | Day/ Night | Time Duratio n | L _{eq} | Limit |
|------------------------------------|---------------|------------------------|-----------------|-------|
| Near Main Gate | Day | 11.20 am – 11.40 am | 66.40 | 75 |
| | Night | 10:00pm – 10:20pm | 58.08 | 70 |
| Near Administrative Building | Day | 12:30 pm – 12:50 pm | 68.27 | 75 |
| | Night | 11:00 pm – 11:20pm | 59.78 | 70 |
| Back Side of the Plant | Day | 12:00 pm – 12:20 pm | 71.69 | 75 |
| | Night | 10:30 pm – 10:50 pm | 68.50 | 70 |

Methodology of Noise Monitoring

Noise levels were measured using integrated sound level meter manufactured by Mastech. The integrating sound level meter is an integrating/ logging type with Octave filter attachment with frequency range of 31.5 to 16000 Hz. This instrument is capable of measuring the Sound Pressure Level (SPL), Leq and octave band frequency analysis.

Discussion on Ambient Noise Levels in the Study Area

Day Time Noise Levels (L_{day}):

Both the day and night time noise level was found within limit prescribed.

5. GROUNDWATER QUALITY MONITORING

Groundwater Quality Monitoring Locations

Keeping in view the importance of groundwater as an important source of drinking water, sample of ground water was collected from the project site for the assessment of impacts of the project on the groundwater quality.

Water sample was collected from the bore wells in the project site. The sample was analyzed for various parameters to compare with the standards for drinking water as per IS: 10500 for ground water sources.

Methodology of Groundwater Quality Monitoring

Sampling of ground water from the bore wells was carried by NABL Accredited Company. Samples were collected as grab sample and sampling forms are filled in as per the sampling plan. The preservative sample were properly added to preserve as per standard operating procedures (SOP) and stored immediately in ice boxes, which were ensured for appropriate temperatures. Sample for chemical analysis was collected in polyethylene carboys. Sample collected for metal content were acidified to <2 pH with 1 ml HNO_3 . A sample for bacteriological analysis was collected in sterilized glass bottles.

Proper care was taken during packing and transportation of samples. All the samples reached the laboratory within the holding times for different parameters. After ensuring the same the samples were forwarded immediately for analysis.

The samples were analyzed as per the standard procedures specified in 'Standard Methods for the Examination of Water and Wastewater' published by American Public Health Association (APHA) and CPCB.

Groundwater Quality Monitoring Results

The detailed groundwater quality monitoring results of the three borewell (by Ecocare) are presented in **Table 5.2**.

Table 5.2 Groundwater Quality Monitoring Results

| Sl. No. | Parameters | Unit | Test Method (APHA 23rd Edition) | Standards (IS:10500) | Results as per Sample No. | | | | |
|---------|--|-----------|--|----------------------|---------------------------|----------------|----------------|----------------|----------------|
| | | | | | Borewell 1 | Borewell 2 | Borewell 3 | Borewell 4 | Borewell 5 |
| 1 | pH at 24.4°C | - | 4500-H ⁺ B | 6.5 - 8.5 | 7.41 | 7.29 | 7.21 | 7.40 | 7.34 |
| 2 | TDS | mg/l | 2540 C | 500.0 | 458.80 | 471.60 | 439.50 | 484.10 | 434.10 |
| 3 | Arsenic | mg/l | 3500 -As B | 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| 4 | Total Alkalinity (as CaCO ₃) | mg/l | 2320 B | 200.0 | 128.10 | 134.40 | 121.80 | 151.20 | 140.70 |
| 5 | Chloride (as Cl ⁻) | mg/l | 4500 – Cl ⁻ B | 250.0 | 36.91 | 31.08 | 39.82 | 36.42 | 29.14 |
| 6 | Total Hardness (as CaCO ₃) | mg/l | 2340 C | 200.0 | 159.12 | 165.24 | 148.92 | 167.28 | 155.04 |
| 7 | Calcium (as Ca ²⁺) | mg/l | 3500 - Ca B | 75.0 | 49.06 | 50.69 | 42.52 | 52.33 | 45.79 |
| 8 | Sulphate (as SO ₄ ²⁻) | mg/l | 4500 – SO ₄ ²⁻ E | 200.0 | 53.98 | 57.48 | 48.60 | 58.94 | 54.58 |
| 9 | Iron (as Fe) | mg/l | 3500 - Fe B | 0.3 | 0.21 | 0.19 | 0.23 | 0.18 | 0.20 |
| 10 | Magnesium (as Mg) | mg/l | 3500 - Mg B | 30.0 | 8.92 | 9.42 | 10.41 | 8.92 | 9.91 |
| 11 | Total Coliform | MPN/100ml | 9221 B | Not Detectable | Not Detectable | Not Detectable | Not Detectable | Not Detectable | Not Detectable |

The detailed groundwater quality monitoring results of the bore well near Main gate (by Envirocheck) are presented in Table 5.3 given below.

| SL. NO. | PARAMETERS | TEST METHOD | UNIT | RESULTS |
|---------|------------|--|-------|------------|
| 1. | Colour | APHA 23 rd Edition, 2120 B : 2017 | -- | 1.0 |
| 2. | Odour | IS 3025 (Part 5) : 1983 : 2012 | -- | Agreeable |
| 3. | pH | IS 3025 (Part 11): 1984, RA 2012 | -- | 6.80 |
| 4. | Taste | IS 3025 (Part 4) : 1983 : 2012 | -- | Acceptable |
| 5. | Turbidity | APHA 23 rd Ed., 2130 N : 2017 | NTU | 1.28 |
| 6. | Total | APHA 23 rd ED., 2540-C : | mg./l | 780.0 |

| | Dissolved Solids | 2017 | | |
|-----|------------------------|--|-------|--------|
| 7. | Aluminium | IS 15302: 2003, RA 2014 | mg./l | <0.02 |
| 8. | Boron | APHA 23 rd Ed., 3500 Al-B : 2017 | mg./l | <0.1 |
| 9. | Calcium | APHA 23 rd Ed., 3500 Ca-B : 2017 | mg./l | 80.96 |
| 10. | Chloride | APHA 23 rd Ed., 4500Cl-B/D : 2017 | mg./l | 72.60 |
| 11. | Copper | APHA 23 rd Ed., 3111B : 2017 | mg./l | 0.40 |
| 12. | Fluoride | APHA 23 rd Ed., 4500 F-D : 2017 | mg./l | <0.1 |
| 13. | Free Residual Chlorine | APHA 23 rd Ed., 4500 Cl-B : 2017 | mg./l | <0.1 |
| 14. | Iron | APHA 23 rd Ed., 3111B : 2017 | mg./l | 0.68 |
| 15. | Magnesium | APHA 23 rd Ed., 3500 Mg-B : 2017 | mg./l | 13.92 |
| 16. | Manganese | APHA 23 rd Ed., 3111B : 2017 | mg./l | <0.05 |
| 17. | Mineral Oil | APHA 23 rd Ed., 5520 B : 2017 | mg./l | <0.01 |
| 18. | Nitrate | APHA 23 rd Ed., 4500 NO ₃ - E : 2017 | mg./l | 6.50 |
| 19. | Phenolic Compounds | APHA 23 rd Ed., 5530 C : 2017 | mg./l | <0.001 |
| 20. | Selenium | IS 15303: 2003, RA 2014 | mg./l | <0.01 |
| 21. | Sulphate | APHA 23 rd Ed., SO ₄ -E : 2017 | mg./l | 81.50 |
| 22. | Total Alkalinity | APHA 23 rd Ed., 2320 B : 2017 | mg./l | 280.0 |
| 23. | Total Hardness | IS 3025 (Part 21): 2009, RA 2014 | mg./l | 260.0 |
| 24. | Zinc | IS 3025 (Part 49): 1994, RA 2014 | mg./l | 0.78 |
| 25. | Cadmium | APHA 23 rd Ed., 3111 B : 2017 | mg./l | <0.002 |
| 26. | Cyanide | IS 3025 (Part 27): 1986, RA 2014 | mg./l | <0.01 |
| 27. | Lead | IS 3025 (Part 47): 1994, RA 2014 | mg./l | <0.005 |
| 28. | Mercury | APHA 23 rd Ed., 3111B : 2017 | mg./l | <0.001 |
| 29. | Arsenic | IS 3025 (Part 37): 1988, RA 2014 | mg./l | <0.01 |
| 30. | Total Chromium | APHA 23 rd Ed., 3111 Cr-B : 2017 | mg./l | <0.02 |

Discussion on Groundwater Quality in the Study Area

All the parameters of ground water are under the prescribed standard.

6. Rain Water Monitoring

Rain Water Monitoring Locations

Rain water can serve as an important source of water, sample of rain water was collected from the project site. The rain water harvesting structures is present within the plant premises.

Sampling of Rain water was carried out on **1st March, 2022** and analyzed in the NABL accredited Laboratory

namely Envirocheck.

Table 6.1 Rain Water Water Monitoring Results

| SL. NO. | PARAMETERS | RESULTS |
|---------|--------------------------------|-----------|
| 1. | Temperature (°C) | 23.50 |
| 2. | Odour | Odourless |
| 3. | Total Suspended Solids (mg./l) | 15.0 |
| 4. | pH | 7.12 |
| 5. | Total Hardness (mg./l) | 8.0 |
| 6. | Calcium (mg./l) | 2.4 |
| 7. | Magnesium (mg./l) | BDL |
| 8. | Chloride (mg./l) | 6.35 |
| 9. | Iron (mg./l) | 0.04 |
| 10. | Salinity (mg./l) | BDL |
| 11. | Haxavalent Chromium (mg./l) | BDL |
| 12. | Total Chromium (mg./l) | BDL |
| 13. | Kjeldhal Nitrogen (mg./l) | 1.20 |
| 14. | Total Dissolved Solids (mg./l) | 60.0 |
| 15. | Phosphate (mg./l) | 0.80 |
| 16. | Zinc (mg./l) | BDL |
| 17. | Sulphide (mg./l) | BDL |
| 18. | Fluoride (mg./l) | BDL |
| 19. | Manganese (mg./l) | BDL |
| 20. | Bi-Carbonate (mg./l) | 8.20 |
| 21. | Sodium (mg./l) | 3.50 |
| 22. | Dissolved Oxygen (mg./l) | 8.60 |
| 23. | COD (mg./l) | BDL |
| 24. | BOD (mg./l) | BDL |
| 25. | Oil & Grease (mg./l) | BDL |
| 26. | Total Coliform (CFU/100 ml.) | Absent |
| 27. | Fecal Coliform (CFU/100 ml.) | Absent |

Remarks : a) BDL indicates Below Detection Limit.
b) CFU indicates Colony Forming Unit.

7. Effluent Water Quality Monitoring

Effluent Water sample was collected from Final Domestic Outlet-Soak pit in the project site. The sample was analyzed for various parameters. The details of water sampling locations are given in **Table 4.1**.

Table 4.1 Details of Effluent Water Quality Monitoring Station

| S. No. | Location Code | Location Name/ Description |
|--------|----------------|--------------------------------|
| 1. | Effluent Water | Domestic Effluent Water (Grab) |

Methodology of Effluent Water Quality Monitoring

Sampling of effluent water was carried out on **1st March, 2022**. Samples were collected as grab sample and sampling forms are filled in as per the sampling plan. The preservative sample were

Six Monthly Compliance Report

October 2021-March 2022

M/s Maan Steel & Power Limited.
Jamuria Industrial Estate, Ikra, P.O.- Jamuria,
District – Burdwan West Bengal

properly added to preserve as per standard operating procedures (SOP) and stored immediately in ice boxes, which were ensured for appropriate temperatures. Sample for chemical analysis was collected in polyethylene carboys.

Proper care was taken during packing and transportation of samples. All the samples reached the laboratory within the holding times for different parameters. After ensuring the same the samples were forwarded immediately for analysis.

The samples were analyzed as per the standard procedures specified in 'Standard Methods for the Examination of Water and Wastewater' published by American Public Health Association (APHA) and CPCB.

The detailed effluent water quality monitoring results are presented in **Table 4.2**

| PARAMETERS | | TEST METHODS | RESULTS | LIMIT* |
|------------|--------------------------------|----------------------------------|---------|---------|
| 1. | pH | APHA 23rd Ed., 4500-H+B : 2017 | 6.95 | 5.5-9.0 |
| 2. | Total Suspended Solids (mg./l) | APHA 23rd Ed., 2540 D : 2017 | 30.0 | 100.0 |
| 3. | Oil and Grease (mg./l) | APHA 23rd Ed., 5520 B/D : 2017 | 4.0 | 10.0 |
| 4. | COD (mg./l) | APHA 23rd Ed., 5220 B/C/D : 2017 | 85.68 | 250.0 |
| 5. | BOD [3 days, 270C] (mg./l) | APHA 23rd Ed., 5210-B : 2017 | 25.0 | 30.0 |

Discussion on Effluent Water Quality

All the parameters are under the prescribed standard.

ANNEXURE 1

STACK 2_200_TPD DRI KILN_03-05-

| | | |
|---------------|--------------------------------|---------------------------|
| EnviroConnect | Forbes Marshall | Historical Data |
| Plant Name | MAAN STEEL & POWER LIMITED | |
| Plant Address | M/S MAAN STEEL & POWER LIMITED | JAMURIA INDUSTRIAL ESTATE |
| Station Name | STACK 2_200_TPD DRI KILN | |
| From Date | 01-03-2022 00:00:00 | |
| To Date | 31-03-2022 14:57:00 | |
| Interval | Daily | |
| Function | Average | |

| | |
|-----------|--------------|
| Parameter | PM |
| Unit | mg/Nm3 |
| Limit | 0.00 - 50.00 |

| | |
|---------------------|---------|
| 01-03-2022 00:00:00 | 23.13 |
| 02-03-2022 00:00:00 | 23.22 |
| 03-03-2022 00:00:00 | 23.23 |
| 04-03-2022 00:00:00 | 23.02 |
| 05-03-2022 00:00:00 | 23.18 |
| 06-03-2022 00:00:00 | 23.21 |
| 07-03-2022 00:00:00 | 23.27 |
| 08-03-2022 00:00:00 | 23.23 |
| 09-03-2022 00:00:00 | 23.43 |
| 10-03-2022 00:00:00 | 23.82 |
| 11-03-2022 00:00:00 | 23.92 |
| 12-03-2022 00:00:00 | 24 |
| 13-03-2022 00:00:00 | 24.02 |
| 14-03-2022 00:00:00 | 24 |
| 15-03-2022 00:00:00 | 24.12 |
| 16-03-2022 00:00:00 | 24.75 |
| 17-03-2022 00:00:00 | 25.33 |
| 18-03-2022 00:00:00 | 26.03 |
| 19-03-2022 00:00:00 | 26.33 |
| 20-03-2022 00:00:00 | 26.56 |
| 21-03-2022 00:00:00 | 26.79 |
| 22-03-2022 00:00:00 | 26.98 |
| 23-03-2022 00:00:00 | 27.03 |
| 24-03-2022 00:00:00 | 27.01 |
| 25-03-2022 00:00:00 | 27.05 |
| 26-03-2022 00:00:00 | 27.68 |
| 27-03-2022 00:00:00 | 27.77 |
| 28-03-2022 00:00:00 | 27.75 < |

STACK 2_200_TPD DRI KILN_03-05-

MOUZA - IKHRA WARD NO. 09 P.O. NANDI BURDWAN 713362. JAMURIA (WEST BENGAL)

STACK 2_200_TPD DRI KILN_03-05-

| | | |
|---------------------|--------------------------------|---------------------------|
| EnviroConnect | Forbes Marshall | Historical Data |
| Plant Name | MAAN STEEL & POWER LIMITED | |
| Plant Address | M/S MAAN STEEL & POWER LIMITED | JAMURIA INDUSTRIAL ESTATE |
| Station Name | STACK 2_200_TPD DRI KILN | |
| From Date | 01-04-2022 00:00:00 | |
| To Date | 30-04-2022 14:57:00 | |
| Interval | Daily | |
| Function | Average | |
| Parameter | PM | |
| Unit | mg/Nm3 | |
| Limit | 0.00 - 50.00 | |
| 05-04-2022 00:00:00 | | 16 < |
| 09-04-2022 00:00:00 | | 19 < |
| 10-04-2022 00:00:00 | | 19 |
| 11-04-2022 00:00:00 | | 19 |
| 12-04-2022 00:00:00 | | 19.05 |
| 13-04-2022 00:00:00 | | 19 |
| 14-04-2022 00:00:00 | | 19 |
| 15-04-2022 00:00:00 | | 19 |
| 16-04-2022 00:00:00 | | 19 |
| 17-04-2022 00:00:00 | | 19.02 |
| 18-04-2022 00:00:00 | | 19 |
| 22-04-2022 00:00:00 | | 19 < |
| 23-04-2022 00:00:00 | | 19 |
| 24-04-2022 00:00:00 | | 19 |
| 25-04-2022 00:00:00 | | 19.31 |
| 26-04-2022 00:00:00 | | 19.34 |
| 27-04-2022 00:00:00 | | 19 |
| 28-04-2022 00:00:00 | | 19.31 |
| 29-04-2022 00:00:00 | | 20 |
| 30-04-2022 00:00:00 | | 20 < |

STACK 2_200_TPD DRI KILN_03-05-

MOUZA - IKHRA WARD NO. 09 P.O. NANDI BURDWAN 713362. JAMURIA (WEST BENGAL)

EnviroConr Forbes Mar Historical Data

Plant Name MAAN STEEL & POWER LIMITED

Plant Address M/S MAAN JAMURIA I MOUZA - I WARD NO. P.O. NAND BURDWAN JAMURIA (WEST BENG

Station Name STACK 2_200_TPD DRI KILN

From Date 01-02-2022 00:00:00

To Date 28-02-2022 14:57:00

Interval Daily

Function Average

Parameter PM

Unit mg/Nm3

Limit 0.00 - 50.00

01-02-2022 18.25

02-02-2022 21.49

03-02-2022 18.61

04-02-2022 19.22

05-02-2022 19.01

06-02-2022 19.23

07-02-2022 19.34

08-02-2022 19.48

09-02-2022 19.84

10-02-2022 20.04

11-02-2022 20.1

12-02-2022 20.05

13-02-2022 20.36

14-02-2022 20.88

15-02-2022 20.98

16-02-2022 20.94

17-02-2022 21.17

18-02-2022 25.34

19-02-2022 21.99

20-02-2022 22.01

21-02-2022 22.04

22-02-2022 22

23-02-2022 22.01

24-02-2022 22.42

25-02-2022 22.84

26-02-2022 22.62

27-02-2022 23.09

28-02-2022 23.12

AL)

EnviroConr Forbes Mar Historical Data

Plant Name MAAN STEEL & POWER LIMITED

Plant Address M/S MAAN JAMURIA I MOUZA - I WARD NO. P.O. NAND BURDWAN JAMURIA (WEST BENG

Station Name STACK 2_200_TPD DRI KILN

From Date 01-01-2022 00:00:00

To Date 31-01-2022 14:57:00

Interval Daily

Function Average

Parameter PM

Unit mg/Nm3

Limit 0.00 - 50.00

01-01-2022 20.69 H

02-01-2022 14.07 <

08-01-2022 27.05 < H

09-01-2022 35.76 H

10-01-2022 28.6 H

11-01-2022 30.21

12-01-2022 30.99

13-01-2022 31.24

14-01-2022 31.89 H

15-01-2022 30

16-01-2022 19.99

17-01-2022 13.91

18-01-2022 13.68

19-01-2022 17.1

20-01-2022 22.17

21-01-2022 22.27

22-01-2022 14.66 H

23-01-2022 2.55

24-01-2022 2.09

25-01-2022 2

26-01-2022 2

27-01-2022 2.01

28-01-2022 17.06

29-01-2022 18.4

30-01-2022 17.83

31-01-2022 18.28

AL)

EnviroConr Forbes Mar Historical Data

Plant Name MAAN STEEL & POWER LIMITED

Plant Address M/S MAAN JAMURIA I MOUZA - I WARD NO. P.O. NAND BURDWAN JAMURIA (WEST BENG

Station Name STACK 2_200_TPD DRI KILN

From Date 01-12-2021 00:00:00

To Date 31-12-2021 14:57:00

Interval Daily

Function Average

Parameter PM

Unit mg/Nm3

Limit 0.00 - 50.00

| | | |
|------------|-------|-----|
| 01-12-2021 | 22.39 | H |
| 02-12-2021 | 22.25 | |
| 03-12-2021 | 22.47 | H |
| 04-12-2021 | 21.79 | H |
| 05-12-2021 | 21.54 | |
| 06-12-2021 | 22.15 | |
| 07-12-2021 | 22.14 | |
| 08-12-2021 | 22.03 | |
| 09-12-2021 | 22.16 | |
| 10-12-2021 | 22.04 | |
| 11-12-2021 | 22.02 | |
| 12-12-2021 | 22.32 | H |
| 13-12-2021 | 22.11 | |
| 14-12-2021 | 21.97 | |
| 15-12-2021 | 22.02 | < |
| 17-12-2021 | 22.07 | < |
| 18-12-2021 | 22.41 | H |
| 19-12-2021 | 22.03 | |
| 20-12-2021 | 22.38 | H |
| 21-12-2021 | 22.37 | H |
| 22-12-2021 | 22.03 | |
| 23-12-2021 | 26.1 | |
| 24-12-2021 | 28.69 | H |
| 25-12-2021 | 25.3 | |
| 26-12-2021 | 25.88 | H |
| 27-12-2021 | 24.43 | |
| 28-12-2021 | 25.05 | H |
| 29-12-2021 | 26.65 | H |
| 30-12-2021 | 26.55 | H |
| 31-12-2021 | 26.49 | < H |

AL)

EnviroConr Forbes Mar Historical Data

Plant Name MAAN STEEL & POWER LIMITED

Plant Address M/S MAAN JAMURIA I MOUZA - I WARD NO. P.O. NAND BURDWAN JAMURIA (WEST BENG

Station Name Stack 1_Combined 95 TPD KILN

From Date 01-04-2022 00:00:00

To Date 30-04-2022 14:29:00

Interval Daily

Function Average

Parameter PM

Unit mg/Nm3

Limit 0.00 - 50.00

05-04-2022 23 <

09-04-2022 23 <

10-04-2022 22.99

11-04-2022 23

12-04-2022 22.99 <

13-04-2022 22.97 <

14-04-2022 23

15-04-2022 23

16-04-2022 23

17-04-2022 23

18-04-2022 23 <

22-04-2022 23 <

23-04-2022 23

24-04-2022 23

25-04-2022 23

26-04-2022 23

27-04-2022 23

28-04-2022 22.96

29-04-2022 23 <

30-04-2022 23 <

AL)

EnviroConr Forbes Mar Historical Data

Plant Name MAAN STEEL & POWER LIMITED

Plant Address M/S MAAN JAMURIA I MOUZA - I WARD NO. P.O. NAND BURDWAN JAMURIA (WEST BENG

Station Name Stack 1_Combined 95 TPD KILN

From Date 01-02-2022 00:00:00

To Date 28-02-2022 14:29:00

Interval Daily

Function Average

Parameter PM

Unit mg/Nm3

Limit 0.00 - 50.00

| | |
|------------|-------|
| 01-02-2022 | 20 |
| 02-02-2022 | 24.44 |
| 03-02-2022 | 24 |
| 04-02-2022 | 23.9 |
| 05-02-2022 | 24 |
| 06-02-2022 | 24 |
| 07-02-2022 | 24 |
| 08-02-2022 | 24 |
| 09-02-2022 | 23.94 |
| 10-02-2022 | 23.93 |
| 11-02-2022 | 24 |
| 12-02-2022 | 24 |
| 13-02-2022 | 24.01 |
| 14-02-2022 | 24 |
| 15-02-2022 | 24 |
| 16-02-2022 | 24 |
| 17-02-2022 | 24 |
| 18-02-2022 | 26.11 |
| 19-02-2022 | 19.99 |
| 20-02-2022 | 20 |
| 21-02-2022 | 20 |
| 22-02-2022 | 19.98 |
| 23-02-2022 | 20 |
| 24-02-2022 | 19.93 |
| 25-02-2022 | 19.2 |
| 26-02-2022 | 19 |
| 27-02-2022 | 19 |
| 28-02-2022 | 19 < |

AL)

EnviroConr Forbes Mar Historical Data

Plant Name MAAN STEEL & POWER LIMITED

Plant Address M/S MAAN JAMURIA I MOUZA - I WARD NO. P.O. NAND BURDWAN JAMURIA (WEST BENG

Station Name Stack 1_Combined 95 TPD KILN

From Date 01-03-2022 00:00:00

To Date 31-03-2022 14:29:00

Interval Daily

Function Average

Parameter PM

Unit mg/Nm3

Limit 0.00 - 50.00

| | |
|------------|---------|
| 01-03-2022 | 19 |
| 02-03-2022 | 19 |
| 03-03-2022 | 19 |
| 04-03-2022 | 19 < |
| 05-03-2022 | 19 |
| 06-03-2022 | 19 |
| 07-03-2022 | 19 |
| 08-03-2022 | 19 |
| 09-03-2022 | 19 < |
| 10-03-2022 | 19 |
| 11-03-2022 | 19 |
| 12-03-2022 | 19 |
| 13-03-2022 | 19 |
| 14-03-2022 | 19 |
| 15-03-2022 | 19 |
| 16-03-2022 | 19 |
| 17-03-2022 | 19 |
| 18-03-2022 | 19 |
| 19-03-2022 | 19 |
| 20-03-2022 | 19 |
| 21-03-2022 | 19 |
| 22-03-2022 | 18.96 |
| 23-03-2022 | 19 |
| 24-03-2022 | 19 |
| 25-03-2022 | 19 |
| 26-03-2022 | 19 |
| 27-03-2022 | 14.73 < |
| 28-03-2022 | 14 < |

AL)

EnviroConr Forbes Mar Historical Data

Plant Name MAAN STEEL & POWER LIMITED

Plant Address M/S MAAN JAMURIA I MOUZA - I WARD NO. P.O. NAND BURDWAN JAMURIA (WEST BENG

Station Name Stack 1_Combined 95 TPD KILN

From Date 01-01-2022 00:00:00

To Date 31-01-2022 14:29:00

Interval Daily

Function Average

Parameter PM

Unit mg/Nm3

Limit 0.00 - 50.00

| | |
|------------|---------|
| 01-01-2022 | 17.01 < |
| 02-01-2022 | 17.23 < |
| 08-01-2022 | 16.93 < |
| 09-01-2022 | 15.17 |
| 10-01-2022 | 15 |
| 11-01-2022 | 14.87 |
| 12-01-2022 | 14.92 < |
| 13-01-2022 | 15 < |
| 14-01-2022 | 15 |
| 15-01-2022 | 18.45 |
| 16-01-2022 | 19.98 |
| 17-01-2022 | 20.12 |
| 18-01-2022 | 20.15 |
| 19-01-2022 | 20.19 |
| 20-01-2022 | 20.19 |
| 21-01-2022 | 20 |
| 22-01-2022 | 20 |
| 23-01-2022 | 19.98 |
| 24-01-2022 | 20 |
| 25-01-2022 | 20 |
| 26-01-2022 | 19.89 |
| 27-01-2022 | 20 < |
| 28-01-2022 | 20.01 < |
| 29-01-2022 | 20 |
| 30-01-2022 | 20.03 |
| 31-01-2022 | 20.01 < |

AL)

EnviroConr Forbes Mar Historical Data

Plant Name MAAN STEEL & POWER LIMITED

Plant Address M/S MAAN STEEL & PC

JAMURIA INDUSTRIAL ESTATE MOUZA - IKHRA WARD NO. 09 P.O. NANDI BURDWAN 71336

Station Name Stack 1_Combined 95 TPD KILN

From Date 01-12-2021 00:00

To Date 31-12-2021 14:29

Interval Daily

Function Average

Parameter PM

Unit mg/Nm3

Limit 0.00 - 50.00

| | |
|------------|---------|
| 01-12-2021 | 17 |
| 02-12-2021 | 17 |
| 03-12-2021 | 17 |
| 04-12-2021 | 17 |
| 05-12-2021 | 16.99 |
| 06-12-2021 | 17 |
| 07-12-2021 | 17 |
| 08-12-2021 | 17 |
| 09-12-2021 | 17 < |
| 10-12-2021 | 17 |
| 11-12-2021 | 17 |
| 12-12-2021 | 17 |
| 13-12-2021 | 17 |
| 14-12-2021 | 17 |
| 15-12-2021 | 17.03 < |
| 17-12-2021 | 17 < |
| 18-12-2021 | 17 |
| 19-12-2021 | 17.08 |
| 20-12-2021 | 17.29 |
| 21-12-2021 | 17.23 |
| 22-12-2021 | 17.04 |
| 23-12-2021 | 17.09 |
| 24-12-2021 | 17 |
| 25-12-2021 | 17 |
| 26-12-2021 | 17 |
| 27-12-2021 | 17 |
| 28-12-2021 | 17 |
| 29-12-2021 | 16.88 |
| 30-12-2021 | 17 |
| 31-12-2021 | 17 < |

52. JAMURIA (WEST BENGAL)

ANNEXURE 2

Air Pollution Equipment details

| ANNEXURE - I | | |
|--------------|---------------------------------|----------------|
| S/L No. | Particulars | Amt (Basic) |
| 1 | Bag Filter for DRI | ₹ 17,50,000 |
| 2 | ID Fan 1 | ₹ 6,00,000 |
| 3 | ID Fan 2 | ₹ 4,40,000 |
| 4 | ESP for DRI 1 | ₹ 70,00,000 |
| 5 | ESP for DRI 2 | ₹ 58,00,000 |
| 6 | ESP DRI Fabrication | ₹ 70,00,000 |
| 7 | ESP for CPP | ₹ 49,00,000 |
| 8 | ESP PP Fabrication | ₹ 72,14,000 |
| 9 | Wet Scrapper 1 | ₹ 8,50,000 |
| 10 | Wet Scrapper 2 | ₹ 12,11,000 |
| 11 | Ash Handling for DRI | ₹ 15,50,000 |
| 12 | Ash Handling for CPP | ₹ 86,00,000 |
| 13 | Air Cooled Condenser Mechanical | ₹ 4,65,00,000 |
| 14 | Air Cooled Condenser Erection | ₹ 35,00,000 |
| 15 | Bag Filter for PP | ₹ 11,25,000 |
| 16 | Scrapers | ₹ 1,40,000 |
| 17 | Stack CEMS | ₹ 18,20,000 |
| | Total | ₹ 10,00,00,000 |

ANNEXURE 3



ENVIROCHECK

Recognised by MoEF&CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

FORMAT NO : ENV/FM/37

| | | | |
|---------------------------|--|---|--------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 01.03.2022 - 02.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Ambient Air |
| Sample ID No. | : ENV/08/March/A/XIV | Report No. | : ENV/08/March/TR(A)/XIV/21-22 |

A] GENERAL INFORMATION

1. Location of Sampling : Near Main Gate
2. Duration of Sampling : 24 hrs. (09:00 a.m. - 09:00 a.m.)

B] METEOROLOGICAL INFORMATION

1. Average Temperature (°C) : 29.0
2. Average Relative Humidity (%) : 56.0
3. Barometric Pressure (mm of Hg) : 760.0
4. Smell or Odour : No Remarkable Smell
5. Weather Condition : Clear sky

C] RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|------------------------------------|-------------------|---|---------|-------|
| 1. | Concentration of PM _{2.5} | µg/m ³ | USEPA 1997a, 40 CFR Part 50, Appendix L | 56.64 | 60.0 |
| 2. | Concentration of PM ₁₀ | µg/m ³ | IS 5182 (PART 23) : 2006 | 93.18 | 100.0 |
| 3. | Concentration of SO ₂ | µg/m ³ | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007: Sec. 11 (Vol. 11.07) : 2011 | 16.64 | 80.0 |
| 4. | Concentration of NO ₂ | µg/m ³ | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec. 11 (Vol. 11.07) : 2011 | 38.58 | 80.0 |

Remarks : Limit as per National Ambient Air Quality Standards Central Pollution Control Board Notification, New Delhi, the 18th November, 2009.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)

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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

FORMAT NO : ENV/FM/37

| | | | |
|---------------------------|--|---|-------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 01.03.2022 - 02.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Ambient Air |
| Sample ID No. | : ENV/08/March/A/XV | Report No. | : ENV/08/March/TR(A)/XV/21-22 |

A] GENERAL INFORMATION

1. Location of Sampling : Near Administrative Building
2. Duration of Sampling : 24 hrs. (09:30 a.m. - 09:30 a.m.)

B] METEOROLOGICAL INFORMATION

1. Average Temperature (°C) : 29.0
2. Average Relative Humidity (%) : 58.0
3. Barometric Pressure (mm of Hg) : 760.0
4. Smell or Odour : No Remarkable Smell
5. Weather Condition : Clear sky

C] RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|------------------------------------|-------------------|---|---------|-------|
| 1. | Concentration of PM _{2.5} | µg/m ³ | USEPA 1997a, 40 CFR Part 50, Appendix L | 51.68 | 60.0 |
| 2. | Concentration of PM ₁₀ | µg/m ³ | IS 5182 (PART 23) : 2006 | 89.17 | 100.0 |
| 3. | Concentration of SO ₂ | µg/m ³ | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007: Sec. 11 (Vol. 11.07) : 2011 | 11.94 | 80.0 |
| 4. | Concentration of NO ₂ | µg/m ³ | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec. 11 (Vol. 11.07) : 2011 | 32.46 | 80.0 |

Remarks : Limit as per National Ambient Air Quality Standards Central Pollution Control Board Notification, New Delhi, the 18th November, 2009.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)



ENVIROCHECK

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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

FORMAT NO : ENV/FM/37

| | | | |
|---------------------------|--|---|--------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 01.03.2022 - 02.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Ambient Air |
| Sample ID No. | : ENV/08/March/A/XVI | Report No. | : ENV/08/March/TR(A)/XVI/21-22 |

A] GENERAL INFORMATION

1. Location of Sampling : Back Side of the Plant
2. Duration of Sampling : 24 hrs. (10:00 a.m. - 10:00 a.m.)

B] METEOROLOGICAL INFORMATION

1. Average Temperature (°C) : 29.0
2. Average Relative Humidity (%) : 58.0
3. Barometric Pressure (mm of Hg) : 760.0
4. Smell or Odour : No Remarkable Smell
5. Weather Condition : Clear sky

C] RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|------------------------------------|-------------------|---|---------|-------|
| 1. | Concentration of PM _{2.5} | µg/m ³ | USEPA 1997a, 40 CFR Part 50, Appendix L | 52.54 | 60.0 |
| 2. | Concentration of PM ₁₀ | µg/m ³ | IS 5182 (PART 23) : 2006 | 82.64 | 100.0 |
| 3. | Concentration of SO ₂ | µg/m ³ | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007: Sec. 11 (Vol. 11.07) : 2011 | 9.60 | 80.0 |
| 4. | Concentration of NO ₂ | µg/m ³ | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec. 11 (Vol. 11.07) : 2011 | 31.09 | 80.0 |

Remarks : Limit as per National Ambient Air Quality Standards Central Pollution Control Board Notification, New Delhi, the 18th November, 2009.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)



ENVIROCHECK

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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

FORMAT NO : ENV/FM/37

| | | | |
|---------------------------|--|---|---------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 01.03.2022 - 02.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Ambient Air |
| Sample ID No. | : ENV/08/March/A/XVII | Report No. | : ENV/08/March/TR(A)/XVII/21-22 |

A] GENERAL INFORMATION

1. Location of Sampling : Near D. G. Room
2. Duration of Sampling : 24 hrs. (10:30 a.m. - 10:30 a.m.)

B] METEOROLOGICAL INFORMATION

1. Average Temperature (°C) : 29.0
2. Average Relative Humidity (%) : 58.0
3. Barometric Pressure (mm of Hg) : 760.0
4. Smell or Odour : No Remarkable Smell
5. Weather Condition : Clear sky

C] RESULTS


| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|------------------------------------|-------------------|---|---------|-------|
| 1. | Concentration of PM _{2.5} | µg/m ³ | USEPA 1997a, 40 CFR Part 50, Appendix L | 56.25 | 60.0 |
| 2. | Concentration of PM ₁₀ | µg/m ³ | IS 5182 (PART 23) : 2006 | 92.80 | 100.0 |
| 3. | Concentration of SO ₂ | µg/m ³ | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007: Sec. 11 (Vol. 11.07) : 2011 | 21.33 | 80.0 |
| 4. | Concentration of NO ₂ | µg/m ³ | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec. 11 (Vol. 11.07) : 2011 | 42.74 | 80.0 |

Remarks : Limit as per National Ambient Air Quality Standards Central Pollution Control Board Notification, New Delhi, the 18th November, 2009.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :


(Dr. Sumit Chowdhury)
(Technical Manager)

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ANNEXURE 4



ENVIROCHECK

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TEST REPORT

FORMAT NO : ENV/FM/38

| | | | |
|---------------------------|--|---|------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 01.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Stack Emission |
| Sample ID No. | : ENV/08/March/A/1 | Report No. | : ENV/08/March/TR(A)/1/21-22 |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | | | |
|---------------------------|--|--|--------|
| Stack Attached to | : Rotary Kiln (No.3) | Height of Stack (mtr.) (from G. L.) | : 40.0 |
| Shape of Stack | : Circular | Stack I.D. at sampling point (mtr.) | : 3.50 |
| Materials of Construction | : M.S. | Height of sampling port (mtr.) (from G.L.) | : 20.0 |
| Capacity | : 200 TPD | | |
| Emission Due to | : Combustion of Coal & Reduction of Fe-Ore | | |
| Fuel Used | : Coal | Permanent Platform & Ladder | : Yes |
| Working Fuel Consumption | : 8.7 Ton/hr. | | |
| Pollution Control Device | : W.H.R.B and E.S.P | | |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|--|----------------------|---|-------------|-------|
| 1. | Flue Gas Temperature | °C | IS : 11255 (Part 1) | : 105.0 | N.A. |
| 2. | Barometric Pressure | mm of Hg. | -- | : 760.0 | N.A. |
| 3. | Velocity of Gas flow | m/s | IS : 11255 (Part 3) | : 8.08 | N.A. |
| 4. | Quantity of Gas flow | Nm ³ /hr. | IS : 11255 (Part III) | : 208923.33 | N.A. |
| 5. | Concentration of SO ₂ | mg/Nm ³ | IS 11255 (Part 2) 1985 RA 2003 | : 677.64 | N.A. |
| 6. | Concentration of CO ₂ | % (v/v) | IS 13270 1992 RA 2003 | : 11.8 | N.A. |
| 7. | Concentration of CO | %(v/v) | IS 13270 1992 RA 2003 | : <1.0 | 1.0 |
| 8. | a) Concentration of Particulate Matter (at 11.8% CO ₂) | | | : 16.27 | N.A. |
| | b) Concentration of Particulate Matter (at 12% CO ₂) | mg/Nm ³ | IS 11255 (Part - 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol. 3 11.07) : 2011 | : 16.54 | 50.0 |

Remarks : Limit as per CPCB [Emission Regulation Part IV : COINDS/26/1986-87].
: N.A. means Not Available.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)

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TEST REPORT

FORMAT NO : ENV/FM/38

| | | | |
|---------------------------|--|---|-------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 01.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Stack Emission |
| Sample ID No. | : ENV/08/March/A/II | Report No. | : ENV/08/March/TR(A)/II/21-22 |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | |
|---------------------------|---|
| Stack Attached to | : Rotary Kiln (No.1 & 2) attached to common stack |
| Shape of Stack | : Circular |
| Materials of Construction | : M.S. |
| Capacity | : Rated - 95 TPD (each), Running - 95 TPD (each) |
| Emission Due to | : Combustion of Coal & Reduction of Fe-Ore |
| Fuel Used | : Coal |
| Working Fuel Consumption | : 3.2 TPH (each kiln) |
| Pollution Control Device | : Individual W.H.R.B and Individual E.S.P |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|--|----------------------|---|------------|-------|
| 1. | Flue Gas Temperature | °C | IS : 11255 (Part 1) | : 98.0 | N.A. |
| 2. | Barometric Pressure | mm of Hg. | -- | : 760.0 | N.A. |
| 3. | Velocity of Gas flow | m/s | IS : 11255 (Part 3) | : 9.81 | N.A. |
| 4. | Quantity of Gas flow | Nm ³ /hr. | IS : 11255 (Part III) | : 50083.49 | N.A. |
| 5. | Concentration of SO ₂ | mg/Nm ³ | IS 11255 (Part 2) 1985 RA 2003 | : 754.93 | N.A. |
| 6. | Concentration of CO ₂ | % (v/v) | IS 13270 1992 RA 2003 | : 10.8 | N.A. |
| 7. | Concentration of CO | %(v/v) | IS 13270 1992 RA 2003 | : <1.0 | 1.0 |
| 8. | a) Concentration of Particulate Matter (at 10.8% CO ₂) | | | : 37.28 | N.A. |
| | b) Concentration of Particulate Matter (at 12% CO ₂) | mg/Nm ³ | IS 11255 (Part - 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol. 3 11.07) : 2011 | : 41.42 | 50.0 |

Remarks : Limit as per CPCB [Emission Regulation Part IV : COINDS/26/1986-87].

: N.A. means Not Available.

: During monitoring both Kilns were in operation.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)

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TEST REPORT

FORMAT NO : ENV/FM/38

| | | | |
|---------------------------|--|---|--------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 01.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Stack Emission |
| Sample ID No. | : ENV/08/March/A/III | Report No. | : ENV/08/March/TR(A)/III/21-22 |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | | |
|---------------------------|---|--------|
| Stack Attached to | : Cooler Discharge of DRI - 1 & 2 | |
| Shape of Stack | : Circular | |
| Materials of Construction | : M.S. | |
| | Height of Stack (mtr.) (from G. L.) | : 30.0 |
| Capacity | : 95 TPD x 2 | |
| Emission Due to | : Process Activity (Cooling of Sponge Iron) | |
| | Stack I.D. at sampling point (mtr.) | : 0.87 |
| Fuel Used | : N.A. | |
| Working Fuel Consumption | : Nil | |
| Pollution Control Device | : Common Bag Filter | |
| | Permanent Platform & Ladder | : Yes |
| | Height of sampling port (mtr.) (from G.L.) | : 12.0 |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|-------------------------------------|----------------------|---|------------|-------|
| 1. | Flue Gas Temperature | °C | IS : 11255 (Part 1) | : 40.0 | N.A. |
| 2. | Barometric Pressure | mm of Hg. | -- | : 760.0 | N.A. |
| 3. | Velocity of Gas flow | m/s | IS : 11255 (Part 3) | : 10.48 | N.A. |
| 4. | Quantity of Gas flow | Nm ³ /hr. | IS : 11255 (Part III) | : 21331.28 | N.A. |
| 5. | Concentration of Particulate Matter | mg/Nm ³ | IS 11255 (Part - 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol. 3 11.07) : 2011 | : 43.84 | 50.0 |

Remarks : Limit as per CPCB [Emission Regulation Part IV : COINDS/26/1986-87].
: N.A. means Not Available.

Reviewed By :

(Durbadal Chakraborty)
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Approved By :

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(Technical Manager)



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TEST REPORT

FORMAT NO : ENV/FM/38

| | | | |
|---------------------------|--|---|-------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 01.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Stack Emission |
| Sample ID No. | : ENV/08/March/A/IV | Report No. | : ENV/08/March/TR(A)/IV/21-22 |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | |
|---------------------------|--|
| Stack Attached to | : Cooler Discharge of DRI -3 (200 TPD) & Product House (common) attached to common stack |
| Shape of Stack | : Circular |
| | Height of Stack (mtr.) (from G. L.) : 30.0 |
| Materials of Construction | : M.S. |
| | Stack I.D. at sampling point (mtr.) : 0.72 |
| Capacity | : 200 TPD |
| | Height of sampling port (mtr.) (from G.L.) : 8.0 |
| Emission Due to | : Process Activity (Cooling & Handling of Sponge Iron) |
| Fuel Used | : N.A. |
| | Permanent Platform & Ladder : Yes |
| Working Fuel Consumption | : Nil |
| Pollution Control Device | : Common Bag Filter |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|-------------------------------------|----------------------|---|------------|-------|
| 1. | Flue Gas Temperature | °C | IS : 11255 (Part 1) | : 39.0 | N.A. |
| 2. | Barometric Pressure | mm of Hg. | -- | : 760.0 | N.A. |
| 3. | Velocity of Gas flow | m/s | IS : 11255 (Part 3) | : 9.06 | N.A. |
| 4. | Quantity of Gas flow | Nm ³ /hr. | IS : 11255 (Part III) | : 12680.77 | N.A. |
| 5. | Concentration of Particulate Matter | mg/Nm ³ | IS 11255 (Part - 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol. 3 11.07) : 2011 | : 19.57 | 50.0 |

Remarks : Limit as per CPCB [Emission Regulation Part IV : COINDS/26/1986-87].
: N.A. means Not Available.

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TEST REPORT

FORMAT NO : ENV/FM/38

| | | | |
|---------------------------|--|---|------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 01.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Stack Emission |
| Sample ID No. | : ENV/08/March/A/V | Report No. | : ENV/08/March/TR(A)/V/21-22 |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | |
|---------------------------|---|
| Stack Attached to | : Separation House & I-Bin of DRI - 1, 2 & 3 attached to common stack |
| Shape of Stack | : Circular |
| | Height of Stack (mtr.) (from G. L.) : 30.0 |
| Materials of Construction | : M.S. |
| | Stack I.D. at sampling point (mtr.) : 1.0 |
| Capacity | : -- |
| | Height of sampling port (mtr.) (from G.L.) : 9.12 |
| Emission Due to | : Process Activity (Handling of Sponge Iron) |
| Fuel Used | : N.A. |
| | Permanent Platform & Ladder : Yes |
| Working Fuel Consumption | : Nil |
| Pollution Control Device | : Common Bag Filter |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|-------------------------------------|----------------------|---|------------|-------|
| 1. | Flue Gas Temperature | °C | IS : 11255 (Part 1) | : 39.5 | N.A. |
| 2. | Barometric Pressure | mm of Hg. | -- | : 760.0 | N.A. |
| 3. | Velocity of Gas flow | m/s | IS : 11255 (Part 3) | : 9.50 | N.A. |
| 4. | Quantity of Gas flow | Nm ³ /hr. | IS : 11255 (Part III) | : 25627.91 | N.A. |
| 5. | Concentration of Particulate Matter | mg/Nm ³ | IS 11255 (Part - 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol. 3 11.07) : 2011 | : 42.70 | 50.0 |

Remarks : Limit as per CPCB [Emission Regulation Part IV : COINDS/26/1986-87].
: N.A. means Not Available.

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TEST REPORT

FORMAT NO : ENV/FM/38

| | | | |
|---------------------------|--|---|-------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 01.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Stack Emission |
| Sample ID No. | : ENV/08/March/A/VI | Report No. | : ENV/08/March/TR(A)/VI/21-22 |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | |
|---------------------------|---|
| Stack Attached to | : Induction Furnace (No.1 & 2) attached to common stack |
| Shape of Stack | : Circular |
| | Height of Stack (mtr.) (from G. L.) : 30.0 |
| Materials of Construction | : M.S. |
| | Stack I.D. at sampling point (mtr.) : 0.9144 |
| Capacity | : 15 MT/Heat (each) |
| | Height of sampling port (mtr.) (from G.L.) : 10.66 |
| Emission Due to | : Melting of Pig Iron, Sponge Iron & Scrap |
| Fuel Used | : N.A. (Electrically Operated) |
| | Permanent Platform & Ladder : Yes |
| Working Fuel Consumption | : Nil |
| Pollution Control Device | : Bag Filter |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|-------------------------------------|----------------------|---|------------|-------|
| 1. | Flue Gas Temperature | °C | IS : 11255 (Part 1) | : 50.8 | N.A. |
| 2. | Barometric Pressure | mm of Hg. | -- | : 760.0 | N.A. |
| 3. | Velocity of Gas flow | m/s | IS : 11255 (Part 3) | : 10.66 | N.A. |
| 4. | Quantity of Gas flow | Nm ³ /hr. | IS : 11255 (Part III) | : 23167.34 | N.A. |
| 5. | Concentration of Particulate Matter | mg/Nm ³ | IS 11255 (Part - 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol. 3 11.07) : 2011 | : 16.20 | 50.0 |

Remarks : Limit as per CPCB [Emission Regulation Part IV : COINDS/26/1986-87].
: N.A. means Not Available.

Reviewed By :

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TEST REPORT

FORMAT NO : ENV/FM/38

| | | | |
|---------------------------|--|---|--------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 02.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Stack Emission |
| Sample ID No. | : ENV/08/March/A/VII | Report No. | : ENV/08/March/TR(A)/VII/21-22 |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | |
|--|-----------------------------------|
| Stack Attached to | : AFBC Boiler (CPP) |
| Shape of Stack | : Circular |
| Materials of Construction | : M.S. |
| Capacity | : 30 TPH |
| Emission Due to | : Combustion of Coal & Dolochar |
| Fuel Used | : Coal & Dolochar |
| Working Fuel Consumption | : Coal - 1 TPH & Dolochar - 8 TPH |
| Pollution Control Device | : E.S.P |
| Height of Stack (mtr.) (from G. L.) | : 35.0 |
| Stack I.D. at sampling point (mtr.) | : 2.2 |
| Height of sampling port (mtr.) (from G.L.) | : 30.0 |
| Permanent Platform & Ladder | : Yes |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|--|----------------------|--|------------|-------|
| 1. | Flue Gas Temperature | °C | IS : 11255 (Part 1) | : 128.3 | N.A. |
| 2. | Barometric Pressure | mm of Hg. | -- | : 760.0 | N.A. |
| 3. | Velocity of Gas flow | m/s | IS : 11255 (Part 3) | : 9.09 | N.A. |
| 4. | Quantity of Gas flow | Nm ³ /hr. | IS : 11255 (Part III) | : 90178.20 | N.A. |
| 5. | Concentration of SO ₂ (at 6% O ₂) | mg/Nm ³ | IS 11255 (Part 2) 1985 RA 2003 | : 458.22 | 500.0 |
| 6. | Concentration of NO _x (at 6% O ₂) | mg/Nm ³ | IS : 11255 (Part 7) 2005 & ASTM D 1608-98 reapproved 2009 : Sec 11 (Vol. 11.07) : 2011 | : 210.31 | 300.0 |
| 7. | Concentration of CO ₂ | % (v/v) | IS 13270 1992 RA 2003 | : 11.2 | N.A. |
| 8. | Concentration of CO | %(v/v) | IS 13270 1992 RA 2003 | : <1.0 | 1.0 |
| 9. | a) Concentration of Particulate Matter | | | : 22.12 | N.A. |
| | b) Concentration of Particulate Matter (at 6% O ₂) | mg/Nm ³ | IS 11255 (Part - 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol. 3 11.07) : 2011 | : 21.54 | 30.0 |

Remarks : Limit as per CPCB [Emission Regulation Part IV : COINDS/26/1986-87].
: N.A. means Not Available.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

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TEST REPORT

FORMAT NO : ENV/FM/38

| | | | | | |
|---------------------------|--|---|--------------------------------|----------------|------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant | | |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 02.03.2022 | | |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 | | |
| | | Date of Issue | : 07.03.2022 | | |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No | Type of Sample | : Stack Emission |
| Sample ID No. | : ENV/08/March/A/VII | Report No. | : ENV/08/March/TR(A)/VII/21-22 | | |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | | | |
|---------------------------|-----------------------------------|--|--------|
| Stack Attached to | : AFBC Boiler (CPP) | | |
| Shape of Stack | : Circular | Height of Stack (mtr.) (from G. L.) | : 35.0 |
| Materials of Construction | : M.S. | Stack I.D. at sampling point (mtr.) | : 2.2 |
| Capacity | : 30 TPH | Height of sampling port (mtr.) (from G.L.) | : 30.0 |
| Emission Due to | : Combustion of Coal & Dolochar | | |
| Fuel Used | : Coal & Dolochar | Permanent Platform & Ladder | : Yes |
| Working Fuel Consumption | : Coal - 1 TPH & Dolochar - 8 TPH | | |
| Pollution Control Device | : E.S.P | | |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|---------------------------------|---------|-----------------------|---------|-------|
| 1. | Concentration of O ₂ | % (v/v) | IS 13270 1992 RA 2003 | : 5.6 | N.A. |

Remarks : N.A. means Not Available.

Reviewed By :

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TEST REPORT

FORMAT NO : ENV/FM/38

| | | | |
|---------------------------|--|---|---------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 02.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Stack Emission |
| Sample ID No. | : ENV/08/March/A/VIII | Report No. | : ENV/08/March/TR(A)/VIII/21-22 |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | |
|--|--|
| Stack Attached to | : Induction Furnace (3 & 4) attached to common stack |
| Shape of Stack | : Circular |
| Materials of Construction | : M.S. |
| Capacity | : 15 MT/Heat (each) |
| Emission Due to | : Melting of Pig Iron, Sponge Iron & Scrap |
| Fuel Used | : N.A. |
| Working Fuel Consumption | : Nil |
| Pollution Control Device | : Bag Filter |
| Height of Stack (mtr.) (from G. L.) | : 29.0 |
| Stack I.D. at sampling point (mtr.) | : 1.1 |
| Height of sampling port (mtr.) (from G.L.) | : 17.5 |
| Permanent Platform & Ladder | : Yes |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|-------------------------------------|----------------------|---|------------|-------|
| 1. | Flue Gas Temperature | °C | IS : 11255 (Part 1) | : 54.0 | N.A. |
| 2. | Barometric Pressure | mm of Hg. | -- | : 760.0 | N.A. |
| 3. | Velocity of Gas flow | m/s | IS : 11255 (Part 3) | : 10.77 | N.A. |
| 4. | Quantity of Gas flow | Nm ³ /hr. | IS : 11255 (Part III) | : 33543.86 | N.A. |
| 5. | Concentration of Particulate Matter | mg/Nm ³ | IS 11255 (Part - 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol. 3 11.07) : 2011 | : 40.80 | 50.0 |

Remarks : Limit as per CPCB [Emission Regulation Part IV : COINDS/26/1986-87].
: N.A. means Not Available.
: During monitoring both furnaces were in operation.

Reviewed By :

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TEST REPORT

FORMAT NO : ENV/FM/38

| | | | |
|---------------------------|--|---|------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan – 713301 | Sampling Date | : 02.03.2022 |
| | | Period of Analysis | : 05.03.2022 – 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| Sample ID No. | : ENV/08/March/A/X | Report No. | : ENV/08/March/TR(A)/X/21-22 |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | |
|---------------------------|---------------------|
| Stack Attached to | : Iron Circuit |
| Shape of Stack | : Circular |
| Materials of Construction | : M.S. |
| Capacity | : -- |
| Emission Due to | : During Processing |
| Fuel Used | : N.A. |
| Working Fuel Consumption | : Nil |
| Pollution Control Device | : Bag Filter |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|-------------------------------------|----------------------|---|------------|-------|
| 1. | Flue Gas Temperature | °C | IS : 11255 (Part 1) | : 42.0 | N.A. |
| 2. | Barometric Pressure | mm of Hg. | -- | : 760.0 | N.A. |
| 3. | Velocity of Gas flow | m/s | IS : 11255 (Part 3) | : 7.43 | N.A. |
| 4. | Quantity of Gas flow | Nm ³ /hr. | IS : 11255 (Part III) | : 11183.12 | N.A. |
| 5. | Concentration of Particulate Matter | mg/Nm ³ | IS 11255 (Part - 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol. 3 11.07) : 2011 | : 26.11 | 50.0 |

Remarks : Limit as per CPCB [Emission Regulation Part IV : COINDS/26/1986-87].
: N.A. means Not Available.

Reviewed By :

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TEST REPORT

FORMAT NO : ENV/FM/38

| | | | |
|---------------------------|--|---|-------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 02.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Stack Emission |
| Sample ID No. | : ENV/08/March/A/XI | Report No. | : ENV/08/March/TR(A)/XI/21-22 |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | |
|---------------------------|---|
| Stack Attached to | : Stock House |
| Shape of Stack | : Circular |
| | Height of Stack (mtr.) (from G. L.) : 28.0 |
| Materials of Construction | : M.S. |
| | Stack I.D. at sampling point (mtr.) : 0.75 |
| Capacity | : -- |
| | Height of sampling port (mtr.) (from G.L.) : 12.0 |
| Emission Due to | : During Processing |
| Fuel Used | : N.A. |
| | Permanent Platform & Ladder : Yes |
| Working Fuel Consumption | : Nil |
| Pollution Control Device | : Bag Filter |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|-------------------------------------|----------------------|---|------------|-------|
| 1. | Flue Gas Temperature | °C | IS : 11255 (Part 1) | : 42.0 | N.A. |
| 2. | Barometric Pressure | mm of Hg. | -- | : 760.0 | N.A. |
| 3. | Velocity of Gas flow | m/s | IS : 11255 (Part 3) | : 10.50 | N.A. |
| 4. | Quantity of Gas flow | Nm ³ /hr. | IS : 11255 (Part III) | : 15811.36 | N.A. |
| 5. | Concentration of Particulate Matter | mg/Nm ³ | IS 11255 (Part - 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol. 3 11.07) : 2011 | : 43.78 | 50.0 |

Remarks : Limit as per CPCB [Emission Regulation Part IV : COINDS/26/1986-87].
: N.A. means Not Available.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)

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Overseas : UAE ■ Qatar ■ Netherlands



ENVIROCHECK

Recognised by MoEF&CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

FORMAT NO : ENV/FM/38

| | | | |
|---------------------------|--|---|--------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 02.03.2022 |
| | | Period of Analysis | : 05.03.2022 – 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Stack Emission |
| Sample ID No. | : ENV/08/March/A/XII | Report No. | : ENV/08/March/TR(A)/XII/21-22 |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | |
|---------------------------|--|
| Stack Attached to | : D. G. – 500 KVA (SMS Division) (Acoustic Enclosure) |
| Shape of Stack | : Circular |
| | Height of Stack (mtr.) (from G. L.) : 9.12 |
| Materials of Construction | : M.S. |
| | Stack I.D. at sampling point (mtr.) : 0.20 |
| Capacity | : 500 KVA |
| | Height of sampling port (mtr.) (from G.L.) : Final Discharging Point |
| Emission Due to | : Combustion of H.S.D |
| Fuel Used | : H.S.D |
| | Permanent Platform & Ladder : Yes |
| Working Fuel Consumption | : 75 liter./hr. |
| Pollution Control Device | : Nil |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|-------------------------------------|----------------------|---|-----------|-------|
| 1. | Flue Gas Temperature | °C | IS : 11255 (Part 1) | : 318.0 | N.A. |
| 2. | Barometric Pressure | mm of Hg. | -- | : 760.0 | N.A. |
| 3. | Velocity of Gas flow | m/s | IS : 11255 (Part 3) | : 18.82 | N.A. |
| 4. | Quantity of Gas flow | Nm ³ /hr. | IS : 11255 (Part III) | : 1071.56 | N.A. |
| 5. | Concentration of SO ₂ | mg/Nm ³ | IS 11255 (Part 2) 1985 RA 2003 | : 76.80 | N.A. |
| 6. | Concentration of CO ₂ | % (v/v) | IS 13270 1992 RA 2003 | : 8.4 | N.A. |
| 7. | Concentration of CO | % (v/v) | IS 13270 1992 RA 2003 | : <1.0 | 1.0 |
| 8. | Concentration of Particulate Matter | mg/Nm ³ | IS 11255 (Part - 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol. 3 11.07) : 2011 | : 61.52 | 150.0 |

Remarks : Limit as per CPCB [Emission Regulation Part IV : COINDS/26/1986-87].
: N.A. means Not Available.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

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TEST REPORT

FORMAT NO : ENV/FM/38

| | | | |
|---------------------------|--|---|---------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 02.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| Sample ID No. | : ENV/08/March/A/XIII | Report No. | : ENV/08/March/TR(A)/XIII/21-22 |

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

| | |
|---------------------------|-----------------------|
| Stack Attached to | : Coal Handling Plant |
| Shape of Stack | : Circular |
| Materials of Construction | : M.S. |
| Capacity | : 50 TPH |
| Emission Due to | : During Processing |
| Fuel Used | : N.A. |
| Working Fuel Consumption | : Nil |
| Pollution Control Device | : Bag Filter |

B. RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|-------------------------------------|----------------------|---|------------|-------|
| 1. | Flue Gas Temperature | °C | IS : 11255 (Part 1) | : 38.0 | N.A. |
| 2. | Barometric Pressure | mm of Hg. | -- | : 760.0 | N.A. |
| 3. | Velocity of Gas flow | m/s | IS : 11255 (Part 3) | : 9.04 | N.A. |
| 4. | Quantity of Gas flow | Nm ³ /hr. | IS : 11255 (Part III) | : 13781.39 | N.A. |
| 5. | Concentration of Particulate Matter | mg/Nm ³ | IS 11255 (Part - 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec. 11 (Vol. 3 11.07) : 2011 | : 27.12 | 50.0 |

Remarks : Limit as per CPCB [Emission Regulation Part IV : COINDS/26/1986-87].
: N.A. means Not Available.

Reviewed By :

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(Dy. Quality Manager)

Approved By :

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ANNEXURE 5



ENVIROCHECK

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TEST REPORT

FORMAT NO : ENV/FM/57

| | | | |
|---------------------------|--|---|----------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 02.03.2022 |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 |
| | | Date of Issue | : 07.03.2022 |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No |
| | | Type of Sample | : Work Zone Air |
| Sample ID No. | : ENV/08/March/A/XVIII | Report No. | : ENV/08/March/TR(A)/XVIII/21-22 |

A] GENERAL INFORMATION

1. Location of Sampling : Near Induction Furnace Area (Inside Shed)
2. Duration of Sampling : 08 hrs. (09:00 a.m. - 05:00 p.m.)

B] METEOROLOGICAL INFORMATION

1. Average Temperature (°C) : 33.0
2. Average Relative Humidity (%) : 68.0
3. Barometric Pressure (mm of Hg) : 760.0
4. Smell or Odour : No Remarkable Smell

C] RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|----------------------|-------------------|-------------------|---------|--------|
| 1. | Concentration of SPM | µg/m ³ | NIOSH 0500 : 1994 | 380.40 | 5000.0 |

Remarks : Limit as per The Factory Act - 1948.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)



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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

FORMAT NO : ENV/FM/57

| | | | | | |
|---------------------------|--|---|----------------------------------|----------------|-----------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant | | |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 02.03.2022 | | |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 | | |
| | | Date of Issue | : 07.03.2022 | | |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No | Type of Sample | : Work Zone Air |
| Sample ID No. | : ENV/08/March/A/XVIII | Report No. | : ENV/08/March/TR(A)/XVIII/21-22 | | |

A] GENERAL INFORMATION

1. Location of Sampling : Near Induction Furnace Area (Inside Shed)
2. Duration of Sampling : 08 hrs. (09:00 a.m. - 05:00 p.m.)

B] METEOROLOGICAL INFORMATION

1. Average Temperature (°C) : 33.0
2. Average Relative Humidity (%) : 68.0
3. Barometric Pressure (mm of Hg) : 760.0
4. Smell or Odour : No Remarkable Smell

C] RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|----------------------------------|-------------------|---|---------|-------|
| 2. | Concentration of RPM | µg/m ³ | IS 5182 (PART 23) : 2006 | 146.10 | N.A. |
| 3. | Concentration of SO ₂ | µg/m ³ | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007: Sec. 11 (Vol. 11.07) : 2011 | 16.0 | N.A. |
| 4. | Concentration of NO ₂ | µg/m ³ | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec. 11 (Vol. 11.07) : 2011 | 35.05 | N.A. |

Remarks : N.A. means Not Available.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)



ENVIROCHECK

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TEST REPORT

FORMAT NO : ENV/FM/57

| | | | | | |
|---------------------------|--|---|--------------------------------|----------------|-----------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant | | |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 02.03.2022 | | |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 | | |
| | | Date of Issue | : 07.03.2022 | | |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No | Type of Sample | : Work Zone Air |
| Sample ID No. | : ENV/08/March/A/XIX | Report No. | : ENV/08/March/TR(A)/XIX/21-22 | | |

A] GENERAL INFORMATION

1. Location of Sampling : Inside the Coal Shed
2. Duration of Sampling : 08 hrs. (09:30 a.m. - 05:30 p.m.)

B] METEOROLOGICAL INFORMATION

1. Average Temperature (°C) : 32.0
2. Average Relative Humidity (%) : 62.0
3. Barometric Pressure (mm of Hg) : 760.0
4. Smell or Odour : No Remarkable Smell

C] RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|----------------------|-------------------|-------------------|---------|--------|
| 1. | Concentration of SPM | µg/m ³ | NIOSH 0500 : 1994 | 481.21 | 5000.0 |

Remarks : Limit as per The Factory Act - 1948.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)



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TEST REPORT

FORMAT NO : ENV/FM/57

| | | | | | |
|---------------------------|--|---|--------------------------------|----------------|-----------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant | | |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 02.03.2022 | | |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 | | |
| | | Date of Issue | : 07.03.2022 | | |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No | Type of Sample | : Work Zone Air |
| Sample ID No. | : ENV/08/March/A/XIX | Report No. | : ENV/08/March/TR(A)/XIX/21-22 | | |

A] GENERAL INFORMATION

1. Location of Sampling : Inside the Coal Shed
2. Duration of Sampling : 08 hrs. (09:30 a.m. - 05:30 p.m.)

B] METEOROLOGICAL INFORMATION

1. Average Temperature (°C) : 32.0
2. Average Relative Humidity (%) : 62.0
3. Barometric Pressure (mm of Hg) : 760.0
4. Smell or Odour : No Remarkable Smell

C] RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|----------------------------------|-------------------|---|---------|-------|
| 2. | Concentration of RPM | µg/m ³ | IS 5182 (PART 23) : 2006 | 210.43 | N.A. |
| 3. | Concentration of SO ₂ | µg/m ³ | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007: Sec. 11 (Vol. 11.07) : 2011 | 15.36 | N.A. |
| 4. | Concentration of NO ₂ | µg/m ³ | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec. 11 (Vol. 11.07) : 2011 | 29.87 | N.A. |

Remarks : N.A. means Not Available.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)



ENVIROCHECK

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TEST REPORT

FORMAT NO : ENV/FM/57

| | | | | | |
|---------------------------|--|---|-------------------------------|----------------|-----------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant | | |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 02.03.2022 | | |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 | | |
| | | Date of Issue | : 07.03.2022 | | |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No | Type of Sample | : Work Zone Air |
| Sample ID No. | : ENV/08/March/A/XX | Report No. | : ENV/08/March/TR(A)/XX/21-22 | | |

A] GENERAL INFORMATION

1. Location of Sampling : Raw Materials Handling Area (Iron Ore Section)
2. Duration of Sampling : 08 hrs. (10:00 a.m. - 06:00 p.m.)

B] METEOROLOGICAL INFORMATION

1. Average Temperature (°C) : 31.0
2. Average Relative Humidity (%) : 64.0
3. Barometric Pressure (mm of Hg) : 760.0
4. Smell or Odour : No Remarkable Smell

C] RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|----------------------|-------------------|-------------------|---------|--------|
| 1. | Concentration of SPM | µg/m ³ | NIOSH 0500 : 1994 | 410.47 | 5000.0 |

Remarks : Limit as per The Factory Act - 1948.

Reviewed By :

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(Dy. Quality Manager)

Approved By :

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ENVIROCHECK

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TEST REPORT

FORMAT NO : ENV/FM/57

| | | | | | |
|---------------------------|--|---|-------------------------------|----------------|-----------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant | | |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 02.03.2022 | | |
| | | Period of Analysis | : 05.03.2022 - 05.03.2022 | | |
| | | Date of Issue | : 07.03.2022 | | |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No | Type of Sample | : Work Zone Air |
| Sample ID No. | : ENV/08/March/A/XX | Report No. | : ENV/08/March/TR(A)/XX/21-22 | | |

A] GENERAL INFORMATION

1. Location of Sampling : Raw Materials Handling Area (Iron Ore Section)
2. Duration of Sampling : 08 hrs. (10:00 a.m. - 06:00 p.m.)

B] METEOROLOGICAL INFORMATION

1. Average Temperature (°C) : 31.0
2. Average Relative Humidity (%) : 64.0
3. Barometric Pressure (mm of Hg) : 760.0
4. Smell or Odour : No Remarkable Smell

C] RESULTS

| SL. NO. | PARAMETERS | UNIT | METHOD NO. | RESULTS | LIMIT |
|---------|----------------------------------|-------------------|---|---------|-------|
| 2. | Concentration of RPM | µg/m ³ | IS 5182 (PART 23) : 2006 | 162.84 | N.A. |
| 3. | Concentration of SO ₂ | µg/m ³ | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007: Sec. 11 (Vol. 11.07) : 2011 | 9.60 | N.A. |
| 4. | Concentration of NO ₂ | µg/m ³ | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec. 11 (Vol. 11.07) : 2011 | 29.88 | N.A. |

Remarks : N.A. means Not Available.

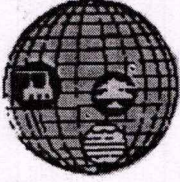
Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

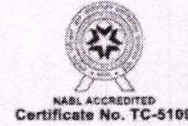
Approved By :

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ANNEXURE 6



EcoCare



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Specialised House on Environmental Monitoring, Analysis, Assessment & Management
ISO 9001:2015 Certified, OHSAS 45001:2018 Certified

Manoj Talkies Basement, Kumarpur
Asansol - 713304
Paschim Bardhaman (W.B.)

ULR NO – TC510921000001020F

Format No. : EC/TR/42/FM/06

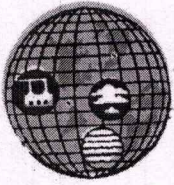
TEST REPORT

| | |
|--|---|
| Report Release Date : 15.12.2021 | Sample Ref. No.(ARF) : EC/ARF/29/211252 |
| Test Report No : EC/TR/42/12261 | Source of Sample : Steel Plant |
| Type of Sample : Ground Water | Sampling Date : 14.12.2021 |
| Sample Collected by : Party | Period of Analysis : 14.12.21 to 15.12.21 |
| Sample Details : Bore Well No – 1 | Sampling Location : Bore Well No – 1 |
| Name & Address : Maan Steel & Power Limited | Sample Condition : Sealed & Preserved |
| Jamuria Industrial Area | Sample Stamped as : "MSPL – 123" |
| P.O – Ekra, P.S – Jamuria | Sample Drawn By : Party |
| Dist. – Paschim Barddhaman | Remarks : ---- |
| West Bengal | Sampling Plan & Procedure : EC/SOP/03/01 |
| | Deviation if any : None |

| Sl. No. | Parameters | Unit | Test Method (APHA 23 rd Edition) | Standards (IS:10500) | Results |
|---------|--|------|---|----------------------|---------|
| 1 | pH at 24.5 °C | | 4500-H ⁺ B | 6.5 – 8.5 | 7.41 |
| 2 | TDS | mg/l | 2540 C | 500.0 | 458.80 |
| 3 | Arsenic | mg/l | 3500 – As B | 0.01 | < 0.01 |
| 4 | Total Alkalinity (as CaCO ₃) | mg/l | 2320 B | 200.0 | 128.10 |
| 5 | Chloride (as Cl ⁻) | mg/l | 4500 – Cl B | 250.0 | 36.91 |
| 6 | Total Hardness (as CaCO ₃) | mg/l | 2340 C | 200.0 | 159.12 |
| 7 | Calcium (as Ca ²⁺) | mg/l | 3500 – Ca B | 75.0 | 49.06 |
| 8 | Sulphate (as SO ₄ ²⁻) | mg/l | 4500 – SO ₄ ²⁻ E | 200.0 | 53.98 |
| 9 | Iron (as Fe) | mg/l | 3500 – Fe B | 0.3 | 0.21 |
| 10 | Magnesium (as Mg) | mg/l | 3500 – Mg B | 30.0 | 8.92 |

1. Test values are reported based on the samples received.
2. Sample(s) will be destroyed after 7 days from date of issues of the Test Report subject to nature of Preservation. Sample will be preserved as per the standard method.
3. The Test report shall not be reproduced, without the written approval of laboratory.

Authorised Signatory
Niranjana Lal Agarwalla
B Tech MS (USA), A.M.I.E
Authorised Signatory



Eco Care

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Manoj Talkies, (Basement Floor)

Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

ULR NO – TC510921000001020P

Format No. : EC/TRT/42/FM/06

TEST REPORT

| | |
|--|---|
| Report Release Date : 15.12.2021 | Sample Ref. No.(ARF) : EC/ARF/29/211252 |
| Test Report No : EC/TR/42/12261/B | Source of Sample : Steel Plant |
| Type of Sample : Ground Water | Sampling Date : 14.12.2021 |
| Sample Collected by : Party | Period of Analysis : 14.12.21 to 15.12.21 |
| Sample Details : Bore Well No – 1 | Sampling Location : Bore Well No – 1 |
| Name & Address : Maan Steel & Power Limited | Sample Condition : Sealed & Preserved |
| Jamuria Industrial Area | Sample Stamped as : "MSPL – 123" |
| P.O – Ekra, P.S – Jamuria | Sample Drawn By : Party |
| Dist. – Paschim Barddhaman | Remarks : --- |
| West Bengal | Sampling Plan & Procedure : EC/SOP/03/01 |
| | Deviation if any : None |

| Sl. No. | Parameters | Unit | Test Method (APHA 23 rd Edition) | Standards (IS:10500) | Results |
|---------|-------------|-----------|---|----------------------|--------------|
| 11 | T. Coliform | MPN/100ml | 9221 B | Not Detectable | Not Detected |

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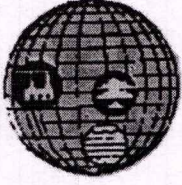
U Agarwalla

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anjan Lal Agarwalla

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ISO 9001:2015 Certified, OHSAS 45001:2018 Certified
ULR NO - TC510921000001021F

Paschim Bardhaman (W.B.)

Format No. : EC/TRT/42/FM/06

TEST REPORT

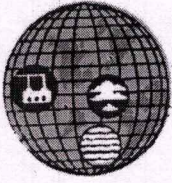
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|---------------------|---|------------------------------|------------------------|
| Report Release Date | : 15.12.2021 | Sample Ref. No.(ARF) | : EC/ARF/29/211252 |
| Test Report No | : EC/TR/42/12262 | Source of Sample | : Steel Plant |
| Type of Sample | : Ground Water | Sampling Date | : 14.12.2021 |
| Sample Collected by | : Party | Period of Analysis | : 14.12.21 to 15.12.21 |
| Sample Details | : Bore Well No - 2 | Sampling Location | : Bore Well No - 2 |
| Name & Address | : Maan Steel & Power Limited Jamuria Industrial Area P.O - Ekra, P.S - Jamuria Dist. - Paschim Bardhaman West Bengal | Sample Condition | : Sealed & Preserved |
| | | Sample Stamped as | : "MSPL - 124" |
| | | Sample Drawn By | : Party |
| | | Remarks | : ---- |
| | | Sampling Plan & Procedure | : EC/SOP/03/01 |
| | | Deviation if any | : None |

| Sl. No. | Parameters | Unit | Test Method (APHA 23 rd Edition) | Standards (IS:10500) | Results |
|---------|---|------|--|-------------------------|---------|
| 1 | pH at 24.6 °C | | 4500-H ⁺ B | 6.5 - 8.5 | 7.29 |
| 2 | TDS | mg/l | 2540 C | 500.0 | 471.60 |
| 3 | Arsenic | mg/l | 3500 - As B | 0.01 | < 0.01 |
| 4 | Total Alkalinity (as CaCO ₃) | mg/l | 2320 B | 200.0 | 134.40 |
| 5 | Chloride (as Cl ⁻) | mg/l | 4500 - Cl ⁻ B | 250.0 | 31.08 |
| 6 | Total Hardness (as CaCO ₃) | mg/l | 2340 C | 200.0 | 165.24 |
| 7 | Calcium (as Ca ²⁺) | mg/l | 3500 - Ca B | 75.0 | 50.69 |
| 8 | Sulphate (as SO ₄ ⁻) | mg/l | 4500 - SO ₄ ²⁻ E | 200.0 | 57.48 |
| 9 | Iron (as Fe) | mg/l | 3500 - Fe B | 0.3 | 0.19 |
| 10 | Magnesium (as Mg) | mg/l | 3500 - Mg B | 30.0 | 9.42 |

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Dist. Burdwan (West Bengal)

ULR NO – TC510921000001021P

Format No. : EC/TR/42/FM/06

TEST REPORT

| | |
|--|---|
| Report Release Date : 15.12.2021 | Sample Ref. No.(ARF) : EC/ARF/29/211252 |
| Test Report No : EC/TR/42/12262/B | Source of Sample : Steel Plant |
| Type of Sample : Ground Water | Sampling Date : 14.12.2021 |
| Sample Collected by : Party | Period of Analysis : 14.12.21 to 15.12.21 |
| Sample Details : Bore Well No – 2 | Sampling Location : Bore Well No – 2 |
| Name & Address : Maan Steel & Power Limited | Sample Condition : Sealed & Preserved |
| Jamuria Industrial Area | Sample Stamped as : "MSPL – 124" |
| P.O – Ekra, P.S – Jamuria | Sample Drawn By : Party |
| Dist. – Paschim Barddhaman | Remarks : --- |
| West Bengal | Sampling Plan & Procedure : EC/SOP/03/01 |
| | Deviation if any : None |

| Sl. No. | Parameters | Unit | Test Method (APHA 23 rd Edition) | Standards (IS:10500) | Results |
|---------|-------------|-----------|---|----------------------|--------------|
| 11 | T. Coliform | MPN/100ml | 9221 B | Not Detectable | Not Detected |

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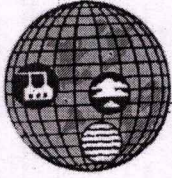
TEST REPORT

| | | | |
|---------------------|---|---------------------------|------------------------|
| Report Release Date | : 15.12.2021 | Sample Ref. No.(ARF) | : EC/ARF/29/211252 |
| Test Report No | : EC/TR/42/12264 | Source of Sample | : Steel Plant |
| Type of Sample | : Ground Water | Sampling Date | : 14.12.2021 |
| Sample Collected by | : Party | Period of Analysis | : 14.12.21 to 15.12.21 |
| Sample Details | : Bore Well No – 3 | Sampling Location | : Bore Well No – 3 |
| Name & Address | : Maan Steel & Power Limited Jamuria Industrial Area P.O – Ekra, P.S – Jamuria Dist. – Paschim Bardhaman West Bengal | Sample Condition | : Sealed & Preserved |
| | | Sample Stamped as | : "MSPL – 125" |
| | | Sample Drawn By | : Party |
| | | Remarks | : ---- |
| | | Sampling Plan & Procedure | : EC/SOP/03/01 |
| | | Deviation if any | : None |

| Sl. No. | Parameters | Unit | Test Method (APHA 23 rd Edition) | Standards (IS:10500) | Results |
|---------|--|------|---|----------------------|---------|
| 1 | pH at 24.5 °C | | 4500-H ⁺ B | 6.5 – 8.5 | 7.21 |
| 2 | TDS | mg/l | 2540 C | 500.0 | 439.50 |
| 3 | Arsenic | mg/l | 3500 – As B | 0.01 | < 0.01 |
| 4 | Total Alkalinity (as CaCO ₃) | mg/l | 2320 B | 200.0 | 121.80 |
| 5 | Chloride (as Cl ⁻) | mg/l | 4500 – Cl ⁻ B | 250.0 | 39.82 |
| 6 | Total Hardness (as CaCO ₃) | mg/l | 2340 C | 200.0 | 148.92 |
| 7 | Calcium (as Ca ²⁺) | mg/l | 3500 – Ca B | 75.0 | 42.52 |
| 8 | Sulphate (as SO ₄ ²⁻) | mg/l | 4500 – SO ₄ ²⁻ E | 200.0 | 48.60 |
| 9 | Iron (as Fe) | mg/l | 3500 – Fe B | 0.3 | 0.23 |
| 10 | Magnesium (as Mg) | mg/l | 3500 – Mg B | 30.0 | 10.41 |

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TEST REPORT

| | | | |
|---------------------|--|------------------------------|------------------------|
| Report Release Date | : 15.12.2021 | Sample Ref. No.(ARF) | : EC/ARF/29/211252 |
| Test Report No | : EC/TR/42/12264/B | Source of Sample | : Steel Plant |
| Type of Sample | : Ground Water | Sampling Date | : 14.12.2021 |
| Sample Collected by | : Party | Period of Analysis | : 14.12.21 to 15.12.21 |
| Sample Details | : Bore Well No – 3 | Sampling Location | : Bore Well No – 3 |
| Name & Address | : Maan Steel & Power Limited Jamuria Industrial Area P.O – Ekra, P.S – Jamuria Dist. – Paschim Barddhaman West Bengal | Sample Condition | : Sealed & Preserved |
| | | Sample Stamped as | : "MSPL – 125" |
| | | Sample Drawn By | : Party |
| | | Remarks | : ---- |
| | | Sampling Plan & Procedure | : EC/SOP/03/01 |
| | | Deviation if any | : None |

| Sl. No. | Parameters | Unit | Test Method (APHA 23 rd Edition) | Standards (IS:10500) | Results |
|---------|-------------|-----------|--|-------------------------|--------------|
| 11 | T. Coliform | MPN/100ml | 9221 B | Not Detectable | Not Detected |

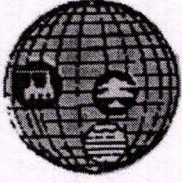
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Paschim Bardhaman (W.B.)

ULR NO – TC510921000001023F

Format No. : EC/TRT/42/FM/06

TEST REPORT

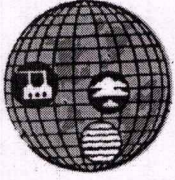
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|---------------------|---|---------------------------|------------------------|
| Report Release Date | : 15.12.2021 | Sample Ref. No.(ARF) | : EC/ARF/29/211252 |
| Test Report No | : EC/TR/42/12265 | Source of Sample | : Steel Plant |
| Type of Sample | : Ground Water | Sampling Date | : 14.12.2021 |
| Sample Collected by | : Party | Period of Analysis | : 14.12.21 to 15.12.21 |
| Sample Details | : Bore Well No – 4 | Sampling Location | : Bore Well No – 4 |
| Name & Address | : Maan Steel & Power Limited Jamuria Industrial Area P.O – Ekra, P.S – Jamuria Dist. – Paschim Bardhaman West Bengal | Sample Condition | : Sealed & Preserved |
| | | Sample Stamped as | : "MSPL – 126" |
| | | Sample Drawn By | : Party |
| | | Remarks | : ---- |
| | | Sampling Plan & Procedure | : EC/SOP/03/01 |
| | | Deviation if any | : None |

| Sl. No. | Parameters | Unit | Test Method (APHA 23 rd Edition) | Standards (IS:10500) | Results |
|---------|--|------|---|----------------------|---------|
| 1 | pH at 24.5 °C | | 4500-H ⁺ B | 6.5 – 8.5 | 7.40 |
| 2 | TDS | mg/l | 2540 C | 500.0 | 484.10 |
| 3 | Arsenic | mg/l | 3500 – As B | 0.01 | < 0.01 |
| 4 | Total Alkalinity (as CaCO ₃) | mg/l | 2320 B | 200.0 | 151.20 |
| 5 | Chloride (as Cl ⁻) | mg/l | 4500 – Cl ⁻ B | 250.0 | 36.42 |
| 6 | Total Hardness (as CaCO ₃) | mg/l | 2340 C | 200.0 | 167.28 |
| 7 | Calcium (as Ca ²⁺) | mg/l | 3500 – Ca B | 75.0 | 52.33 |
| 8 | Sulphate (as SO ₄ ⁻²) | mg/l | 4500 – SO ₄ ⁻² E | 200.0 | 58.94 |
| 9 | Iron (as Fe) | mg/l | 3500 – Fe B | 0.3 | 0.18 |
| 10 | Magnesium (as Mg) | mg/l | 3500 – Mg B | 30.0 | 8.92 |

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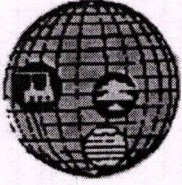
TEST REPORT

| | |
|--|---|
| Report Release Date : 15.12.2021 | Sample Ref. No.(ARF) : EC/ARF/29/211252 |
| Test Report No : EC/TR/42/12265/B | Source of Sample : Steel Plant |
| Type of Sample : Ground Water | Sampling Date : 14.12.2021 |
| Sample Collected by : Party | Period of Analysis : 14.12.21 to 15.12.21 |
| Sample Details : Bore Well No – 4 | Sampling Location : Bore Well No – 4 |
| Name & Address : Maan Steel & Power Limited | Sample Condition : Sealed & Preserved |
| Jamuria Industrial Area | Sample Stamped as : "MSPL – 126" |
| P.O – Ekra, P.S – Jamuria | Sample Drawn By : Party |
| Dist. – Paschim Barddhaman | Remarks : --- |
| West Bengal | Sampling Plan & Procedure : EC/SOP/03/01 |
| | Deviation if any : None |

| Sl. No. | Parameters | Unit | Test Method (APHA 23 rd Edition) | Standards (IS:10500) | Results |
|---------|-------------|-----------|---|----------------------|--------------|
| 11 | T. Coliform | MPN/100ml | 9221 B | Not Detectable | Not Detected |

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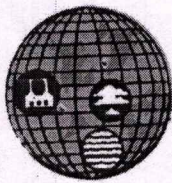
TEST REPORT

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|---------------------|--|------------------------------|------------------------|
| Report Release Date | : 15.12.2021 | Sample Ref. No.(ARF) | : EC/ARF/29/211252 |
| Test Report No | : EC/TR/42/12266 | Source of Sample | : Steel Plant |
| Type of Sample | : Ground Water | Sampling Date | : 14.12.2021 |
| Sample Collected by | : Party | Period of Analysis | : 14.12.21 to 15.12.21 |
| Sample Details | : Bore Well No – 5 | Sampling Location | : Bore Well No – 5 |
| Name & Address | : Maan Steel & Power Limited Jamuria Industrial Area P.O – Ekra, P.S – Jamuria Dist. – Paschim Barddhaman West Bengal | Sample Condition | : Sealed & Preserved |
| | | Sample Stamped as | : "MSPL – 127" |
| | | Sample Drawn By | : Party |
| | | Remarks | : ---- |
| | | Sampling Plan & Procedure | : EC/SOP/03/01 |
| | | Deviation if any | : None |

| Sl. No. | Parameters | Unit | Test Method (APHA 23 rd Edition) | Standards (IS:10500) | Results |
|---------|--|------|--|-------------------------|---------|
| 1 | pH at 24.6 °C | | 4500-H ⁺ B | 6.5 – 8.5 | 7.34 |
| 2 | TDS | mg/l | 2540 C | 500.0 | 434.10 |
| 3 | Arsenic | mg/l | 3500 – As B | 0.01 | < 0.01 |
| 4 | Total Alkalinity (as CaCO ₃) | mg/l | 2320 B | 200.0 | 140.70 |
| 5 | Chloride (as Cl ⁻) | mg/l | 4500 – Cl ⁻ B | 250.0 | 29.14 |
| 6 | Total Hardness (as CaCO ₃) | mg/l | 2340 C | 200.0 | 155.04 |
| 7 | Calcium (as Ca ²⁺) | mg/l | 3500 – Ca B | 75.0 | 45.79 |
| 8 | Sulphate (as SO ₄ ²⁻) | mg/l | 4500 – SO ₄ ²⁻ E | 200.0 | 54.58 |
| 9 | Iron (as Fe) | mg/l | 3500 – Fe B | 0.3 | 0.20 |
| 10 | Magnesium (as Mg) | mg/l | 3500 – Mg B | 30.0 | 9.91 |

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Dist. Burdwan (West Bengal)

ULR NO – TC510921000001024P

Format No. : EC/TRT/42/FM/06

TEST REPORT

| | | | |
|---------------------|--|------------------------------|------------------------|
| Report Release Date | : 15.12.2021 | Sample Ref. No.(ARF) | : EC/ARF/29/211252 |
| Test Report No | : EC/TR/42/12266/B | Source of Sample | : Steel Plant |
| Type of Sample | : Ground Water | Sampling Date | : 14.12.2021 |
| Sample Collected by | : Party | Period of Analysis | : 14.12.21 to 15.12.21 |
| Sample Details | : Bore Well No – 5 | Sampling Location | : Bore Well No – 5 |
| Name & Address | : Maan Steel & Power Limited Jamuria Industrial Area P.O – Ekra, P.S – Jamuria Dist. – Paschim Barddhaman West Bengal | Sample Condition | : Sealed & Preserved |
| | | Sample Stamped as | : "MSPL – 127" |
| | | Sample Drawn By | : Party |
| | | Remarks | : --- |
| | | Sampling Plan & Procedure | : EC/SOP/03/01 |
| | | Deviation if any | : None |

| Sl. No. | Parameters | Unit | Test Method (APHA 23 rd Edition) | Standards (IS:10500) | Results |
|---------|-------------|-----------|--|-------------------------|--------------|
| 11 | T. Coliform | MPN/100ml | 922i B | Not Detectable | Not Detected |

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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



FORMAT NO. ENV/FM/55

TEST REPORT

| | | | | | |
|---------------------------|---|---|---------------------------|----------------|----------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant | | |
| Address | : Jamuria Industrial Estate, Mouza – Ikhra, Ward No. – 9, P.O. – Nandi, Dist. – Paschim Bardhaman, Pin - 713362 | Sampling Date | : 01.03.2022 | | |
| | | Period of Analysis | : 03.03.2022 – 12.03.2022 | | |
| | | Date of Issue | : 14.03.2022 | | |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No | Type of Sample | : Ground Water |
| Location | : Near Main Gate (From Borewell) | Report No. | : ENV/1064B/W/M/21-22 | | |

| SL. NO. | PARAMETERS | TEST METHOD | UNIT | RESULTS |
|---------|------------------------|--|-------|------------|
| 1. | Colour | APHA 23 rd Edition, 2120 B : 2017 | Hazen | 1.0 |
| 2. | Odour | APHA 23 rd Ed., 2150 B : 2017 | -- | Agreeable |
| 3. | pH | APHA 23 rd Ed., H+B : 2017 | -- | 6.80 |
| 4. | Taste | APHA 23 rd Ed., 2160 B : 2017 | -- | Acceptable |
| 5. | Turbidity | APHA 23 rd Ed., 2130 N : 2017 | NTU | 1.28 |
| 6. | Total Dissolved Solids | APHA 23 rd Ed., 2540-C : 2017 | mg/l | 780.0 |
| 7. | Aluminium | APHA 23 rd Ed., 3500 Al-B : 2017 | mg/l | <0.02 |
| 8. | Boron | APHA 23 rd Ed., 3500 Al-B : 2017 | mg/l | <0.1 |
| 9. | Calcium | APHA 23 rd Ed., 3500 Ca-B : 2017 | mg/l | 80.96 |
| 10. | Chloride | APHA 23 rd Ed., 4500Cl-B/D : 2017 | mg/l | 72.60 |
| 11. | Copper | APHA 23 rd Ed., 3111B : 2017 | mg/l | 0.40 |
| 12. | Fluoride | APHA 23 rd Ed., 4500 F-D : 2017 | mg/l | <0.1 |
| 13. | Free Residual Chlorine | APHA 23 rd Ed., 4500 Cl-B : 2017 | mg/l | <0.1 |
| 14. | Iron | APHA 23 rd Ed., 3111B : 2017 | mg/l | 0.68 |
| 15. | Magnesium | APHA 23 rd Ed., 3500 Mg-B : 2017 | mg/l | 13.92 |
| 16. | Manganese | APHA 23 rd Ed., 3111B : 2017 | mg/l | <0.05 |
| 17. | Mineral Oil | APHA 23 rd Ed., 5520 B : 2017 | mg/l | <0.01 |
| 18. | Nitrate | APHA 23 rd Ed., 4500 NO ₃ - E : 2017 | mg/l | 6.50 |
| 19. | Phenolic Compounds | APHA 23 rd Ed., 5530 C : 2017 | mg/l | <0.001 |
| 20. | Selenium | IS 15303: 2003, RA 2014 | mg/l | <0.01 |
| 21. | Sulphate | APHA 23 rd Ed., SO ₄ -E : 2017 | mg/l | 81.50 |
| 22. | Total Alkalinity | APHA 23 rd Ed., 2320 B : 2017 | mg/l | 280.0 |
| 23. | Total Hardness | APHA 23 rd Ed., 2340 C : 2017 | mg/l | 260.0 |
| 24. | Zinc | APHA 23 rd Ed., 3111 B : 2017 | mg/l | 0.78 |
| 25. | Cadmium | APHA 23 rd Ed., 3111 B : 2017 | mg/l | <0.002 |
| 26. | Cyanide | APHA 23 rd Ed., 4500 CN D/E/F : 2017 | mg/l | <0.01 |
| 27. | Lead | APHA 23 rd Ed., 3111 B : 2017 | mg/l | <0.005 |
| 28. | Mercury | APHA 23 rd Ed., 3111B : 2017 | mg/l | <0.001 |
| 29. | Arsenic | IS 3025 (Part 37): 1988, RA 2014 | mg/l | <0.01 |
| 30. | Total Chromium | APHA 23 rd Ed., 3111 Cr-B : 2017 | mg/l | <0.02 |

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)



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TEST REPORT

| | | | | | |
|---------------------------|---|---|---------------------------|----------------|----------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant | | |
| Address | : Jamuria Industrial Estate, Mouza – Ikhra, Ward No. – 9, P.O. – Nandi, Dist. – Paschim Bardhaman, Pin - 713362 | Sampling Date | : 01.03.2022 | | |
| | | Period of Analysis | : 03.03.2022 – 04.03.2022 | | |
| | | Date of Issue | : 14.03.2022 | | |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No | Type of Sample | : Ground Water |
| Location | : Near Main Gate (From Borewell) | Report No. | : ENV/1064B/W/M/21-22 | | |

| SL. NO. | PARAMETERS | TEST METHOD | UNIT | RESULTS |
|---------|----------------|--|------------|---------|
| 1. | Total Coliform | 9222B, APHA 23 rd Ed., 2017 | CFU/100ml. | <1.0 |
| 2. | E. Coli | 9222I, APHA 23 rd Ed., 2017 | CFU/100ml. | <1.0 |

Remarks : a) CFU indicates Colony Forming Unit.
b) <1.0 indicates 'Absent' No Colony Developed, i.e. Co Coliform Found.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Priyanka Mukherjee)
(Technical Manager, Microbiology)



ENVIROCHECK

Recognised by MoEF&CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

| | | | |
|----------------------|--|--------------------|---------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Sampling Date | : 01.03.2022 |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Period of Analysis | : 03.03.2022 - 11.03.2022 |
| | | Date of Issue | : 12.03.2022 |
| Type of Sample | : Rain Water (From Rain Water Collection Pond) | Report No. | : ENV/1064/W/M/21-22 |

| SL. NO. | PARAMETERS | UNIT | RESULTS |
|---------|------------------------|-------------|-----------|
| 1. | Temperature | °C | 23.50 |
| 2. | Odour | -- | Odourless |
| 3. | Total Suspended Solids | mg./l | 15.0 |
| 4. | pH | -- | 7.12 |
| 5. | Total Hardness | mg./l | 8.0 |
| 6. | Calcium | mg./l | 2.4 |
| 7. | Magnesium | mg./l | BDL |
| 8. | Chloride | mg./l | 6.35 |
| 9. | Iron | mg./l | 0.04 |
| 10. | Salinity | mg./l | BDL |
| 11. | Haxavalent Chromium | mg./l | BDL |
| 12. | Total Chromium | mg./l | BDL |
| 13. | Kjeldhal Nitrogen | mg./l | 1.20 |
| 14. | Total Dissolved Solids | mg./l | 60.0 |
| 15. | Phosphate | mg./l | 0.80 |
| 16. | Zinc | mg./l | BDL |
| 17. | Sulphide | mg./l | BDL |
| 18. | Fluoride | mg./l | BDL |
| 19. | Manganese | mg./l | BDL |
| 20. | Bi-Carbonate | mg./l | 8.20 |
| 21. | Sodium | mg./l | 3.50 |
| 22. | Dissolved Oxygen | mg./l | 8.60 |
| 23. | COD | mg./l | BDL |
| 24. | BOD | mg./l | BDL |
| 25. | Oil & Grease | mg./l | BDL |
| 26. | Total Coliform | CFU/100 ml. | Absent |
| 27. | Fecal Coliform | CFU/100 ml. | Absent |

Remarks : a) BDL indicates Below Detection Limit.
b) CFU indicates Colony Forming Unit.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)

ANNEXURE 7



ENVIROCHECK

Recognised by MoEF&CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



FORMAT NO. ENV/FM/40

TEST REPORT

| | | | | | |
|---------------------------|---|---|---------------------------|----------------|----------------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Type of Industry | : Integrated Steel Plant | | |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Sampling Date | : 01.03.2022 | | |
| | | Period of Analysis | : 03.03.2022 - 08.03.2022 | | |
| | | Date of Issue | : 11.03.2022 | | |
| Sampling Plan & Procedure | : ENV/SOP/01 | Deviation from the Sampling Method and Plan | : No | Type of Sample | : Domestic Effluent Water (Grab) |
| Location | : Final Domestic Outlet-Soak pit | Sample ID No. | : ENV/08/March/W | Report No. | : ENV/08/March/TR(W)/21-22 |

| SL. NO. | PARAMETERS | TEST METHOD | UNIT | RESULTS | LIMIT |
|---------|--|---|------|---------|---------|
| 1. | pH | 4500 H+B APHA 23 rd Edition, 2017 | - | 6.95 | 5.5-9.0 |
| 2. | Total Suspended Solids | 2540 D APHA 23 rd Edition, 2017 | mg/l | 30.0 | 100.0 |
| 3. | Oil & Grease | 5520 Oil B/D APHA 23 rd Edition, 2017 | mg/l | 4.0 | 10.0 |
| 4. | Chemical Oxygen Demand | 5200 COD B/C/D APHA 23 rd Edition, 2017 | mg/l | 85.68 | 250.0 |
| 5. | Biochemical Oxygen Demand for 3 days at 27°C | 5210 BOD B APHA 23 rd Edition, 2017 | mg/l | 25.0 | 30.0 |

Remarks : Limit as per Schedule VI inserted by Rule 2(d) of the Environment (Protection) Second Amendment Rules, 1993 notified vide G.S.R. 422(E) dated 19.05.1993, published in the Gazette No. 174 dated 19.05.1993.

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)

ANNEXURE 8



ENVIROCHECK

Recognised by MoEF&CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



LECHATE STUDY REPORT

| | | | |
|-----|----------------------|---|--|
| 1. | Name of the Industry | : | Maan Steel & Power Ltd. |
| 2. | Address | : | Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 |
| 3. | Date of sampling | : | 02.03.2022 |
| 4.* | Report No. | : | ENV/1064D/W/M/21-22 |
| 5. | Reporting date | : | 10.03.2022 |

| Sl. No. | LOCATION | PARAMETERS (mg./ltr.) | | | | | | |
|---------|-------------------|-----------------------|------|------|------|------|--------|--------|
| | | Fe | Zn. | Cr. | Cu | Ni | Pb | Cd |
| 1. | Near DRI | 0.92 | 0.80 | 0.28 | 0.86 | 0.10 | <0.005 | <0.002 |
| 2. | Near Rolling Mill | 0.96 | 0.68 | 0.20 | 0.72 | 0.08 | <0.005 | <0.002 |
| 3. | Near SMS | 0.86 | 0.60 | 0.16 | 0.48 | 0.06 | <0.005 | <0.002 |
| 4. | Near CPP | 0.80 | 0.52 | 0.10 | 0.56 | 0.05 | <0.005 | <0.002 |

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)

ANNEXURE 9

MAKE UP WATER REQUIREMENT FOR THE PROJECT

| Consumption Unit | Fresh Make-Up | Recycled/ Make-Up | Waste water Generation | Utilisation/ Method of disposal |
|-----------------------|---------------|-------------------|------------------------|---------------------------------|
| DRI Kilns | 300 | 60 | 120 | Recycle / loss |
| SMS +Ferro alloys | 210 | 40 | 85 | Recycle/ loss |
| Rolling Mill | 325 | 65 | 130 | Recycle/ loss |
| CPP Boiler feed DM | 675 | | 190 | Recycle |
| Plant CPP cooling | | 200 | 100 | Recycle / loss |
| Ash handling | - | - | 20 | Recycle / loss |
| Potable/ domestic | 40 | - | 30 | Recycle / loss |
| Miscellaneous | | 50 | 81 | |
| WTP Loss | | | - | Loss |
| Dust suppression | | 115 | - | Loss |
| Greenbelt Development | | 50 | - | |
| Total | 1632 | 675 | 675 | |

After actual running of plant with water audit the amount can be further reduced.

Maan Steel & Power Limited



Director, Authorised Signatory

FORM 4

[See Rules 9(3) and 10(5)]

(EMBLEM OR HOLOGRAM OF THE CONCERNED AUTHORITY)

PERMIT FOR SINKING OF NEW WELL

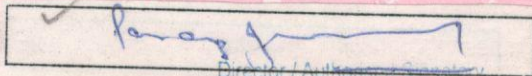
[U/S 7(3)(b) / 7(4)(b) / 7(5)(a) of the West Bengal Ground Water Resources (Management, Control and Regulation) Act 2005.]

P- 1791

066784



PERMIT NO **P0213031000590000001TSE**

1. (a) Name of the applicant (user) : Shri/Smt. **MAAN STEEL & POWER LTD.**
- (b) Son / Daughter of :
- (c) Address of the applicant : **JAMURIA INDUSTRIAL ESTATE, NANDI, JAMURIA**
- (d) Category of farmer (Please tick) : **Small Farmer / Marginal Farmer / Others**
(in case of irrigation well)
- (e) Serial No. of application Form : **BP/A0149, SL.NO:57; DT. 18.02.2016**
and date of submission
- (f) Specimen signature of the user : 
2. Location particulars---
 - (a) District : **BURDWAN**
 - (b) Block, Mouza, J. L. No., Plot No. : **JAMURIA, IKHRA, 38, 59**
 - (c) Municipality / Corporation :
 - Ward No. / Borouha No., Holding No. :
3. Particulars of the proposed well and pumping device---
 - (a) Type of the well : **TUBEWELL**
 - (b) Approx. depth of the well (m) : **100m**
 - (c) Purpose of the well : **INDUSTRIAL**
 - (d) Assembly size (for tube well) : **100 mm. X 150 mm.**
 - (e) Approx. strainer length (for tube well) : **12 m.**
 - (f) Diameter (for dug well) : **m.**
 - (g) Type of pump to be used : **SUBMERSIBLE**
 - (h) H. P. of the pump : **3.5 H.P**
 - (i) Operational device : **Electric Motor**
 - (j) Rate of withdrawal (m³/hr.) : **20 m³/hr**
 - (k) Maximum allowable running hours per day : **3 Hour Per Day**

This permit authorizes the owner applicant (user) to sink a well in the location specified at S1. (2) for extraction of ground water at a rate not exceeding that as shown at S1. (3) (j) and for running hours / day as shown at S1. (3) (K), and is valid subject to the observance of the conditions stated overleaf.

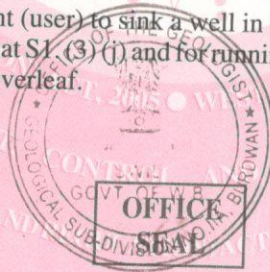
Place : **Burdwan**

Date : **29/06/2016**

28/12/2017

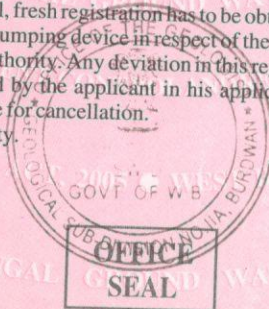
Conditions :

- (1) In case of any change of ownership of the proposed well, fresh registration has to be obtained.
- (2) No change of location, design, rate of withdrawal and pumping device in respect of the proposed well as indicated at S1. (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this permit.
- (3) In case, any of the particulars / information furnished by the applicant in his application for issuance of this permit is found to be incorrect during verification at any subsequent stage, this permit is liable for cancellation.
- (4) Any other condition imposed by the concerned Authority.



Geologist, SW/D & Member Secretary, District Level Ground Water Resources Development Authority Burdwan-713101

Signature of the Issuing Authority and Designation
28/12/2017



**CONDITIONALITIES FOR PACKAGE DRINKING WATER PROJECTS AND INDUSTRIES/
INFRASTRUCTURES:**

1. Roof Top Rain Water harvesting for Surface Storage.
2. Excavation of pond of size 150 ft. x 50ft. with 2 m. depth.
3. Chemical Quality Test Report from BIS approved Laboratory in each year to be submitted to the Geologist & Member Secretary, DLA.
4. Arrangement of Water Meter at the outlet of Tube Well discharge to be monitored by Govt. Officials as assigned by DLA.
5. The enhanced rate if any in future (including the rates revised retrospectively) of fees/ charges/ taxes for draws of ground water on annual basis, should be borne by applications for operating their tube wells in a continuous manner.

Pranab
28/12/2017

Geologist, SWID &
Member Secretary, District Level
Ground Water Resources Development Authority
Burdwan-713101

BR/A 0149 SLM - 57

T.R. FORM NO. 7
[See sub-rule (2) (b) of T.R. 3.06]

Challan for Deposit of Money in the account of GOVERNMENT OF WEST BENGAL

1. Name of the Bank & Branch: State Bank of India, Burdwan Main Branch (0048)
2. (a) Name of the Treasury: Burdwan Treasury - II, Burdwan
(b) Treasury Code:

| | | | | | |
|---|---|---|--|--|--|
| B | U | B | | | |
|---|---|---|--|--|--|

3. Account Code:

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 7 | 0 | 2 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 2 | 2 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

(14- Digits must be filled up properly)

4. Detail Head of Account: 0702-80-800 Other receipts -002-other items 27 other -receipts

5. (a) Amount: Rs 1000/-
(b) in words: Rupees: one thousand only.

6. By whom tendered - Name & Address:
Maan Steel & Power Ltd. 58/1, Serat bone rd. k-25

7. Name / Designation & Address of the Departmental Officer on whose behalf / favour money is paid:
Geologist Member Secretary, SWID, Burdwan
Spandan Complex, 1st. Floor, Burdwan

8. (a) Particulars & authority of Deposit: Notification No. 2109 WI-BP dt. 31st July 2006

* (b) T.V. No. & Date of A.C. Bill: T.V. No. 18 dated 21.03.2013 of Burdwan Treasury-II



9. Accounts Officer by whom adjustable: Accountant General (A&E), West Bengal.

Verified 28/12/17

Signature of Departmental / Treasury Officer

Depositor's Signature
Date: 28/12/17

Received payment.

579

Treasury Received Challan No.

Bank Scroll Serial No.

Receipt by Bank / Treasury

Date:



Signature with seal of the Bank

Date:

1* In respect of Challan relating to refund of unspent amount of A.C. Bill

FORM 4

[See Rules 9(3) and 10(5)]

066785

(EMBLEM OR HOLOGRAM OF THE CONCERNED AUTHORITY)

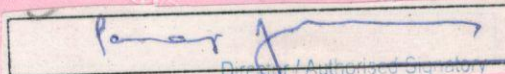


PERMIT FOR SINKING OF NEW WELL

[U/S 7(3)(b) / 7(4)(b) / 7(5)(a) of the West Bengal Ground Water Resources (Management, Control and Regulation) Act 2005.]

P- 1792

PERMIT NO **P0213031000090215001TSE**

1. (a) Name of the applicant (user) : Shri/Smt. **MAAN STEEL & POWER LTD.**
- (b) Son / Daughter of : :
- (c) Address of the applicant : **JAMURIA INDUSTRIAL ESTATE, NANDI, JAMURIA**
- (d) Category of farmer (Please tick) : **Small Farmer / Marginal Farmer / Others**
(in case of irrigation well)
- (e) Serial No. of application Form and date of submission : **BP/A0149, SL.NO:55; DT. 18.02.2016**
- (f) Specimen signature of the user : 
2. Location particulars---
 - (a) District : **BURDWAN**
 - (b) Block, Mouza, J. L. No. , Plot No. : **JAMURIA, IKHRA, 38, 09/2150**
 - (c) Municipality / Corporation :
Ward No. / Borough No., Holding No. :
3. Particulars of the proposed well and pumping device---
 - (a) Type of the well : **TUBEWELL**
 - (b) Approx. depth of the well (m) : **100m**
 - (c) Purpose of the well : **INDUSTRIAL**
 - (d) Assembly size (for tube well) : **100 mm. X 150 mm.**
 - (e) Approx. strainer length (for tube well) : **12 m.**
 - (f) Diameter (for dug well) : **m.**
 - (g) Type of pump to be used : **SUBMERSIBLE**
 - (h) H. P. of the pump : **3.5 H.P.**
 - (i) Operational device : **Electric Motor**
 - (j) Rate of withdrawal (m³/hr.) : **20 m³/hr**
 - (k) Maximum allowable running hours per day : **3 Hour Per Day**

This permit authorizes the owner applicant (user) to sink a well in the location specified at S1. (2) for extraction of ground water at a rate not exceeding that as shown at S1. (3) (j) and for running hours / day as shown at S1. (3) (K), and is valid subject to the observance of the conditions stated overleaf.

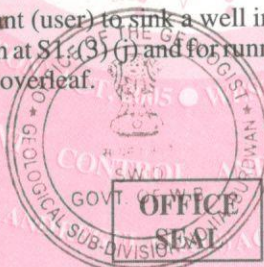
Place : Burdwan

Date : 29/06/2016

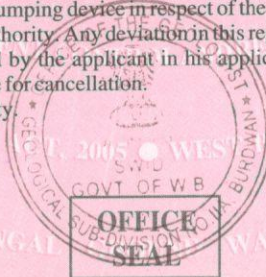
28/12/2017

Conditions :

- (1) In case of any change of ownership of the proposed well, fresh registration has to be obtained.
- (2) No change of location, design, rate of withdrawal and pumping device in respect of the proposed well as indicated at S1. (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this permit.
- (3) In case, any of the particulars / information furnished by the applicant in his application for issuance of this permit is found to be incorrect during verification at any subsequent stage, this permit is liable for cancellation.
- (4) Any other condition imposed by the concerned Authority.

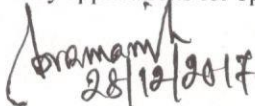


Geologist, SWID &
Member of the District Level
Ground Water Resources Management Authority
Burdwan-713101



**CONDITIONALITIES FOR PACKAGE DRINKING WATER PROJECTS AND INDUSTRIES/
INFRASTRUCTURES:**

1. Roof Top Rain Water harvesting for Surface Storage.
2. Excavation of pond of size 150 ft. x 50ft. with 2 m. depth.
3. Chemical Quality Test Report from BIS approved Laboratory in each year to be submitted to the Geologist & Member Secretary, DLA.
4. Arrangement of Water Meter at the outlet of Tube Well discharge to be monitored by Govt. Officials as assigned by DLA.
5. The enhanced rate if any in future (including the rates revised retrospectively) of fees/ charges/ taxes for drawls of ground water on annual basis, should be borne by applications for operating their tube wells in a continuous manner.


28/12/2017
Geologist, SWID &
Member Secretary, District Level
Ground Water Resources Development Authority
Burdwan-713101

37 | A0149 8200 55

T.R. FORM NO. 7
[See sub-rule (2) (b) of T.R. 3.06]

Challan for Deposit of Money in the account of GOVERNMENT OF WEST BENGAL

1. Name of the Bank & Branch: State Bank of India, Burdwan Main Branch (0048)
2. (a) Name of the Treasury : Burdwan Treasury - II, Burdwan
(b) Treasury Code:

| | | | | | |
|---|---|---|--|--|--|
| B | U | B | | | |
|---|---|---|--|--|--|

3. Account Code :

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| 0 | 7 | 0 | 2 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 2 | 2 | 7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|

(14- Digits must be filled up properly)

4. Detail Head of Account: 0702-80-800 Other receipts -002-other items 27 other -receipts

5. (a) Amount : Rs 1000/-
(b) in. words : Rupees: one thousand only.

6. By whome tendered - Name & Address:
Maan Steel & Power Ltd 587, Sarat-bone rd
K-25

7. Name / Designation & Address of the Departmental Officer on whose behalf / favour money is paid:
Geologist Member Sactetary, SWID, Burdwan
Spandan Complex, 1st. Floor, Burdwan

8. (a) Particulars & authority of Deposit: Notification No. 2109 WI-BP dt. 31st July 2006

* (b) T.V. No. & Date of A.C. Bill: T.V. No. 18 dated 21.03.2013 of Burdwan Treasury-II



9. Accounts Officer by whome adjustable : Accountant General (A&E), West Bengal.

Verified 28/12/17

Signature of Departmental / Treasury Officer

576

Depositor's Signature
Date: 28/12/17

Received payment.



Treasury Received Challan No.
Bank Scroll Serial No.

Receipt by Bank / Treasury

Signature with seal of the Bank

Date:

Date:

1* In respect of Challan relating to refund of unspent amount of A.C. Bill

FORM 4

[See Rules 9(3) and 10(5)]

066786

(EMBLEM OR HOLOGRAM OF THE CONCERNED AUTHORITY)

PERMIT FOR SINKING OF NEW WELL

[U/S 7(3)(b) / 7(4)(b) / 7(5)(a) of the West Bengal Ground Water Resources (Management, Control and Regulation) Act 2005.]

P- 1793

PERMIT NO **P0213031000750000001TSE**

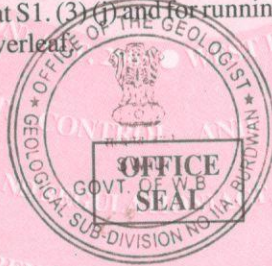


1. (a) Name of the applicant (user) : Shri/Smt. **MAAN STEEL & POWER LTD.**
(b) Son / Daughter of :
(c) Address of the applicant : **JAMURIA INDUSTRIAL ESTATE, NANDI, JAMURIA**
(d) Category of farmer (Please tick) : **Small Farmer / Marginal Farmer / Others**
(in case of irrigation well)
(e) Serial No. of application Form and date of submission : **BP/A0149, SL.NO:54; DT. 18.02.2016**
(f) Specimen signature of the user :
2. Location particulars---
(a) District : **BURDWAN**
(b) Block, Mouza, J. L. No., Plot No. : **JAMURIA, IKHRA, 38, 75**
(c) Municipality / Corporation :
Ward No. / Borough No., Holding No. :
3. Particulars of the proposed well and pumping device---
(a) Type of the well : **TUBEWELL**
(b) Approx. depth of the well (m) : **100m**
(c) Purpose of the well : **INDUSTRIAL**
(d) Assembly size (for tube well) : **100 mm. X 150mm.**
(e) Approx. strainer length (for tube well) : **12 m.**
(f) Diameter (for dug well) : **m.**
(g) Type of pump to be used : **SUBMERSIBLE**
(h) H. P. of the pump : **3.5 H.P**
(i) Operational device : **Electric Motor**
(j) Rate of withdrawal (m³/hr.) : **20 m³/hr**
(k) Maximum allowable running hours per day : **3 Hour Per Day**

This permit authorizes the owner applicant (user) to sink a well in the location specified at S1. (2) for extraction of ground water at a rate not exceeding that as shown at S1. (3) (j) and for running hours / day as shown at S1. (3) (k), and is valid subject to the observance of the conditions stated overleaf.

Place : **Burdwan**

Date : **29/06/2016**
28/10/2017



Geologist, SWID &
Member Secretary, District Level
Ground Water Resources Development Authority
Burdwan-713101

Conditions :

- (1) In case of any change of ownership of the proposed well, fresh registration has to be obtained.
- (2) No change of location, design, rate of withdrawal and pumping device in respect of the proposed well as indicated at S1. (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this permit.
- (3) In case, any of the particulars / information furnished by the applicant in his application for issuance of this permit is found to be incorrect during verification at any subsequent stage, this permit is liable for cancellation.
- (4) Any other condition imposed by the concerned Authority.



**CONDITIONALITIES FOR PACKAGE DRINKING WATER PROJECTS AND INDUSTRIES/
INFRASTRUCTURES:**

1. Roof Top Rain Water harvesting for Surface Storage.
2. Excavation of pond of size 150 ft. x 50ft. with 2 m. depth.
3. Chemical Quality Test Report from BIS approved Laboratory in each year to be submitted to the Geologist & Member Secretary, DLA.
4. Arrangement of Water Meter at the outlet of Tube Well discharge to be monitored by Govt. Officials as assigned by DLA.
5. The enhanced rate if any in future (including the rates revised retrospectively) of fees/ charges/ taxes for drawls of ground water on annual basis, should be borne by applications for operating their tube wells in a continuous manner.

Dr. Mamun
28/12/2017
Geologist, SWID &
Member Secretary, District Level
Ground Water Resources Development Authority
Burdwan-713101

29/A 0149 2-54

T.R. FORM NO. 7
[See sub-rule (2) (b) of T.R. 3.06]

Challan for Deposit of Money in the account of GOVERNMENT OF WEST BENGAL

1. Name of the Bank & Branch: State Bank of India, Burdwan Main Branch (0048)
2. (a) Name of the Treasury : Burdwan Treasury - II, Burdwan
(b) Treasury Code:

| | | | | | |
|---|---|---|--|--|--|
| B | U | B | | | |
|---|---|---|--|--|--|

3. Account Code :

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 7 | 0 | 2 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 2 | 2 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

(14- Digits must be filled up properly)

4. Detail Head of Account: 0702-80-800 Other receipts -002-other items 27 other -receipts

5. (a) Amount : Rs 1000/-
(b) in words : Rupees: one thousand only

6. By whom tendered - Name & Address:

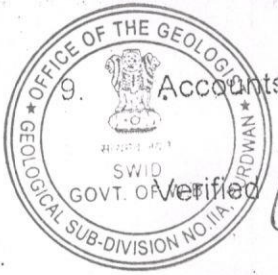
Magan Steer & Power Ltd. 58/1, Sarat Bose Rd. K-25

7. Name / Designation & Address of the Departmental Officer on whose behalf / favour money is paid:

Geologist Member Secretary, SWID, Burdwan
Spandan Complex, 1st. Floor, Burdwan

8. (a) Particulars & authority of Deposit: Notification No. 2109 WI-BP dt. 31st July 2006

* (b) T.V. No. & Date of A.C. Bill: T.V. No. 18 dated 21.03.2013 of Burdwan Treasury-II



9. Accounts Officer by whome adjustable : Accountant General (A&E), West Bengal.

Signature of Departmental / Treasury Officer

570

Depositor's Signature
Date: 28/12/17

Received payment.

Basab Biswas



Treasury Received Challan No.
Bank Scroll Serial No.

Receipt by Bank / Treasury
Date:

Signature with seal of the Bank
Date:

* In respect of Challan relating to refund of unspent amount of A.C. Bill

FORM 4

[See Rules 9(3) and 10(5)]

(EMBLEM OR HOLOGRAM OF THE CONCERNED AUTHORITY)

066783

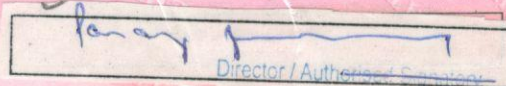


PERMIT FOR SINKING OF NEW WELL

[U/S 7(3)(b) / 7(4)(b) / 7(5)(a) of the West Bengal Ground Water Resources (Management, Control and Regulation) Act 2005.]

P- 1790

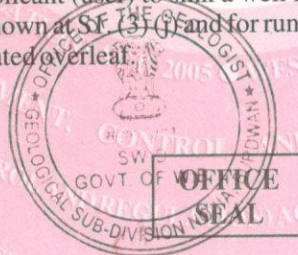
PERMIT NO **P021303100092000001TSE**

1. (a) Name of the applicant (user) : Shri/Smt **MAAN STEEL & POWER LTD.**
- (b) Son / Daughter of : _____
- (c) Address of the applicant : **JAMURIA INDUSTRIAL ESTATE, NANDI, JAMURIA**
- (d) Category of farmer (Please tick) : **Small Farmer / Marginal Farmer / Others**
(in case of irrigation well)
- (e) Serial No. of application Form and date of submission : **BP/A0149, SL.NO:56; DT. 18.02.2016**
- (f) Specimen signature of the user : 
2. Location particulars---
 - (a) District : **BURDWAN**
 - (b) Block, Mouza, J. L. No., Plot No. : **JAMURIA, IKHRA, 38, 92**
 - (c) Municipality / Corporation Ward No. / Borough No., Holding No. : _____
3. Particulars of the proposed well and pumping device---
 - (a) Type of the well : **TUBEWELL**
 - (b) Approx. depth of the well (m) : **100m**
 - (c) Purpose of the well : **INDUSTRIAL**
 - (d) Assembly size (for tube well) : **100 mm. X 50 mm.**
 - (e) Approx. strainer length (for tube well) : **12 m.**
 - (f) Diameter (for dug well) : _____ m.
 - (g) Type of pump to be used : **SUBMERSIBLE**
 - (h) H. P. of the pump : **3.5 H.P**
 - (i) Operational device : **Electric Motor**
 - (j) Rate of withdrawal (m³/hr.) : **20 m³/hr**
 - (k) Maximum allowable running hours per day : **3 Hour Per Day**

This permit authorizes the owner applicant (user) to sink a well in the location specified at S1. (2) for extraction of ground water at a rate not exceeding that as shown at S1. (3) (j) and for running hours / day as shown at S1. (3) (k), and is valid subject to the observance of the conditions stated overleaf.

Place : **Burdwan**

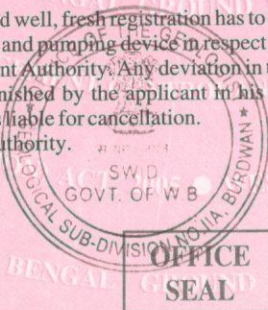
Date : **28/12/2017**
29/06/2016



Geologist, SWID & Member Secretary, District Level Ground Water Resource Development Authority Burdwan-713101

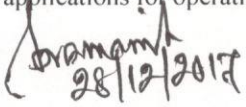
Conditions :

- (1) In case of any change of ownership of the proposed well, fresh registration has to be obtained.
- (2) No change of location, design, rate of withdrawal and pumping device in respect of the proposed well as indicated at S1. (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this permit.
- (3) In case, any of the particulars / information furnished by the applicant in his application for issuance of this permit is found to be incorrect during verification at any subsequent stage, this permit is liable for cancellation.
- (4) Any other condition imposed by the concerned Authority.



**CONDITIONALITIES FOR PACKAGE DRINKING WATER PROJECTS AND INDUSTRIES/
INFRASTRUCTURES:**

1. Roof Top Rain Water harvesting for Surface Storage.
2. Excavation of pond of size 150 ft. x 50ft. with 2 m. depth.
3. Chemical Quality Test Report from BIS approved Laboratory in each year to be submitted to the Geologist & Member Secretary, DLA.
4. Arrangement of Water Meter at the outlet of Tube Well discharge to be monitored by Govt. Officials as assigned by DLA.
5. The enhanced rate if any in future (including the rates revised retrospectively) of fees/ charges/ taxes for drawls of ground water on annual basis, should be borne by applications for operating their tube wells in a continuous manner.


28/12/2012
Geologist, SWID &
Member Secretary, District Level
Ground Water Resources Development Authority
Burdwan-713101

Bf/A 0149 sl 56

T.R. FORM NO. 7
[See sub-rule (2) (b) of T.R. 3.06]

Challan for Deposit of Money in the account of GOVERNMENT OF WEST BENGAL

1. Name of the Bank & Branch: State Bank of India, Burdwan Main Branch (0048)
2. (a) Name of the Treasury: Burdwan Treasury - II, Burdwan
(b) Treasury Code:

| | | | | | |
|---|---|---|--|--|--|
| B | U | B | | | |
|---|---|---|--|--|--|

3. Account Code:

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 7 | 0 | 2 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 2 | 2 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

(14- Digits must be filled up properly)

4. Detail Head of Account: 0702-80-800 Other receipts -002-other items 27 other -receipts

5. (a) Amount: Rs 1000/-
(b) in words: Rupees: One thousand only

6. By whom tendered - Name & Address:
Maan Steel & Power Ltd, 58/1, Sarit bari Rd. K. Z.

7. Name / Designation & Address of the Departmental Officer on whose behalf / favour money is paid:
Geologist Member Secretary, SWID, Burdwan
Spandan Complex, 1st. Floor, Burdwan

8. (a) Particulars & authority of Deposit: Notification No. 2109 WI-BP dt. 31st July 2006

* (b) T.V. No. & Date of A.C. Bill: T.V. No. 18 dated 21.03.2013 of Burdwan Treasury-II



9. Accounts Officer by whom adjustable: Accountant General (A&E), West Bengal.

Verified: *[Signature]*
Signature of Departmental / Treasury Officer

[Red circle containing '571']

Depositor's Signature
Date: *28/12/17*

Received payment. *[Stamp]* Treasury Received Challan No.



Bank Scroll Serial No.

Receipt by Bank / Treasury
Date:

Signature with seal of the Bank
Date:

* In respect of Challan relating to refund of unspent amount of A.C. Bill

FORM 4

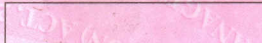
[See Rules 9(3) and 10(5)]

(EMBLEM OR HOLOGRAM OF THE CONCERNED AUTHORITY)

PERMIT FOR SINKING OF NEW WELL

[U/S 7(3)(b)/7(4)(b)/7(5)(a) of the West Bengal Ground Water Resources (Management, Control and Regulation) Act, 2005.]

PERMIT NO. P0213031000000012501TSE

1. (a) Name of the applicant (user) : Shri/Smt. **Amit Agarwal (Director)**
(b) Son / Daughter of : **C/O Maan Steel & Power Ltd.**
(c) Address of the applicant : **Vill+P.O. Bamunara, Jamuria Industrial Estate**
(d) Category of farmer (Please tick) : **Small Farmer / Marginal Farmer / Others**
(e) Serial No. of application Form and date of submission : **BP/A 0126, SI No.28, Dated 26.06.09**
(f) Specimen signature of the user : 

2. Location particulars---

- (a) District : **Jamuria, Ikra, 38,125**
(b) Block, Mouza, J. L. No. , Plot No. :
(c) Municipality / Corporation :
Ward No. / Borough No., Holding No. :

3. Particulars of the proposed well and pumping device---

- (a) Type of the well : **LDTW**
(b) Approx. depth of the well (m) : **100mt(Approx)**
(c) Purpose of the well : **Industrial**
(d) Assembly size (for tube well) : **mm X mm.**
(e) Approx. strainer length (for tube well) : **m. 15 mt.**
(f) Diameter (for dug well) : **m.**
(g) Type of pump to be used : **Submersible**
(h) H. P. of the pump : **5 H.P**
(i) Operational device : **Electric Motor**
(j) Rate of withdrawal (m³/hr.) : **15- 20 M³/hr**
(k) Maximum allowable running hours per day : **3-4hrs/day**

This permit authorizes the owner applicant (user) to sink a well in the location specified at S1. (2) for extraction of ground water at a rate not exceeding that as shown at S1. (3) (j) and for running hours / day as shown at S1. (3) (K), and is valid subject to the observance of the conditions stated overleaf.

Place : **Burdwan**

Date : **4/07/11**

Conditions :

- (1) In case of any change of ownership of the proposed well, fresh registration has to be obtained.
- (2) No change of location, design, rate of withdrawal and pumping device in respect of the proposed well as indicated at S1. (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this permit.
- (3) In case, any of the particulars / information furnished by the applicant in his application for issuance of this permit is found to be incorrect during verification at any subsequent stage, this permit is liable for cancellation.
- (4) Any other condition imposed by the concerned Authority.

72498

Yashinai
11/07/11

Geologist Member Secretary
District level Ground, Water Resource
Development Authority, Burdwan

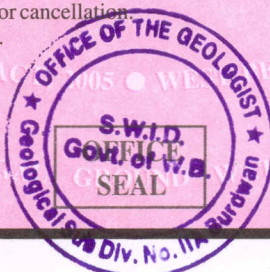
MAAN STEEL & POWER LTD.

Amit Agarwal
Director / Authorised Signatory.

Signature of the
Issued in th



Yashinai 4/07/11
Signature of the Issuing Authority
and Designated Secretary,
District level Ground, Water Resource
Development Authority, Burdwan



ANNEXURE 10



ENVIROCHECK

Recognised by MoEF&CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

| | | | |
|----------------------|---|---------------|------------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Sampling Date | : 02.03.2022 |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Date of Issue | : 11.03.2022 |
| Type of Sample | : Slag | Report No. | : ENV/1064C/SL/M/21-22 |

| Sl. No. | PRAMETERS | LOCATION | | |
|---------|--------------------------|--|---|---|
| | | <u>Slag of 4 x 15 MT Induction Furnace</u> | <u>Slag of Rotary Kiln - 3 Accrilation due to Shut Down</u> | <u>Slag of Rotary Kiln - 1 Accrilation due to Shut Down</u> |
| 1. | Total Chromium (mg./kg.) | 6.50 | 7.20 | 7.35 |
| 2. | Lead (mg./kg.) | 2.80 | 3.10 | 2.65 |
| 3. | Arsenic (mg./kg.) | <0.1 | <0.1 | <0.1 |
| 4. | Mercury (mg./kg.) | <0.01 | <0.01 | <0.01 |
| 5. | Cadmium (mg./kg.) | <0.02 | <0.02 | <0.02 |
| 6. | Barium (mg./kg.) | <1.0 | <1.0 | <1.0 |
| 7. | Selenium (mg./kg.) | <0.1 | <0.1 | <0.1 |
| 8. | Silver (mg./kg.) | <0.1 | <0.1 | <0.1 |

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)

ANNEXURE 11



ENVIROCHECK

Recognised by MoEF&CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

| | | | |
|----------------------|--|---------------|-----------------------|
| Name of the Industry | : Maan Steel & Power Ltd. | Sampling Date | : 01.03.2022 |
| Address | : Jamuria Industrial Estate, Jamuria, Paschim Burdwan - 713301 | Date of Issue | : 11.03.2022 |
| Type of Sample | : Sludge | Report No. | : ENV/1064A/S/M/21-22 |

| Sl. No. | LOCATION | PARAMETERS (mg./kg.) | | |
|---------|---|------------------------------------|--|---|
| | | Bed Sludge of GCT of Rotary Kiln-3 | Bed Sludge of GCT of Rotary Kiln-1 & 2 | E.S.P Bed Sludge of Rotary Kiln - 1 & 2 |
| 1. | pH | 5.80 | 4.80 | 6.20 |
| 2. | Electrical Conductivity ($\mu\text{s}/\text{cm}$) | 0.70 | 1.30 | 0.65 |
| 3. | Loss of Drying-105°C | 18.0% | 16.5% | 20.0% |
| | Loss of Drying-550°C | 4% | 5.5% | 4.5% |
| 4. | Arsenic (mg./kg.) | <0.1 | <0.1 | <0.1 |
| 5. | Lead (mg./kg.) | 21.50 | 23.0 | 18.20 |
| 6. | Zinc (mg./kg.) | 1180.0 | 1045.0 | 980.0 |
| 7. | Nickel (mg./kg.) | 41.80 | 46.50 | 32.50 |
| 8. | Total Chromium (mg./kg.) | 8.50 | 6.80 | 3.80 |
| 9. | Hexavalent Chromium (mg./kg.) | 3.20 | 2.80 | 1.50 |
| 10. | Manganese (mg./kg.) | 1920.0 | 1685.0 | 1520.0 |
| 11. | Mercury (mg./kg.) | 1.80 | 1.50 | 1.65 |
| 12. | Copper (mg./kg.) | 810.0 | 920.0 | 725.0 |
| 13. | Cobalt (mg./kg.) | 320.0 | 290.0 | 980.0 |
| 14. | Antimony (mg./kg.) | <1.0 | <1.0 | <1.0 |

Reviewed By :

(Durbadal Chakraborty)
(Dy. Quality Manager)

Approved By :

(Dr. Sumit Chowdhury)
(Technical Manager)

ANNEXURE 12

CHALLAN

WEST BENGAL POLLUTION CONTROL BOARD

"Paribesh Bhavan", 10A, LA Block
Sector-III, Salt Lake, Kolkata-98

(4th Copy)
(To be retained by the depositor)

PAY-IN-SLIP

UNITED BANK OF INDIA

Branch..... Date 12/7/12

Maan Steel & Power Ltd.
(Name & Address of the Company / Unit)

57/1 SHAKT BOSE ROAD KOL-25

Unit Code U00500000153733

(for units with unit code, optional)

Category Red/Orange/Green (Please ✓/tick)

Please Credit: A/C NO. 1096050101684

WEST BENGAL POLLUTION CONTROL BOARD

| Particular of Fees | Code | Amount * |
|--|------|-------------------|
| Consent to Establish (NOC) | R4D | |
| Consent to Operate | R4C | Rs..... |
| Analysis Charges (Air/Water) | R4M | Rs..... |
| Haz. Waste Authorisation (July 12 to March 13) | R4N | Rs. <u>1463/-</u> |
| Bio-Med Waste Authorisation | R4O | Rs..... |
| Import Clearance | R4P | Rs..... |
| Laboratory Recognition/ Registration/renewal | R4q | Rs..... |
| Other (Please Specify) | R4H | Rs..... |
| Fine (Please Specify) | R4Z | Rs..... |
| Arrear fees (Specify Period) | R4AR | Rs..... |
| Advance fees (Specify Period) (Apr 13 to June 13) | R4AD | Rs. <u>8287/-</u> |
| TOTAL | | Rs. <u>9750/-</u> |

* Amount (current year)

Uma Shankar Yadav
Depositor's Name & Signature

Particulars of Cash/Cheque/Draft

Rupees (in words) Nine thousand seven hundred

Fifty only

Signature of Receiving Cashier





Duly completed form along with necessary attachments is to be submitted in single copy

WEST BENGAL POLLUTION CONTROL BOARD

Paribesh Bhawan,

Bldg. No. 10 A, Block-LA, Sector-III, Bidhan Nagar, Kolkata – 700 098, INDIA

Tel : 091 (033) 2335-9088 / 7428 / 8211 / 8073 / 6731

Fax : 091 (033) 2335 6730 / 2813

Website : www.wbpcb.gov.in, e-mail : wbpcbnet@wbpcb.gov.in

Form -1

[See rules 5(3) and (7)]

Application for Obtaining Authorisation for Collection/ Reception/ Treatment/ Transport/ Storage/ Disposal of Hazardous Waste*

From: Maam Steel & Power Ltd.
Room No. 4C, 4th Floor.
Elgin Road, Kolkata - 20

To

The Member Secretary,
West Bengal Pollution Control Board,
10A, Block-LA, Sector-III, Bidhan Nagar,
Kolkata- 700 098

Sir,

I / We hereby apply for authorisation/ renewal of authorisation under sub-rule (3) of Rule 5 of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 for collection/ reception/ treatment/ transport/ storage/ disposal of hazardous wastes.

For Office Use Only

1. Code No. :
2. Whether the unit is situated in a critically polluted area as identified by Ministry of Environment and Forests;

To be filled in by Applicant

Part – A: General

3. (a) Name and address of the unit and location of activity Maam Steel & Power Ltd.
Jamuria Industrial Estate, Mouza, DKRGA.
Ward No. 9, P. O. - Nandi, Dist. Burdwan, 713362
- (b) Authorisation required for (Please tick mark appropriate activity / activities):
 - () collection
 - () reception
 - () treatment
 - () transport
 - () storage
 - () disposal

(c) In case of renewal of authorisation, previous authorisation number and date

- (a) Whether the unit is generating hazardous waste as defined in the Rules; *Yes.*
 (b) If so the type and quantity of wastes (in Tonnes or Kl.)
Enclosed Annexure - A
5. (a) Total capital invested on the project (in Rs.): *36.02 Crore.*
 (b) Year of commencement of production : *2011*
 (c) Whether the industry works general/ 2 shifts/ round the clock :
6. (a) List and quantum of products and by-products (in Tonnes or Kl.):
Sponge Iron - 4500 MT per Month.
Charcoal - 2100 MT per Month.
 (b) List and quantum of raw material used (in Tonnes or Kl.): *Iron Ore - 9405 M.T per Month*
Non Cooking Coal - 6650 MT per Month
Dolomite 150 M.T per Month.
7. Furnish a flow diagram of manufacturing process showing input and output in terms of products and waste generated including for captive power generation and demineralised water. *Enclosed.*

Part - B: Hazardous Waste

8. Hazardous Wastes :
 (a) Type of hazardous wastes generated as defined under these Rules: *Enclosed Annexure - A*
 (b) Quantum of hazardous waste generated: *Enclosed Annexure - A*
 (c) Sources and wastes characteristics: (Also indicate waste amenable to recycling, re-processing and reuse) *N/A*
 (d) Mode of storage within the plant, method of disposal and capacity: (provide details) *N/A*
9. Hazardous Wastes generated as per these Rules from storage of hazardous chemicals as defined under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989. *N/A*

Part - C: Treatment, Storage and Disposal Facility

13. Detailed proposal of the facility (to be attached) to include : *Not Required.*
- (i) Location of site (provide map)
 (ii) Name of waste processing technology
 (iii) Details of processing technology
 (iv) Type and Quantity of waste to be processed per day
 (v) Site clearance (from local authority, if any)
 (vi) Utilization programme for waste processed (Product Utilization)

- (vii) Method of disposal (details in brief be given)
- (viii) Quantity of waste to be disposed per day
- (ix) Nature and composition of waste
- (x) Methodology and operational details of landfilling/incineration
- (xi) Measures to be taken for prevention and control of environmental pollution including treatment of leachate
- (xii) Investment on Project and expected returns
- (xiii) Measures to be taken for safety of workers working in the plant (1) Helmet (2) Boots.
(3) Hand Gloves (4) Apron & Safety Glasses.

Place :

Signature **Maan Steel & Power Ltd.**

Date :

Designation : *Pradeep Jindal*
Director / Authorized Signatory

Annexure-A

List of type and quantity of wastes.

- | | | | |
|----|---|---|------------------------|
| 1. | Sludge and filters Contaminated with Oil | → | 200 Ltrs. Per Year |
| 2. | Used/spent oil | → | 200 Ltrs. Per Year |
| 3. | Waste/residues from process | → | 1 Mt. Per Year |
| 4. | Discarded containers/ barrels/ liners Contaminated with hazardous wastes / Chemicals | → | 40 to 50 Nos. Per Year |
| 5. | Filters & Filter materials which have organic liquids in them e.g. minerals oil synthetic oil and organic chlorine compounds | → | 40 to 50 Nos. Per Year |

o/c

Date: 12/07/2012

To

The Member Secretary
West Bengal Pollution Control Board
Paribesh Bhawan,
10, A Block-LA, Sector-III
Salt Lake City, Kolkata-700 017



Sub: - Deposit the Hazardous Waste Authorization form-1

Ref:- your Memo No.196(14)/35-92/2001(part-II)Dated.27/06/2012

Dear Sir,

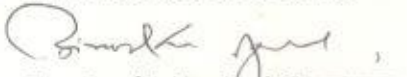
With due respect and above reference this is to inform you that we are depositing the Hazardous Waste Authorization form-1, which was required by your waste management Cell.

Therefore please take a note of it and acknowledge the same and oblige.

Thanking you

Yours faithfully

For Maan Steel & Power Ltd



Director /Authorized Signatory

Enclosed

Form-1

Payment slip - RB: 97501

Annexure-A

Digram of Manufacturing Process



Corporate & Regd. Office :

Room No. 4C, 13 Elgin Road, Kolkata - 700 020, West Bengal
Phone : 91 33 2289 0700, Fax : 91 33 2282 7947

Works : Jamuria Industrial Estate, Mouza-Ikhra, Ward No. 09, P.O. Nandi, Dist. Burdwan - 713 362, W.B.

e-mail : info@maan.co.in

www.maan.co.in

ANNEXURE 13

No. 4 Bill

Mob: 9434189129
7001537943



JOY GURU NURSERY & HORTICULTURE FARM



All Kinds of Best Quality Plants Grower & Supplier

Garden Stripur More, Near Gunjan Park, Ningha

Name: MAAN STEEL & POWER LTD.

Address: Tanna Industrial area mouza.

| Sl. No. | Particulars | Qty. | Rate | Rs. Amount | p. |
|---------|-------------|------|------|---------------|------------|
| 1. | Azadirachta | 125 | 5/- | 625 = | v |
| 2. | Moringa | 125 | 5/- | 625 = | a |
| 3. | Chattan | 50 | 10/- | 500 = | w |
| 4. | Kantol | 50 | 15/- | 750 = | e |
| 5. | Ashok | 50 | 10/- | 500 = | av |
| | | | | <u>3050 =</u> | <u>(2)</u> |

Date: 13/7/28

S. S. M.
Signature

6

BILL

Mob : 9434189129
7001537943

JOY GURU NURSERY & HORTICULTURE FARM

All Kinds of Best Quality Plants Grower
& Supplier

Garden-Sripur More, Near Gunjan Park, Ningha

Name M.A.M. Steel & Power Ltd.

Address Juvda, Indulw mowra

| Sl. No. | Particulars | Qty. | Rate | Amount Rs. | P |
|---------|-------------|------|------|---------------|---|
| 1 | Chatim | 100 | 10/- | 1000 = | ✓ |
| 2 | Sonag m/- | 100 | 5/- | 500 = | ✓ |
| 3 | Kantak | 50 | 15/- | 750 = | ✓ |
| | Mingia | 50 | 5/- | 250 = | ✓ |
| | | | | <u>2500 =</u> | ✓ |

242 CHALLAN

Mob: 9434189129
9434189129

JOY GURU NURSERY & HORTICULTURE FARM



All Kinds of Best Quality Plants Grower & Supplier

Garden Sipur More, Near Gunjan Park, Mingha

Name

Address

Date

| Sl No. | Particulars | Qty | Rate |
|--------|-------------|-----|------|
| 1 | Chatan | 100 | ₹ |
| 2 | Sonaju | 100 | ₹ |
| 3 | Kantala | 50 | ₹ |
| 4 | Musq | 50 | ₹ |
| | | 300 | ₹ |

WB 38 - L 9457
24/12/14

JOY GURU NURSERY & HORTICULTURE FARM

Signature

Customer's Sig

ANNEXURE 14

1. INTRODUCTION

It is said prevention is better than cure. All possible measures are to be taken to prevent any undesirable incident. Also it is said expect the unexpected. Hope for the best and prepare for the Worst. Emergency / Disaster planning is an integral part of the overall loss control program. This is important for effective management of an accident / incident to minimize environmental impacts and loss to people & property in and around the installation.

Any accident, which has potential to develop into Emergency and can threaten large no of person or large area of plant on site affect the safety of public, property and environment. Therefore Emergency procedures are planned to protect plant, property, public and environment.

An emergency occurring in the plant is one that may affect several sections within it and / or may cause serious injury, loss of lives, extensive damage to property or serious disruption inside or outside the works. It will require the best use of internal and the external resources to handle it effectively. Though an emergency is usually the result of a malfunction of the otherwise normal operating plant and machinery, it may also be precipitated by the intervention of an outside event such as a cyclone, flood, or deliberate acts of arson or sabotage.

These incidents may cause serious injuries, loss of lives and extensive damage to properties of the Organisation. The resources to tackle such major emergencies will require pooling of materials and manpower from the whole factory as well as from the outside for early control and mitigation of the emergency.

2. OBJECTIVES

To ensure all personnel on site are aware of their responsibilities, when an Emergency occurs at the Organisation. A quick and effective response during an emergency can have a tremendous significance on whether the situation is controlled with little loss or turns into a major emergency. The main objectives of the Onsite and Disaster Management Plan are

- To localise the emergency and if possible control/eliminate it at the quickest possible time.
- To minimise the consequences of an emergency.
- To minimise the plant down time by following the prudent utility practices.
- To minimise the effects on environment due to consequences of plant emergencies.
- To prevent spreading of the damage in other areas.
- To give necessary warning to plant personnel and neighbourhood.
- To maximize the resource utilisation and combined efforts towards the emergency operations.
- To mobilize the internal resources and utilize them in the most effective way.
- To arrange rescue of persons, transport and treatment of casualties.
- To seek necessary help from industries in the neighbourhood or local authorities.
- To provide information to government agencies and to provide information to the public.

Also the objectives includes but not limited to the compliance of the statutory requirements under the various statutes such as The Factories Act-1948, The Manufacture, Storage and Import of Hazardous Chemicals Rules-1989, and The West Bengal Factories Rules etc.

ANNEXURE 15

MAAN STEEL & POWER LIMITED

Statement of Expenses incurred in Corporate Social Responsibility during FY 2021-22

| Nature of Work | Amount (Rs.) |
|---|---------------------|
| Donation of Equipment in Hospital - Covid | 280,000.00 |
| Tree Plantation for Social Purpose | 218,491.00 |
| Construction of Toilets with septic Tank for Social purpose | 273,869.00 |
| Goushala Dhanbad | 1,537,861.00 |
| Education Promotion | 589,000.00 |
| Constrution material (GI Wire, Net, Hardware Goods) | 3,245.00 |
| Constrution material (Hardware Goods) | 4,219.00 |
| Constrution of (Tag, Mote Sheet etc) | 10,696.70 |
| Eye Testing Camp | 51,000.00 |
| Cycle donated to Physically challenged person | 29,232.00 |
| Bahadurpur BDO Office - Solar Street light | 72,352.00 |
| Promoting Education and Vocational skill | 2,000,000.00 |
| | 5,069,965.70 |

ANNEXURE 16

WEST BENGAL POLLUTION CONTROL BOARD

'Paribesh Bhawan'
Bldg. No. - 10A, Block - LA, Sector-III
Salt Lake City, Kolkata-700 098



Consent Letter Number : 0128909

Memo Number : 155-as-co-8/10/0105

Date : 07/01/2020

Consent to Operate

under

Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974 and
Section 21 of the Air (Prevention and Control of Pollution) Act, 1981

The West Bengal Pollution Control Board (hereinafter referred to as State Board) under the provisions of Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974, as amended and Section 21 of the Air (Prevention and Control of Pollution) Act, 1981, as amended and Rules and Orders made thereunder, hereby grants its consent to :

M/s. Maan Steel & Power Limited.
at 58/1, Sarat Bose Road, Kolkata-700025
.....(Address of Regd. office/Head/Office/City Office)

(hereinafter referred to as Applicant) for its unit located at Jamuria Industrial Estate,
Mouza - Ikra, P.O. - Nandi, P.S - Jamuria, Dist-Paschim Bardhaman,
Pin - 713362

.....(Detailed address of the manufacturing unit)

for a period from the date of issue to 30/09/2023.

to operate the industrial unit and to discharge liquid effluent and to emit gaseous effluent from the premises/land of the industrial unit, in accordance with the conditions as mentioned in the Annexure to this consent letter provided on any day at any instance the quantity and quality of liquid discharge and gaseous emission shall not exceed the permissible limit as specified in the Table I & II of this consent letter and in the Environmental (Protection) Act, 1986.

Breach of the conditions and / or failure to comply with the directions as set out in the Annexure shall render the applicant liable for prosecution under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981.

The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alter the conditions of this consent letter giving one month's notice to the applicant.



For and on behalf of the State Board

(Member Secretary/Chief Engr./Sr. Env. Engr. / Env. Engr. / Asst. Env. Engr.)

Environmental Engineer
W. B. Pollution Control Board
Operation & Execution Cell

ANNEXURE

Consent to M/s. Maan Steel & Power Limitedfor its unit at Jamuria Industrial Estate, Mouza - Ikra, P.O. - Nandi,
P.S. - Jamuria, Dist - Paschim Bardhaman, Pin - 713362**Conditions :**

01. This Consent is valid for the manufacture of :-

| Sl. No. | Name of major products and by-products | Quantity manufactured per month |
|---------|---|---------------------------------|
| 01 | Sponge Iron (by 3 rd DRI Kiln) | 5000.0 MT |
| 02 | Billet | 9000.0 MT |
| 03 | TMT | 16730.0 MT |
| 04 | Power | 12.0 MW |
| 05 | Miss Roll TMT | 150.0 MT |
| 06 | | |
| 07 | | |
| 08 | | |
| 09 | | |
| 10 | | |
| 11 | | |
| 12 | | |

02. The Applicant shall remain responsible for quantity and quality of liquid effluent and air emissions.
03. Daily discharge of industrial liquid effluent shall not exceed KL.
04. Daily discharge of domestic liquid effluent shall not exceed 4.5 KL.
05. Daily discharge of mixed (industrial & domestic) liquid effluent shall not exceed KL.
06. The Applicant shall discharge liquid effluent to (place of discharge) through nos. outlets / outfalls.
07. To bring into any altered or new outlet/outfall or to change the place of discharge, the Applicant shall have to inform the Board and obtain prior permission of the Board in this effect.
08. The Applicant shall provide comprehensive facility for treatment of industrial liquid waste and domestic liquid waste (sewage, sullage and liquid effluent generated from canteen), and operate and maintain the same continuously so that the quality of final effluent conforms to the Standard as given in Table-I in page 03.

(Member Secretary/Chief Engr./ Sr. Env. Engr. / Env. Engr. / Asst. Env. Engr.)

Nandi
07/01/20
Environmental Engineer
W. B. Pollution Control Board
Operation & Execution Cell

(4)

Consent to M/s. Maan Steel & Power Ltd.

for its unit at Tamura Industrial Estate, Mouza-Ikna, P.O.-Nandi,

P.S.-Tamura, Dist-Paschim Bardhaman, Pin-713362

11. The *Applicant* shall install suitable device for measuring the volume of water consumed for different purposes as mentioned above giving correct result to the satisfaction of the *State Board*.
12. All the stacks connected to various sources of emissions must be designated by numbers such as S-1, S-2, S-3, etc., and this must be painted/displayed to facilitate identification.
13. The *Applicant* shall install comprehensive control system consisting of pollution control equipment as is warranted with reference to generation of air emissions and operate and maintain the same continuously so as to achieve the level of pollutants of the *Standard* as given in Table-II below : See Annexure-I

Table-II

| Stack No. | Stack height from G.I., (in mts.) | Stack attached to (sources and control system, if any): | Volume Nm ³ /hr. | Velocity of gas emission m/sec | Concentrations of parameters not to exceed | | | | Frequency of emission sampling |
|-----------|-----------------------------------|---|-----------------------------|--------------------------------|--|-----------|--|--|--------------------------------|
| | | | | | SPM (mg/Nm ³) | CO (%v/v) | | | |
| S-1 | | | | | | | | | |
| S-2 | | | | | | | | | |
| S-3 | | | | | | | | | |
| S-4 | | | | | | | | | |
| S-5 | | | | | | | | | |
| S-6 | | | | | | | | | |
| S-7 | | | | | | | | | |
| S-8 | | | | | | | | | |
| S-9 | | | | | | | | | |
| S-10 | | | | | | | | | |

(Member Secretary/Chief Engr./ Sr. Env. Engr. / Env. Engr. / Asst. Env. Engr.)

Masdi
07/01/20
Environmental Engineer
W. B. Pollution Control Board
Operation & Execution Cell

0128909

(5)

Consent to M/s. Maan Steel & Power Ltd.

for its unit at Jamunia Industrial Estate, Mouza-Ikna, P.O.-Nandi,
P.S.- Jamunia, Dist- Paschim Bardhaman, Pin-713362.

14. The Applicant shall provide ports in the stack(s) and other necessary permanent facilities such as ladder, platform, etc. for monitoring/sampling the air emissions and the same shall be made available for inspection and use by the State Board's staff as well as State Board's authorised agencies.

15. The Applicant shall observe the following fuel consumption pattern :-

| Sl. No | Type of fuel | Quantity consumed per day | Fuel burning operation where the fuel is used |
|--------|--------------|---------------------------|---|
| 01 | Coal | 14,350 MT/Month | 3rd DRI Kiln/AFBC Boiler |
| 02 | | | |
| 03 | | | |
| 04 | | | |
| 05 | | | |

16. The Applicant shall maintain the generation and treatment/disposal of non-hazardous solid waste as specified below :-

| Type of waste | Quantity | Treatment | Disposal |
|----------------------------|-----------------------------|-----------|--------------------------------|
| Dolo Char | 4000 MT/month | — | To be used in AFBC Boiler |
| Fly Ash/Slag/Mill Scale | 158 MT/254 MT/ 76 MT/Day | — | Land Filling and Brick Making. |

17. The Applicant shall take adequate measures for control of noise levels from its own sources within the premises within the limit given below :-

| Time | Limit in dB(A) L_{eq} |
|---------------------------------|-------------------------|
| Day Time (06 a.m. to 10 p.m.) | 75 |
| Night Time (10 p.m. to 06 a.m.) | 70 |

18. The Applicant shall at all times maintain good house-keeping, proper working order, and operate efficiently for control of pollution from all sources so as not to cause nuisance to surrounding areas/inhabitants and to achieve compliance with the terms and conditions of the consent.

19. The Applicant shall bring about at least 33% of the available open land under the green coverage / plantation.

20. The Applicant shall provide for an alternate electric power source sufficient to operate all pollution control facilities installed by the Applicant to maintain compliance with the terms and conditions of the consent. In absence of such an alternate electric power source, the Applicant shall stop, reduce or otherwise control production to abide by the terms and conditions of the Consent regarding pollution level.

21. The Applicant shall install a separate energy meter showing the consumption of energy for operation of pollution control devices.

22. The Applicant shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises.

23. The Applicant shall provide drainage system for conveying industrial and domestic liquid waste. Storm-water drain shall be kept separate from the drainage system meant for industrial and domestic liquid waste

(Member Secretary/Chief Engr./ Sr. Env. Engr. / Env. Engr. / Asst. Env. Engr.)

Mausmi
07/01/20
Environmental Engineer
W. B. Pollution Control Board
Operation & Execution Cell
Continued.....

Consent to M/s. Maan Steel & Power Ltd.

for its unit at Jamuria Industrial Estate, Mouza - Ikra, P.O. - Nandi,
P.S. - Jamuria, Dist - Paschim Bardhaman, Pin - 713362

24. The *Applicant* shall maintain a separate register showing consumption of chemicals used in pollution control systems.
25. The *Applicant* shall get the samples of hazardous wastes/leachates analysed at least once in from the laboratory recognised of the West Bengal Pollution Control Board and ensure that they conform to the limits stipulated. Test reports shall be sent to the Board.
26. The *Applicant* shall provide adequate and safe facility for collection of air, waste water and solid waste samples by the *State Board's* staff as well as *State Board's* authorised agencies.
27. The *Applicant* shall submit to the *State Board* by the 30th September of every year the Environmental Statement Report for the financial year ending 31st March of the current year in the prescribed form (Form -V) as required under the provisions of rule 14 of the Environment (Protection) [Second Amendment] rules, 1992.
28. The *Applicant* shall allow the Officers of the *State Board* to enter into the applicant's premises at any reasonable time to inspect the pollution control systems as well as monitoring and measuring devices in connection with prevention & control of pollution.
29. The *Applicant* shall maintain an Inspection Book in the factory premises which shall be made available to Officers & employees of the *State Board* for inspection, review and to write down any direction or observation as is deemed necessary during the inspection from time to time.
30. The *Application* shall furnish to the *State Board* all information in respect of quality, quantity, rate of discharge, place of discharge of liquid effluent and air emissions.
31. The *Applicant* shall maintain adequate number of qualified and trained personnel among his staff for proper maintenance and operation of the effluent treatment and / or emission control devices and for overall environment management of the industry.
32. The *Applicant* shall have to make registration for the use of groundwater if any, with Central Ground Water Authority.
33. The *Applicant* shall intimate to the *State Board* immediately of any occurrence or apprehension of occurrence of discharge of any poisonous, noxious or pollutants in excess of quality as well as quality as mentioned earlier to any receiving water body/receiving system or to atmosphere owing to accident or other unforeseen incident/event including natural disaster. The *Applicant* Shall (i) take all steps adequate to prevent such accident discharge/release of poisonous, noxious or pollutants and to limit their consequences to persons and the environment, (ii) provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety and mitigate the accidental release of poisonous noxious or pollutants to the environment.
34. The *Applicant* shall make an application to the *State Board* in the prescribed form for renewal of the consent at least 60 (sixty) days before the date of expiry of this Consent.
35. The *Applicant* shall not make any alternation/modification/expansion in the existing manufacturing process and equipment as well as the pollution control system without prior approval of the Board.
36. The *Applicant* shall comply with the conditions as laid down in the Manufacture, Storage and Import of hazardous Chemicals Rules, 1989 and Hazardous Wastes (Management & Handling) Rules, 1989.

Additional Conditions See Annexure-II.

(Member Secretary/Chief Engr./Sr. Env. Engr./Env. Engr./Asst. Env. Engr.)

Handwritten Signature
07/01/20
Environmental Engineer
W. B. Pollution Control Board
Operation & Execution Cell

Annexure -II

Annexure to Consent Letter Number – CO128909

Additional Conditions issued to to M/s. Maan Steel & Power Ltd. at existing factory premises – Mouza-Ikrah, P.O-Nandi, P.S-Jamuraia, Dist- Paschim Bardhaman, Pin -713362.

1. The unit should comply all the conditions issued in earlier Environmental Clearance, Consent to Establish and Consent to Operate.
2. The unit should obtain all the statutory licenses as applicable from other concerned Govt. Department.
3. This consent may be revoked at any time on violation of environmental norms.
4. The unit shall submit a status of compliance of the conditions stipulated in EC.
5. This consent to Operate is valid for operation of 3rd DRI Plant (1x200TPD Kiln) with WHRB-20TPH , WHRB-1&2 attached with DRI Kiln-1&2, AFBC Boiler-30TPH, Induction Furnaces- 2x15 Ton/batch each for SMS & Rolling Mill Plant.
6. This Consent to Operate is also valid for 3rd DRI Kiln with existing facility and validity has been extended for period upto 30.09.2023 in continuation of previous issued CFO Sl.No.CO107574 vide memo no.531-as-co-s/10/0105 dated 14.08.2018

Atsudi
27/01/2023
Environmental Engineer
West Bengal Pollution Control Board

Environmental Engineer
W. B. Pollution Control Board
Operation & Execution Cell

Annexure – I

Annexure to Consent Letter Number – **CO128909**

Additional Conditions issued to **M/s. Maan Steel & Power Ltd.** at existing factory premises – Mouza-Ikrah, P.O-Nandi, P.S-Jamuria, Dist- Paschim Bardhaman, Pin -713362.

| Stack No. | Stack height from G.L (in mts.) | Stack attached to (sources and control system, if any) | Volume Nm ³ /hr | Velocity of gas emission m/sec | Concentration of parameters not to exceed | | | | Frequency of emission sampling |
|-----------|---------------------------------|--|----------------------------|--------------------------------|---|------------|--|--|--------------------------------|
| | | | | | PM (mg/Nm ³) | CO (% v/v) | | | |
| S-1 | 40.0 m # | Individual stack, individual 3 field ESP of 3 rd Rotary Kiln of capacity 200TPD- 1(one) no and WHRB-1(one) no.-20TPH installed recently. | - | - | 50 | - | | | Quarterly |
| S-2 | 35.0 m (common) | common stack, individual 3 field ESP of 1 st & 2 nd Rotary Kiln of capacity 100TPD each- 2(two) nos and WHRB-2(two) nos.-10TPH each installed recently. | - | - | 100 | - | | | Quarterly |
| S-3 | 35.00 | Individual stack, individual 4 field ESP of AFBC Boiler - 1(one) no.- 30TPH | - | - | 30 | | | | Quarterly |
| S-4 | 30.0 m (common) | Induction Furnaces (2x 15 MT/batch) with bag filter | - | - | 150 | - | | | Quarterly |
| S-5 | 30.0 m | Coal Handling Plant – Capacity-50TPH with bag filter | - | - | 50 | - | | | Quarterly |

As given conditios in CFO SI.No.CO107574


Environmental Engineer
West Bengal Pollution Control Board
Environmental Engineer
W. B. Pollution Control Board
Operation & Execution Cell

WEST BENGAL POLLUTION CONTROL BOARD

'Paribesh Bhawan'
Bldg. No. - 10A, Block - LA, Sector-III
Salt Lake City, Kolkata-700 098



Consent Letter Number : **CO110163**

apply for renewal of
consent 60 (Sixty) days
before expiry

Memo Number : **1905 -WPBA/Red(Bwn)/Cont(667)/00**

Date : **04-9-18**

Consent to Operate

under

Section 25 & 26 of the **Water (Prevention and Control of Pollution) Act, 1974** and
Section 21 of the **Air (Prevention and Control of Pollution) Act, 1981**

The West Bengal Pollution Control Board (hereinafter referred to as State Board) under the provisions of Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974, as amended and Section 21 of the Air (Prevention and Control of Pollution) Act, 1981, as amended and Rules and Orders made thereunder, hereby grants its consent to :

M/S. Maan Steel & Power Ltd.

(Address of Regd. office/Head/Office/City Office)

(hereinafter referred to as Applicant) for its unit located at **Jamuria Industrial Estate, P.O. Nandi,
P.S. Jamuria, Dist- Paschim Bardhaman, Pin-713362**

(Detailed address of the manufacturing unit)

for a period from **upto 30-09-2023** to

to operate the industrial unit and to discharge liquid effluent and to emit gaseous effluent from the premises/land of the industrial unit, in accordance with the conditions as mentioned in the Annexure to this consent letter provided on any day at any instance the quantity and quality of liquid discharge and gaseous emission shall not exceed the permissible limit as specified in the Table I & II of this consent letter and in the Environmental (Protection) Act, 1986.

Breach of the conditions and / or failure to comply with the directions as set out in the Annexure shall render the applicant liable for prosecution under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981.

The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alter the conditions of this consent letter giving one month's notice to the applicant.



For and on behalf of the State Board

(Member Secretary/Chief Engr./ Sr. Env. Engr./ Env. Engr. / Asst. Env. Engr.)

ANNEXURE

Consent to M/S. Maan Steel & Power Ltd.
 for its unit at Jamuria Industrial Estate, P.O. Nandi, P.S. Jamuria,
Dist- Paschim Bardhaman, Pin-713362

Conditions :

01. This Consent is valid for the manufacture of :-

| Sl. No. | Name of major products and by-products | Quantity manufactured per month |
|---------|--|---------------------------------|
| 01 | M.S. Billets | 10950 MT |
| 02 | Sponge Iron | 5780 MT |
| 03 | | |
| 04 | | |
| 05 | | |
| 06 | | |
| 07 | | |
| 08 | | |
| 09 | | |
| 10 | | |
| 11 | | |
| 12 | | |

02. The *Applicant* shall remain responsible for quantity and quality of liquid effluent and air emissions.
03. Daily discharge of industrial liquid effluent shall not exceed NIL KL.
04. Daily discharge of domestic liquid effluent shall not exceed 30.0 KL.
05. Daily discharge of mixed (industrial & domestic) liquid effluent shall not exceed NIL KL.
06. The *Applicant* shall discharge liquid effluent to Municipal Drain (place of discharge)
 through 01 (One) nos. outlets / outfalls.
07. To bring into any altered or new outlet/outfall or to change the place of discharge, the *Applicant* shall have to inform the Board and obtain prior permission of the Board in this effect.
08. The *Applicant* shall provide comprehensive facility for treatment of industrial liquid waste and domestic liquid waste (sewage, sullage and liquid effluent generated from canteen), and operate and maintain the same continuously so that the quality of final effluent conforms to the *Standard* as given in Table-I in page 03.

(Member Secretary/Chief Engr./ Sr. Env. Engr. /Env. Engr. / Asst. Env. Engr.)

Continued.....

Consent to M/S. Maan Steel & Power Ltd.

for its unit at Jamuria Industrial Estate, P.O. Nandi, P.S. Jamuria,

Dist-Paschim Bardhaman

11. The *Applicant* shall install suitable device for measuring the volume of water consumed for different purposes as mentioned above giving correct result to the satisfaction of the *State Board*.
12. All the stacks connected to various sources of emissions must be designated by numbers such as S-1, S-2, S-3, etc., and this must be painted/displayed to facilitate identification.
13. The *Applicant* shall install comprehensive control system consisting of pollution control equipment as is warranted with reference to generation of air emissions and operate and maintain the same continuously so as to achieve the level of pollutants of the *Standard* as given in Table-II below :

Table-II

| Stack No. | Stack height from G.I., (in mts.) | Stack attached to (sources and control system, if any): | Volume Nm ³ /hr. | Velocity of gas emission m/sec | Concentrations of parameters not to exceed | | | | Frequency of emission sampling |
|-----------|-----------------------------------|---|-----------------------------|--------------------------------|--|-----------|--|--|--------------------------------|
| | | | | | SPM (mg/Nm ³) | CO (%v/v) | | | |
| S-1 | | | | | | | | | |
| S-2 | | | | | | | | | |
| S-3 | | | Refer Annexure - 'A' | | | | | | |
| S-4 | | | | | | | | | |
| S-5 | | | | | | | | | |
| S-6 | | | | | | | | | |
| S-7 | | | | | | | | | |
| S-8 | | | | | | | | | |
| S-9 | | | | | | | | | |
| S-10 | | | | | | | | | |

(Member Secretary/Chief Engr./ Sr. Env. Engr./ Env. Engr. / Asst. Env. Engr.)

Continued.....

(5)

Consent to M/S. Maan Steel & Power Ltd.
 for its unit at Jamuria Industrial Estate, P.O. Nandi, P.S. Jamuria.
Dist- Paschim Bardhaman, Pin-713362

14. The *Applicant* shall provide ports in the stack(s) and other necessary permanent facilities such as ladder, platform, etc. for monitoring/sampling the air emissions and the same shall be made available for inspection and use by the *State Board's* staff as well as *State Board's* authorised agencies.
15. The *Applicant* shall observe the following fuel consumption pattern :-

| Sl. No | Type of fuel | Quantity consumed per day | Fuel burning operation where the fuel is used |
|--------|--------------|---------------------------|---|
| 01 | Coal | 214 MT | Rotary Kilns (02 nos.) |
| 02 | HSD | 190 Lt. | DG Sets (02 nos.) |
| 03 | | | |
| 04 | | | |
| 05 | | | |

16. The *Applicant* shall maintain the generation and treatment/disposal of non-hazardous solid waste as specified below :- Refer Annexure - 'B'

| Type of waste | Quantity | Treatment | Disposal |
|---------------|----------|-----------|----------|
| | | | |
| | | | |

17. The *Applicant* shall take adequate measures for control of noise levels from its own sources within the premises within the limit given below :-

| Time | Limit in dB(A) L_{eq} |
|---------------------------------|-------------------------|
| Day Time (06 a.m. to 09 p.m.) | 65 |
| Night Time (09 p.m. to 06 a.m.) | 55 |

18. The *Applicant* shall at all times maintain good house-keeping, proper working order, and operate efficiently for control of pollution from all sources so as not to cause nuisance to surrounding areas/inhabitants and to achieve compliance with the terms and conditions of the consent.
19. The *Applicant* shall bring about at least 33% of the available open land under the green coverage / plantation.
20. The *Applicant* shall provide for an alternate electric power source sufficient to operate all pollution control facilities installed by the *Applicant* to maintain compliance with the terms and conditions of the consent. In absence of such an alternate electric power source, the *Applicant* shall stop, reduce or otherwise control production to abide by the terms and conditions of the Consent regarding pollution level.
21. The *Applicant* shall install a separate energy meter showing the consumption of energy for operation of pollution control devices.
22. The *Applicant* shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises.
23. The *Applicant* shall provide drainage system for conveying industrial and domestic liquid waste. Storm-water drain shall be kept separate from the drainage system meant for industrial and domestic liquid waste

(Member Secretary/Chief Engr./ Sr. Env. Engr. /Env. Engr. / Asst. Env. Engr.)

Continued.....

Consent to M/S. Maan Steel & Power Ltd.
 for its unit at Jamuria Industrial Estate, P.O. Nandi, P.S. Jamuria,
Dist- Paschim Bardhaman, Pin-713362

24. The *Applicant* shall maintain a separate register showing consumption of chemicals used in pollution control systems.
25. The *Applicant* shall get the samples of hazardous wastes/leachates analysed at least once in 5 Years from the laboratory recognised of the West Bengal Pollution Control Board and ensure that they conform to the limits stipulated. Test reports shall be sent to the Board.
26. The *Applicant* shall provide adequate and safe facility for collection of air, waste water and solid waste samples by the *State Board's* staff as well as *State Board's* authorised agencies.
27. The *Applicant* shall submit to the *State Board* by the 30th September of every year the Environmental Statement Report for the financial year ending 31st March of the current year in the prescribed form (Form -V) as required under the provisions of rule 14 of the Environment (Protection) [Second Amendment] rules, 1992.
28. The *Applicant* shall allow the Officers of the *State Board* to enter into the applicant's premises at any reasonable time to inspect the pollution control systems as well as monitoring and measuring devices in connection with prevention & control of pollution.
29. The *Applicant* shall maintain an Inspection Book in the factory premises which shall be made available to Officers & employees of the *State Board* for inspection, review and to write down any direction or observation as is deemed necessary during the inspection from time to time.
30. The *Applicant* shall furnish to the *State Board* all information in respect of quality, quantity, rate of discharge, place of discharge of liquid effluent and air emissions.
31. The *Applicant* shall maintain adequate number of qualified and trained personnel among his staff for proper maintenance and operation of the effluent treatment and / or emission control devices and for overall environment management of the industry.
32. The *Applicant* shall have to make registration for the use of groundwater if any, with Central Ground Water Authority.
33. The *Applicant* shall intimate to the *State Board* immediately of any occurrence or apprehension of occurrence of discharge of any poisonous, noxious or pollutants in excess of quality as well as quality as mentioned earlier to any receiving water body/receiving system or to atmosphere owing to accident or other unforeseen incident/event including natural disaster. The *Applicant* Shall (i) take all steps adequate to prevent such accident discharge/release of poisonous, noxious or pollutants and to limit their consequences to persons and the environment, (ii) provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety and mitigate the accidental release of poisonous noxious or pollutants to the environment.
34. The *Applicant* shall make an application to the *State Board* in the prescribed form for renewal of the consent at least 60 (sixty) days before the date of expiry of this Consent.
35. The *Applicant* shall not make any alternation/modification/expansion in the existing manufacturing process and equipment as well as the pollution control system without prior approval of the Board.
36. The *Applicant* shall comply with the conditions as laid down in the Manufacture, Storage and Import of hazardous Chemicals Rules, 1989 and Hazardous Wastes (Management & Handling) Rules, 1989.

Additional Conditions **Please See Annexure - 'C' attached.**

Consent Letter Sl. No.: CO 110163

WEST BENGAL POLLUTION CONTROL BOARD
Paribesh Bhawan; Bldg. No.-10A, Block – L.A., Sector – III
Salt Lake City, Kolkata – 700 106

Name of the Unit: **M/s Maan Steel & Power Ltd.**

Located at Jamuria Industrial Estate, P. O. – Nandi, P. S. – Jamuria, Dist. – Paschim Bardhaman, Pin - 713362

ANNEXURE – ‘A’

The Applicant shall install comprehensive control system consisting of pollution control equipment as is warranted with reference to generation of air emissions and operate and maintain the same continuously so as to achieve the level of pollutants to the Standard as given in Table – II below:

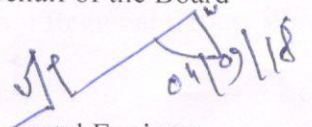
| Sl. No. | Stack height from GL (Meters) | Stack attached to (sources and control system, if any) | Volume (Nm ³ /hr) | Velocity of gas emission (m / sec) | Concentrations of parameters not to exceed | | Frequency of emission sampling |
|---------|-------------------------------|--|------------------------------|------------------------------------|--|-------------|--------------------------------|
| | | | | | SPM (mg/ Nm ³) | CO (% v/ v) | |
| 1. | 35.0 | Rotary Kilns (1 & 2) | ----- | ----- | 100 | 1 | Quarterly |
| 2. | 30.0 | Induction Furnace – 1 | ----- | ----- | 150 | --- | Quarterly |
| 3. | 30.0 | Induction Furnace – 2 | ----- | ----- | 150 | ----- | Quarterly |
| 4. | 30.0 | Cooler Discharge | ----- | ----- | 50 | ----- | Quarterly |
| 5. | 30.0 | Product Separation | ----- | ----- | 50 | ----- | Quarterly |
| 6. | 30.0 | Raw Material Handling | ----- | ----- | 50 | ----- | Quarterly |
| 7. | 30.0 | Stock House | ----- | ----- | 50 | ----- | Quarterly |
| 8. | 13.0 | DG Set (500 KVA) | ----- | ----- | 150 | 1 | Quarterly |
| 9. | 13.0 | DG Set (250 KVA) | ----- | ----- | 150 | 1 | Quarterly |

ANNEXURE – ‘B’

The Applicant shall maintain the generation and treatment / disposal of non-hazardous solid waste as specified below:

| Sl. No. | Type of Waste | Quantity (MT / month) | Treatment | Disposal |
|---------|---------------|-----------------------|-----------|---------------------------|
| 1. | Dolochar | 3700 | ----- | Sold out to outside party |
| 2. | Slag | 1872 | ----- | Land filling |
| 3. | Coal Dust | 2000 | ----- | Sold out to outside party |

For and on behalf of the Board


Environmental Engineer
Asansol Regional Office, WBPCB

ANNEXURE – 'C'

Consent Letter Sl. No.:20110163.....

WEST BENGAL POLLUTION CONTROL BOARD

Paribesh Bhawan; Bldg. No.-10A, Block – L.A., Sector – III, Salt Lake City, Kolkata – 700 098

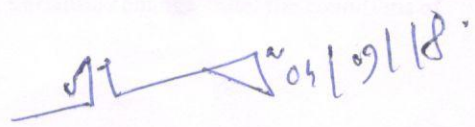
Name of the Unit: **M/s Maan Steel & Power Ltd.**

Located at Jamuria Industrial Estate, P. O. – Nandi, P. S. – Jamuria, Dist. – Paschim Bardhaman,
Pin - 713362

ADDITIONAL CONDITIONS

1. Proper & effective steps should be taken so as to ensure that manufacturing activities do not affect the residents of the neighbourhood in any way.
2. The unit will have to take pollution control measures regarding air, water and noise to keep the parameters within the permissible limit as laid down by WBPCB.
3. This consent shall be revoked at any time on the valid ground of any complaint (for violation of Environmental Acts) against the unit regarding air, water pollution and any other environmental hazards caused by the unit.
4. Solid waste should be disposed off in an environment friendly manner.
5. No additional machinery / equipment can be installed without permission from the State Board.
6. No nuisance should be caused to the neighbourhood residence due to activity of the unit.
7. The unit should obtain permission for the two (02) DG sets of 500 KVA and 250 KVA from the Directorate of Electricity as per 47A rule of Indian Electricity Rules 1956 & submit a copy of the same to the State Board accordingly.
8. The unit should comply with the provision of GSR 371 (E) dated 17.05.2002 issued by Ministry of Environment and Forest, Govt. of India.
9. The unit should comply with the sixteen-point direction issued by the State Board vide memo no. 1044 – 4 / WPB / CE – II / GEN / 2008 dated 01.06.2012.
10. The unit should obtain Hazardous Waste Authorisation under the provision of Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 and submit the copy of same to the State Board accordingly.

For and on behalf of the Board


Environmental Engineer
Asansol Regional Office, WBPCB

ANNEXURE 17



TEST REPORT

| | | | |
|-----|---|---|--|
| 1. | Name of the Industry | : | Maan Steel & Power Limited |
| 2. | Address | : | Jamuria Industrial Estate, Jamuria, District - Paschim Bardhaman |
| 3. | Type of Industry | : | Steel & Power Plant |
| 4. | Sampling Plan & Procedure | : | ENV/SOP/01 |
| 5. | Deviation from the Sampling Method & Plan | : | No |
| 6. | Type of Sample | : | Noise |
| 7. | Sample ID | : | ENV/02/Mar/N |
| 8. | Report ID | : | ENV/02/Mar/TR(N)/21-22 |
| 9. | Date of Study | : | 01/03/2022 |
| 10. | Reporting Date | : | 19/03/2022 |
| 11. | Method No. | : | IS: 9989 - 1981 |
| 12. | Duration of Noise | : | 20 Minutes |
| 13. | Height from Ground Level | : | 4 feet |
| 14. | Sample Monitored by | : | Mr. Pappu Hazra |

RESULTS OF NOISE LEVEL STUDY

DAY TIME

| | | | | | | | |
|----|-------------------|---|----------------|--|---------------|--|-----------|
| 1. | Location of Study | : | Near Main Gate | | | | |
| | Time (A.M) | | Minimum dB(A) | | Maximum dB(A) | | Leq dB(A) |
| | 11:20 - 11:40 | | 61.2 | | 68.7 | | 66.40 |

NIGHT TIME

| | | | | | | | |
|----|-------------------|---|----------------|--|---------------|--|-----------|
| 2. | Location of Study | : | Near Main Gate | | | | |
| | Time (P.M) | | Minimum dB(A) | | Maximum dB(A) | | Leq dB(A) |
| | 10:00 - 10:20 | | 55.2 | | 59.8 | | 58.08 |

DAY TIME

| | | | | | | | |
|----|-------------------|---|------------------------|--|---------------|--|-----------|
| 3. | Location of Study | : | Back side of the Plant | | | | |
| | Time (P.M) | | Minimum dB(A) | | Maximum dB(A) | | Leq dB(A) |
| | 12:00 - 12:20 | | 70.2 | | 72.8 | | 71.69 |

NIGHT TIME

| | | | | | | | |
|----|-------------------|---|------------------------|--|---------------|--|-----------|
| 4. | Location of Study | : | Back side of the Plant | | | | |
| | Time (P.M) | | Minimum dB(A) | | Maximum dB(A) | | Leq dB(A) |
| | 10:30 - 10:50 | | 67.2 | | 69.5 | | 68.50 |

DAY TIME

| | | | | | | | |
|----|-------------------|---|------------------------------|--|---------------|--|-----------|
| 5. | Location of Study | : | Near Administrative Building | | | | |
| | Time (P.M) | | Minimum dB(A) | | Maximum dB(A) | | Leq dB(A) |
| | 12:30 - 12:50 | | 64.7 | | 70.2 | | 68.27 |

NIGHT TIME

| | | | | | | | |
|----|-------------------|---|------------------------------|--|---------------|--|-----------|
| 6. | Location of Study | : | Near Administrative Building | | | | |
| | Time (P.M) | | Minimum dB(A) | | Maximum dB(A) | | Leq dB(A) |
| | 11:00 - 11:20 | | 59.2 | | 60.3 | | 59.78 |



ENVIROCHECK

Recognised by MoEF&CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001 : 2018



ACCREDITED
Management Systems
Certification Body
MSCB-150
ISO 45001:2018

** Mean of L_{eq} - Equivalent to Sound Energy

Limit in L_{eq} dB(A)

| Category Area | Day Time dB(A) | Night Time dB(A) |
|---------------------|-------------------|---------------------|
| A. Industrial Area | 75 | 70 |
| B. Commercial Area | 65 | 55 |
| C. Residential Area | 55 | 45 |
| D. Silence Zone | 50 | 40 |

**Day Time is reckoned in between
6:00 A.M & 10:00 P.M

**Night Time is reckoned in between
10:00 P.M & 6:00 A.M

(Central Pollution Control Board, Ministry of Environment & Forests Government of India) &
(Department of Environment, Government of West Bengal)

PERMISSIBLE NOISE EXPOSURE FOR INDUSTRIAL WORKERS

| Hours | Limit in dB(A) |
|---------------------|----------------|
| 8 | 90 |
| 4 | 93 |
| 2 | 96 |
| 1 | 99 |
| 1/2 | 102 |
| 1/4 | 105 |
| 1/8 | 108 |
| 1/16 | 111 |
| 1/32 | 114 |
| (2 minutes or less) | - |

** The Noise Pollution (Regulation and Control Rules, 2000

** S.O. 123 (E) Dated : 14th February, 2000

Reviewed By:

Dy. Quality Manager

Approved By:

Quality Manager

> End of Report <

ANNEXURE 18



[Monthly Contribution](#) > [Online Challan Status](#)

Transaction Details

* Required Fields

| | |
|-------------------------------|------------------------------------|
| Transaction status: | Transaction Completed Successfully |
| Employer's Code No: | 74000514500000599 |
| Employer's Name: | MAAN STEEL & POWER LTD. |
| Challan Period: | Mar-2022 |
| Challan Number : | 07422111541631 |
| Challan Created Date | 10-04-2022 13:57:37 |
| Challan Submitted Date | 14-04-2022 13:44:06 |
| Amount Paid: | 150497.00 |
| Transaction Number: | 78380014 |

Print

Close

ANNEXURE 19

6
F. No. J-11011/695/2009- IA-II(I)

Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj,
New Delhi - 110003
E-mail: sharath.kr@gov.in
Tel: 011-24695319

Dated: 15th January, 2018

To

✓ **The Director**

M/s Maan Steel and Power Limited
Jamuria Industrial State, Ikra, P.O Jamuria,
District Burdwan, West Bengal-713362.

Subject: Proposed for 0.18 MTPA Integrated Steel Plant, 24 MW Captive Power Plant and 2 x 9 MVA Ferro Alloys located at Jamuria Industrial State, Ikra, P.O Jamuria, District Burdwan, West Bengal of M/s Maan Steel And Power Limited- Extension of validity of Environmental Clearance regarding.

Sir,

This has reference to your online application vide proposal no. IA/WB/IND/6154/2010 dated 7th November, 2017 seeking extension of validity of Environmental Clearance granted vide File No. J-11011/695/2009- IA.II(I) dated 31st December 2010.

2.0 M/s Maan Steel & Power Limited is located at Jamuria Industrial Estate in Paschim Burdwan district of WB. The earlier project is continuing to run with 2x95 TPD DRI Kilns and producing 57,000 TPA sponge iron.

3.0 The company has obtained EC for the expansion of the unit to 0.18 MTPA Integrated Steel Plant, based on additional 4x100 TPD DRI kilns, and 4x15T IF with 2x30T LRF and matching CCM, 550 TPD Rolling mill, 24 MW Captive Power Plant & 2x9 MVA Ferro Alloy Plant. The validity of EC is up to 30th December 2017.

4.0 CTE for all the facilities as per EC has been received from WBPCB vide letter No 124863, dt. 20.10 2014, and remains valid up to 31.08.2019. The company has so far commissioned only 2x15T IF with CCM, and running the plant along with 2x95 TPD DRI Kilns which is existing prior to EC. CTE of 2x200 TPD DRI Kiln has been permitted by WBPCB against 4x100 TPD.

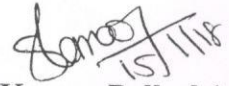
5.0 It was informed that now the situation has changed; Tata Capital Financial Services Limited (TCFSL) vide letter No-CF\TL\Kol\1455825, 14th September 2017 has sanctioned Term Loan for Rs.20.00 crores for a tenure of 78 Months; Punjab National Bank vide letter dated 27th Nov.2017 have sanctioned Rs 50 cores to the company; and the company has also spent Rs. 11.20 Crores towards expansion of Sponge iron, billet, CPP & RM unit till 13.10.2017.

6.0 The proposal was considered during the 26th meeting of Expert Appraisal Committee [EAC] (Industry-I) held during 11th – 13th December, 2017. After detailed deliberations, the committee recommended for extension of validity of EC up to 30th December 2020.

8.0 Based on the recommendations of the Expert Appraisal Committee [EAC] (Industry-I), ministry hereby decided to grant extension of validity of the environmental clearance up to 30th December 2020 subject to following conditions:

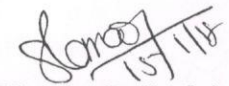
- i. Project Proponent shall strictly adhere to time schedule submitted to the Ministry regarding completion of the balance works.
- ii. All other terms and conditions mentioned in the Environment Clearance vide File No. J-11011/695/2009- IA.II(I) dated 31st December 2010 will remain same.
- iii. The PP shall obtain fresh environmental clearance in case of change in scope of the project if any.

This issues with the approval of competent authority


(Sharath Kumar Pallerla)
Scientist 'F' / Director

Copy to:-

1. **The Secretary**, Department of Environment, Government of West Bengal, Secretariat Kolkata.
2. **The Additional Principal Chief Conservator of Forests (C)**, Ministry of Environment, Forest and Climate Change, Regional Office (EZ), A/3, Chandrasekharpur, Bhubneshwar-751 023.
3. **The Chairman, Central Pollution Control Board**, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. **The Chairman**, West Bengal State Pollution Control Board, Paribesh Bhawan, 10A-Block LA, Sector -III, Salt Lake City, KOLKATTA – 700 098.
5. **The District Collector**, Burdwan District, Government of West Bengal.
6. **Guard File/Record File/Monitoring File.**
7. MoEF&CC Website


(Sharath Kumar Pallerla)
Scientist 'F'/Director

F. No. J-11011/695/2009-IA-II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

Paryavaran Bhawan
CGO Complex, Lodhi Road
New Delhi – 110 003
E-mail: ms.industry-mef@nic.in
Tele/fax: 011 – 2436 3973
Dated: December 31st, 2010

To,
M/s Maan Steel & Power Limited
Room No. 4C.13, Elgin Road
Kolkata- 700 200, West Bengal

Fax: 033- 22827947
E-mail: globalexperts@rediffmail.com

Sub: Expansion of Sponge Iron Plant (57,000 TPA) into Integrated Steel Plant (0.18 MTPA) along with Captive Power Plant (24 MW; WHRB 12 MW & FBC 12 MW) and Ferro Alloy Plant (2x9 MVA) at Jamuria Industrial Estate, Ikra, P.O. Jamuria, District Burdwan in West Bengal by M/s Maan Steel & Power Limited - regarding Environmental Clearance

Sir,

This has reference to your letter no. MSPL/ENV-05/2010-11 dated 14th October, 2010 received in the Ministry on 20th October, 2010 along with a copy of EIA/EMP reports seeking environment clearance under the provisions of EIA Notification, 2006.

2. The Ministry of Environment and Forests has examined the application for the above project. It is noted that M/s Maan Steel & Power Limited have proposed for the expansion of Sponge Iron Plant (57,000 TPA) by addition of Steel melting shop and rolling mill to Integrated Steel Plant (0.18 MTPA) along with Captive Power Plant (24 MW; WHRB 12 MW & FBC 12 MW) and Ferro Alloy Plant (2x9 MVA) at Jamuria Industrial Estate, in District Burdwan in West Bengal. About 18000 TPA of Steam coal / pearl coke will be required which will be purchased from open market and also from import. Total land acquired is 40.94 acres and green belt will be developed in 13.5 acres. No R&R is involved. No national park/wildlife sanctuary/reserve forests are located within 10 km. radius of the project site. Total cost of the project is Rs. 342.30 Crores. Rs 13.70 Crores and Rs 1.19 Crores are earmarked towards capital cost and recurring cost/annum for environment pollution control measures.

3. Following are the details of the facilities to be installed and products to be manufactured:

| EXISTING UNITS : | | | | |
|----------------------|-----------|-------------|------------------|---------|
| Major Units | Capacity | Products | Production (TPA) | End Use |
| DRI kiln | 2x95 TPD | Sponge Iron | 57,000 | SMS |
| PROPOSED EXPANSION : | | | | |
| DRI KILN | 4X100 TPD | Sponge Iron | 1,20,000 | SMS |

| | | | | |
|----------------------------------|------------------------------|--------------------------------|----------|----------------------|
| SMS-IF-LRF/AOD -Billet Caster | 4x15 T 2x30 T Matching | MS Billets | 1,92,000 | Rolling Mills |
| Rolling Mills | 550 TPD | Rods/bars/light Structurals | 1,80,000 | Sale |
| CPP-WHRB +CPP-FBC | 12 MW 12 MW | Power | 24 MW | Internal use |
| Ferro Alloys | 2x9 MVA | Ferro-Mn / Silico-Mn | 30,000 | Internal use/sale |

4. To control particulate emissions electrostatic precipitator (ESP) will be provided to DRI kilns and FBC boiler. Hot fume gases for the kiln will be passed through dust settling chamber (DSC) and after burning chamber (ABC) to remove the coarse solids and burn CO and then passed through waste heat recovery boiler (WHRB) and Electrostatic precipitator (ESP) before letting out into the atmosphere through ID fan and stack. Fume extraction system with duct, gas cooler, bag house, ID fans and stack will be provided to Induction Furnace. Fugitive dust will be controlled by dust suppression and dust extraction system. Regular water sprinkling will be carried out to minimize the fugitive dust emission during transportation.

5. Total water requirement of 1,632 m³/day will be met from the River Ajay. The treated effluent will be used for dust suppression and green belt development. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and 'Zero' discharge will be adopted. All the storm water will be collected and stored in water harvesting pond. Out of 45 MW power requirement, 24 MW will be generated captively and 21 MW will be sourced from grid. Char and coal fumes will be utilized as fuel feed in FBC power plant.

6. The solid waste generated in the form of Char and coal fines will be used in FBC boiler. Scrap will be recycled in steel melting shop. Scales from rolling mill and Iron ore fines from raw material handling system will be sold to sinter plant. Kiln dust, kiln accretion, bottom ash will be used for land filling. Fly ash will be used as per Fly Ash Notification and collected in dry form. Waste/used/spent oil and used batteries will be sold to authorized recyclers/re-processors.

7. All the Integrated Steel plants are listed at S.No. 3(a) under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

8. The proposal was considered by the Expert Appraisal Committee-1 (industry) in its 16th meeting held during 22nd - 24th November, 2010. The Committee recommended the proposal for environmental clearance subject to stipulation of specific conditions along with other environmental conditions. Public hearing is not required due to project being located in Jamuria Industrial Estate as per Section (iii), Stage (3), Para (i)(b) of EIA Notification 2006

9. Based on the information submitted by you, presentation made by you and consultant, Global Experts, Bhubaneswar, the Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14th September 2006 subject to strict compliance of the following Specific and General conditions:

A. SPECIFIC CONDITIONS :

- i. Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack

| | | | | |
|----------------------------------|------------------------------|--------------------------------|----------|----------------------|
| SMS-IF-LRF/AOD -Billet Caster | 4x15 T 2x30 T Matching | MS Billets | 1,92,000 | Rolling Mills |
| Rolling Mills | 550 TPD | Rods/bars/light Structurals | 1,80,000 | Sale |
| CPP-WHRB +CPP-FBC | 12 MW 12 MW | Power | 24 MW | Internal use |
| Ferro Alloys | 2x9 MVA | Ferro-Mn / Silico-Mn | 30,000 | Internal use/sale |

4. To control particulate emissions electrostatic precipitator (ESP) will be provided to DRI kilns and FBC boiler. Hot fume gases for the kiln will be passed through dust settling chamber (DSC) and after burning chamber (ABC) to remove the coarse solids and burn CO and then passed through waste heat recovery boiler (WHRB) and Electrostatic precipitator (ESP) before letting out into the atmosphere through ID fan and stack. Fume extraction system with duct, gas cooler, bag house, ID fans and stack will be provided to Induction Furnace. Fugitive dust will be controlled by dust suppression and dust extraction system. Regular water sprinkling will be carried out to minimize the fugitive dust emission during transportation.

5. Total water requirement of 1,632 m³/day will be met from the River Ajay. The treated effluent will be used for dust suppression and green belt development. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and 'Zero' discharge will be adopted. All the storm water will be collected and stored in water harvesting pond. Out of 45 MW power requirement, 24 MW will be generated captively and 21 MW will be sourced from grid. Char and coal fumes will be utilized as fuel feed in FBC power plant.

6. The solid waste generated in the form of Char and coal fines will be used in FBC boiler. Scrap will be recycled in steel melting shop. Scales from rolling mill and Iron ore fines from raw material handling system will be sold to sinter plant. Kiln dust, kiln accretion, bottom ash will be used for land filling. Fly ash will be used as per Fly Ash Notification and collected in dry form. Waste/used/spent oil and used batteries will be sold to authorized recyclers/re-processors.

7. All the Integrated Steel plants are listed at S.No. 3(a) under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

8. The proposal was considered by the Expert Appraisal Committee-1 (industry) in its 16th meeting held during 22nd - 24th November, 2010. The Committee recommended the proposal for environmental clearance subject to stipulation of specific conditions along with other environmental conditions. Public hearing is not required due to project being located in Jamuria Industrial Estate as per Section (iii), Stage (3), Para (i)(b) of EIA Notification 2006

9. Based on the information submitted by you, presentation made by you and consultant, Global Experts, Bhubaneswar, the Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14th September 2006 subject to strict compliance of the following Specific and General conditions:

A. SPECIFIC CONDITIONS :

- i. Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack

monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), gas cleaning plant, venturi scrubber, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm^3 by installing energy efficient technology.

- ii. As proposed, Electrostatic precipitator (ESP) shall be provided to control the particulate emissions from the FBC and WHRB within 50 mg/Nm^3 . Fume extraction system shall be provided to the steel melting shop to extract the fumes. Bag filters to control the dust emissions from the induction furnaces and pulse jet bag filters at coal and iron crushing area, stock house and cooler discharge area.
- iii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB shall be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 should be followed.
- v. Hot gases from DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in waste heat recovery boiler (WHRB). The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack.
- vi. Total water requirement shall not exceed $1,632 \text{ m}^3/\text{day}$. Permission from the competent authority shall be obtained to draw the water. Efforts shall further be made to use maximum water from the rain water harvesting sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent should be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage should be treated in septic tank followed by soak pit.
- vii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- viii. Regular monitoring of influent and effluent surface, sub-surface and ground water (including chromite) should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E (P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, West Bengal Pollution Control Board (WBPCB) and CPCB.
- ix. The water consumption shall not exceed as per the standard prescribed for the steel plants.
- x. All the coal fines, char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be used for briquette making or disposed off anywhere else. AFBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from the beginning. Scrap shall be used in steel melting shop (SMS) and SMS slag and

kiln accretions shall be properly utilized. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner.

- xi. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and its subsequent amendments.
- xii. Vehicular pollution due to transportation of raw material and finished products shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.
- xiii. All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads. Facilities for parking of trucks carrying raw coal from the linked coalmines shall be created within the Unit.
- xiv. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste should be submitted to the Ministry's Regional Office at Bhubaneswar, WBPCB and CPCB.
- xv. A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- xvi. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, WBPCB and CPCB within 3 months of issue of environment clearance letter.
- xvii. As proposed, green belt shall be developed in 33 % of plant area as per the CPCB guidelines in consultation with the DFO.
- xviii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants should be implemented.
- xix. At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.
- xx. The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

B. GENERAL CONDITIONS:

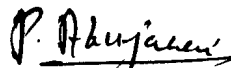
- i. The project authorities must strictly adhere to the stipulations made by the West Bengal State Pollution Control Board and the State Government.
- ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.
- iii. The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and

standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.

- iv. At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM₁₀, SO₂ and NO_x are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the SPCB/CPCB once in six months.
- v. Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.
- vi. The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).
- vii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- viii. The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.
- ix. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.
- x. Requisite amount shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Bhubaneswar. The funds so provided shall not be diverted for any other purpose.
- xi. A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.
- xii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF at Bhubaneswar. The respective Zonal Office of

CPCB and the SPCB. The criteria pollutant levels namely; PM10, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

- xiii. The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Bhubaneswar / CPCB / SPCB shall monitor the stipulated conditions.
 - xiv. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company alongwith the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEF at Bhubaneswar by e-mail.
 - xv. The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Bhubaneswar.
 - xvi. Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.
10. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
11. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
12. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.


(Dr. P.L. Ahujai)
Scientist -F

ANNEXURE 20



वर्ष 8 अंक 337

पृष्ठ 12

धनबाद, सोमवार

24 जनवरी, 2011

आसवनसोल संस्करण

मूल्य ₹ 4.00

कृषि जागरण

विश्व का सर्वाधिक पढ़ा जाने वाला अखबार

NOTICE

This is to inform all concerns that Environmental clearance has been granted by Ministry of Environment & Forests, Govt. of India vide letter No. J-11011/695/2009-IA-II (I) dt. 31-12-2010 to M/s Maan Steel & Power Ltd. At Jamuna Industrial Estate, IKRA, P.O. Jamuna, Distt. Burdwan in West Bengal for their Expansion of 0.18 MTPA Integrated Steel Plant along with 24 MW Captive Power Plant.

ভারতে সর্বাধিক প্রচারিত প্রথম শ্রেণির বাংলা দৈনিক

আনন্দবাজার পত্রিকা

কলকাতা ১১ মাঘ ১৪১৭ মঙ্গলবার ২৫ জানুয়ারি ২০১১ শহর সংস্করণ ৩.৫০ টাকা

দক্ষিণবঙ্গ

দশ]

আনন্দবাজার পত্রিকা কলকাতা মঙ্গলবার ২৫ জানুয়ারি ২০১১

DABE

নোটিশ

This is to inform all concerns that Environmental clearance has been granted by Ministry of Environment & Forests, Govt. of India vide letter No. J-11011/695/2009-IA-II (I) dt. 31-12-2010 to M/s Maan Steel & Power Ltd. At Jamuria Industrial Estate, IKRA, P.O. Jamuria, Distt. Burdwan in West Bengal for their Expansion of 0.18 MTPA Integrated Steel Plant along with 24 MW Captive Power Plant.

AKGGS:ENRGO:138

PHOTOGRAPHS

Ambient Air Quality Monitoring

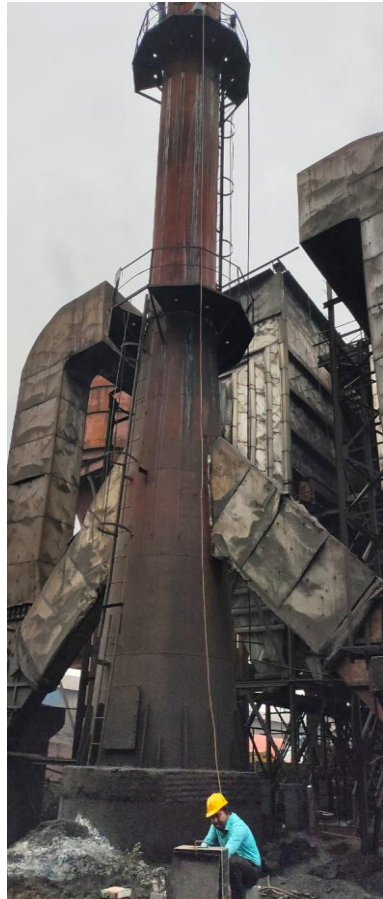


AMBIENT NOISE MONITORING



STACK GAS MONITORING





Sludge Collection



Slag Collection



Effluent water collection



Water Sampling



Laechate collection



Water Sprinkler





LED Lightening in Workplace



Green Belt Development





Health-Care Facilities



24-hour Ambulance facilities



Information Board

