



# JAMSHEDPUR MINERALS & CHEMICALS

Manufacturer of Low Carbon Ferro Alloys

14 June, 2021

To,

**Regional Officer (ECZ)**

Ministry of Environment, Forest and Climate Change,

Integrated Regional Office (ECZ), Bungalow No. A-2, Shyamali Colony,  
Ranchi - 834002

**Subject: Regarding compliance of Environmental Clearance conditions.**

Reference: Environmental Clearance from Ministry of Environment & Forest, New Delhi  
vide F.No. J-11011/76/2011-IA-II(I) Dated 27-11-2012

Sir,

We have obtained environment clearance and NOC/CTE from the concerned authorities prior to starting the work at site. All mandatory clearances, authorizations and permission obtained prior to commissioning and operation of the plant.

As per requirements of Environment (Protection) Act 1986 and various conditions of the above mentioned Environmental Clearance we are submitting the six monthly compliance reports with status for the period from 1<sup>st</sup> October 2020 to 31<sup>st</sup> March 2021 to the specified authorities. The same is enclosed for your information.

Thanking you,

Yours Faithfully,

For Jamshepur Minerals & Chemicals

(Shiy Kumar Agarwal)

Partner

**Enclosure:** Compliance Report for the period 01.10.2020 to 31.03.2021 with Annexures





# JAMSHEDPUR MINERALS & CHEMICALS

Manufacturer of Low Carbon Ferro Alloys

14 June, 2021

To,  
The Director, IA-Division (Monitoring Cell),

Indira Paryavaran Bhawan, Ministry of Environment, Forest & CC,  
Jorbagh Road, Lodhi Road, New Delhi-110003

**Subject: Regarding compliance of Environmental Clearance conditions.**

Reference: Environmental Clearance from Ministry of Environment & Forest, New Delhi  
vide F.No. J-11011/76/2011-IA-II(I) Dated 27-11-2012

Sir,

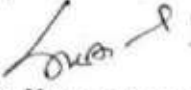
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For Jamshedpur Minerals & Chemicals

  
(Shiv Kumar Agarwal)  
Partner

**Enclosure:** Compliance Report for the period 01.10.2020 to 31.03.2021 with Annexures





# JAMSHEDPUR MINERALS & CHEMICALS

Manufacturer of Low Carbon Ferro Alloys

14 June, 2021

To,  
**The Regional Officer,**  
Jharkhand State Pollution Control Board,  
Adityapur, Jamshedpur, Jharkhand - 831013

**Subject: Regarding compliance of Environmental Clearance conditions.**

Reference: Environmental Clearance from Ministry of Environment & Forest, New Delhi  
vide F.No. J-11011/76/2011-IA-II(I) Dated 27-11-2012

Sir,

We have obtained environment clearance and NOC/CTE from the concerned authorities prior to starting the work at site. All mandatory clearances, authorizations and permission obtained prior to commissioning and operation of the plant.

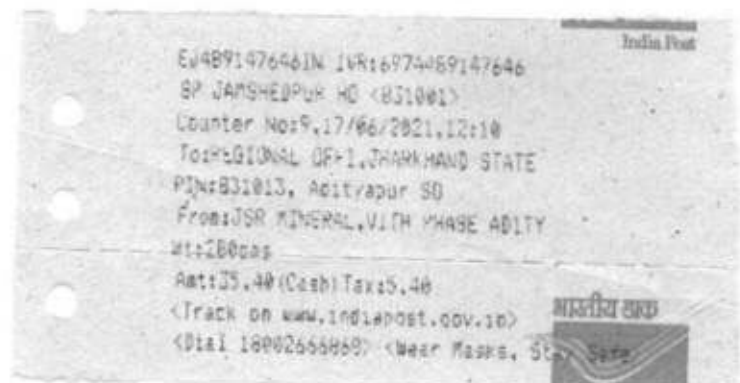
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Yours Faithfully,  
For Jamshedpur Minerals & Chemicals

(Shiv Kumar Agarwal)  
Partner

**Enclosure:** Compliance Report for the period 01.10.2020 to 31.03.2021 with Annexures





# JAMSHEDPUR MINERALS & CHEMICALS

Manufacturer of Low Carbon Ferro Alloys

14 June, 2021

To,  
**Regional Director**  
CPCB, Kolkata  
Southern Conclave, Block 502,  
5th & 6th Floors, 1582  
Rajdanga Main Road, Kolkata - 700107,

**Subject: Regarding compliance of Environmental Clearance conditions.**

Reference: Environmental Clearance from Ministry of Environment & Forest, New Delhi  
vide F.No. J-11011/76/2011-IA-II(I) Dated 27-11-2012

Sir,

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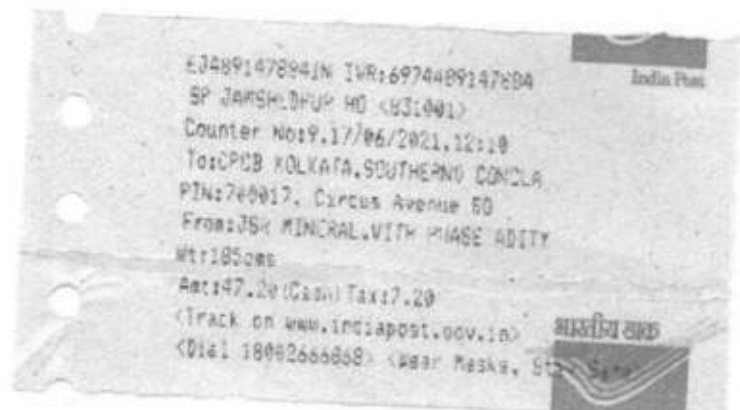
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Thanking you,

Yours Faithfully,  
For Jamshedpur Minerals & Chemicals

(Shiv Kumar Agarwal)  
Partner

**Enclosure:** Compliance Report for the period 01.10.2020 to 31.03.2021 with Annexures





# JAMSHEDPUR MINERALS & CHEMICALS

Manufacturer of Low Carbon Ferro Alloys

14 June, 2021

To,  
**The Member Secretary,**  
Jharkhand State Pollution Control Board,  
T.A. Division Building, Dhurwa,  
Ranchi, Jharkhand - 834004

**Subject: Regarding compliance of Environmental Clearance conditions.**

Reference: Environmental Clearance from Ministry of Environment & Forest, New Delhi vide F.No. J-11011/76/2011-IA-II(I) Dated 27-11-2012.

Sir,

We have obtained environment clearance and NOC/CTE from the concerned authorities prior to starting the work at site. All mandatory clearances, authorizations and permission obtained prior to commissioning and operation of the plant.

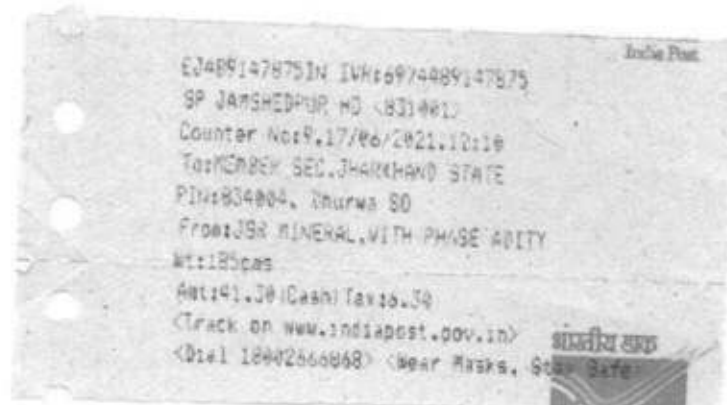
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Thanking you,

Yours Faithfully,  
For Jamsheedpur Minerals & Chemicals

(Shiv Kumar Agarwal)  
Partner

**Enclosure:** Compliance Report for the period 01.10.2020 to 31.03.2021 with Annexures





# JAMSHEDPUR MINERALS & CHEMICALS

Manufacturer of Low Carbon Ferro Alloys

14.06.2021

**The Regional Manager,  
Jharkhand State Pollution Control Board,  
Adityapur, Jharkhand**

Dear Sir,

Sub: Regarding Compliance of Environment Clearance Conditions.

Ref : 1) Environmental Clearance from Ministry of Environment & Forest, New Delhi Vide F.No. J-11011/76/2011-IA-II (I) dt. 27.11.2012

2) CTO No JSPCB/HO/RNC/CTO-8949750/2020/1734 dtd.18.10.2020 AND Valid upto 30.09.2025

We are pleased to enclosed herewith the followings.

- a) Environment Statement for the year ending 31.03.2021.
- b) Ambient Air & Noise Test Report.

Kindly acknowledge the receipt & oblige.

Thanks & Regards,

Sincerely Your

For Jamshedpur Minerals & Chemicals

(Shiv Kumar Agarwal)

Partner

Encl: As Above

## ENVIRONMENT CLEARANCE COMPLIANCE REPORT

Environmental Clearance F.No.J-11011/76/2011-IA-II(I) dt.27.11.2012		
CONDITION		COMPLIANCE/ STATUS (01.10.2020 – 31.03.2021)
<b>SPECIFIC CONDITIONS</b>		
1	No charcoal shall be used as fuel Pet coke shall be used as fuel instead of charcoal from unknown sources.	No fuel, charcoal or pet coke used in the production process.
2	Continuous monitoring facilities for all the stacks and sufficient air pollution control equipments viz. fume extraction system with bag filters, ID fan and stack of adequate height to submerged arc furnace shall be provided to control emissions below 50 mg/Nm <sup>3</sup>	Online continuous emission monitoring system installed from Forbes Marshall Codel Pvt. Ltd. and connected online with JSPCB, Ranchi. The fume extraction system with multicyclone - bag filters along with ID Fan and stack of 36 m installed to meet the norms. Stack monitoring report attached as <b>Annexure - 1</b> .
3	The National Ambient Air Quality Standards issued by the Ministry vide G S.R. No. 826(E) dated 16th November, 2009 shall be followed.	Ambient Air Quality maintained within the permissible limits of National Standards. Monitoring reports attached as <b>Annexure - 1</b>
4	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.	Secondary fugitive emissions well within the prescribed limit of CPCB. Guidelines / Code of Practice issued by the CPCB will be followed. Working under shed, water sprinkling done and bag filters installed to control the secondary emissions if any.
5	Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall 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 should also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.	No water requirement or any wastewater/effluent generated from the process. Water used only for environmental and domestic purpose. Domestic wastewater is routed to septic tank – soak pit.
6	The total water requirement shall not exceed 1.5 m <sup>3</sup> /day. 'Zero' effluent discharge shall be strictly followed and no wastewater should be discharged outside the premises.	The total water requirement does not exceed 1.0 m <sup>3</sup> /day. The water is exclusively used for environmental and domestic purpose only. 'Zero' effluent discharge strictly followed, declaration of same already submitted.

JAMSHEDPUR MINERALS & CHEMICALS

  
Partner

7	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 should be met from other sources.	Rainwater tank-cum-pit constructed for collection and use of water harvested. Water used for plant purposes or recharge to ground water.
8	Slag produced in Ferro Manganese (Fe-Mn) production shall be used in manufacture of Silica Manganese (Si-Mn). All the other Ferro alloy slag shall be used in the preparation of building materials.	Slag produced, partly used in the lining of vessel for manufacturing of Ferro Manganese and partly sold to end users.
9	No Ferro Chrome shall be manufactured without prior approval from the Ministry of Environment & Forests.	No Ferro Chrome manufacturing. We hereby confirm that we will not manufacture Ferro Chrome without the prior approval of MoEF&CC.
10	Risk and Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.	Risk and Disaster Management Plan already submitted as per direction.
11	As proposed. Green belt should be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	The green belt developed along the boundary. Plantation done in the open area to the extent possible. Limited land area in notified industrial area.
12	At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on locals need 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 shall be ensured accordingly in a time bound manner.	We will adhere to the plan and the guidelines of CPCB and MoEF&CC. Social welfare work taken up through a local agency "Friends of Tribal Society". During this period amount of Rs. 1.10 lakh provided to "Friends of Tribal Society" for needful. Ledger of same attached as <b>Annexure - 2</b>
13	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.	The unit has been installed and is in operation since 26.02.2015. No construction at present.



**GENERAL CONDITIONS:**

1	The project authorities must strictly adhere to the stipulations made by the Jharkhand State Pollution Control Board and the State Government.	Stipulations of JSPCB are being adhered to. Consent to operate obtained prior to commissioning of the plant and renewed regularly thereafter, with compliance of conditions.
2	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment & Forests.	We confirm that no expansion or modification in the plant shall be carried out without prior approval of MoEF&CC.
3	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19 <sup>th</sup> May, 1993 and standards prescribed from time to time. The State Pollution Control Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	Being complied with
4	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM <sub>10</sub> , SO <sub>2</sub> and NO <sub>x</sub> 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.	AAQ monitoring carried out. Reports enclosed as <b>Annexure - 1</b>
5	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 shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Being complied with, Noise monitoring carried out and report attached as <b>Annexure - 1</b>
6	Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	Occupational health surveillance of the workers done as per statue and records maintained. Copy of report submitted with the previous compliance.
7	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.	Rainwater tank-cum-pit constructed for collection and use of water harvested. Water used for plant purposes or recharge to ground water.

8	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.	Being complied. Social welfare work taken up through a local agency "Friends of Tribal Society".
9	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.	Environment protection measures implemented as per EIA/EMP and schedule. Recurring cost for Environmental Control measure from 01.10.2020 to 31.03.2021 is approx. Rs. 12.55 Lacs, details attached as <b>Annexure – 3</b>
10	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.	Letter sent to concerned offices/bodies. Clearance letter has been put on the website of the company.
11	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, SO, NOx (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.	Complied. Status uploaded on the company website. Information also displayed on the board at the company main gate.

12	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.	Six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data regularly submitted to concerned authorities in June & December every year. Latest compliance report attached along with.
13	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 along with 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.	Being complied as directed. Environment Statement for the year ending 31 <sup>st</sup> March 2021 attached along with as <b>Annexure - 4</b> .
14	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 <a href="http://envfor.nic.in">http://envfor.nic.in</a> . 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.	Information to 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 has been published in Hindustan (Hindi) and Hindustan Times dated 03.12.2012 and copies, submitted to concerned authorities. Copies submitted with earlier reports.
15	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.	Finance for the project has been approved by : 1. Bank of Baroda, Main Branch, Jamshedpur on 6 <sup>th</sup> April 2013.  The unit has been installed and under operation with Consent to Operate under Ref: PC/JSR/AIR/J-76/14/39564/B-195, dtd. 19.01.2016 and valid upto 30.09.2020.

# ANNEXURE - 3

## EMP EXPENDITURE

PERIOD: 01.10.2020 TO 31.03.2021

### REPAIR & MAINTENANCE FOR POLLUTION CONTROL EQUIPMENT :-

#### PARTICULAR

	AMOUNT (Rs.)	AMOUNT (Rs.)
A) Salary for 6 months of 1 maintenance staff	60,000.00	
B) Expenses incurred on repair & maintenance Period 01.10.2020 to 31.03.2021	11,47,025.00	12,07,025.00

### PLANTATION EXPENSES FOR POLLUTION CONTROL MEASURES:-

A) Salary for Gardener 6 months	48,000.00	48,000.00
<b>Total</b>		<b>12,55,025.00</b>

JAMSHEDPUR MINERALS & CHEMICALS

Partner



वनबंधु परिषद  
FRIENDS OF TRIBALS SOCIETY  
Jamshedpur Chapter



202, Gajraj Mansion Diagonal Road, Bistupur, Jamshedpur - 831001, Jharkhand, Email:  
ftsjamshedpur@gmail.com | Ph: 7488883877 | Mob: 7488883877

H.O: Ekal Bhawan, 123/A, Harish Mukherjee Road, Kolkata-26, Ph: 033 - 2454 4510/11/12/13, Web: www.ftsindia.com PAN: AAAAF0290L

Received with thanks, from:

M/S JAMSHEDPUR MINERALS AND CHEMICALS  
Flat no F 75, Seventh Floor, LILAC, Ashlana Gardens, Sonari,  
Jamshedpur 831011, Jharkhand,  
Jamshedpu - 831011, Jharkhand.

PAN No: AAGFJ4862R


Amount in words: Forty Four Thousand Rupees

Reference: Cheque No. 001630, DT. 14.12.2020, bank of baroda

This receipt is valid only after realisation of the payment.  
Its donation is eligible for deduction U/S 80(G) of the  
Income Tax Act 1961 vide order NO: DIT(E)/3260/BE/73/89-90 Dt. 13-12-2011.

Receipt No.	: 3723 / 2020-21
Date	: 21-01-2021
On account of	: One Teacher School
Pay Mode	: Cheque
Amount	: Rs. 44000 /-

For Friends of Tribals Society

  
Secretary / Treasurer

JAMSHEDPUR MINERALS & CHEMICALS

  
Partner



वनबंधु परिषद  
FRIENDS OF TRIBALS SOCIETY  
Jamshedpur Chapter



202, Gajraj Mansion Diagonal Road, Bistupur, Jamshedpur - 831001, Jharkhand, Email:  
ftsjamshedpur@gmail.com | Ph : 7488883877 | Mob : 7488883877

H.O.: Ekal Bhawan, 123/A, Harish Mukherjee Road, Kolkata-26, Ph: 033 - 2454 4510/11/12/13, Web: www.ftsindia.com PAN: AAAAF0290L

Received with thanks from :  M/S JAMSHEDPUR MINERALS AND CHEMICALS Flat no F 75, Seventh Floor, LILAC, Ashiana Gardens, Sonari, Jamshedpur 831011, Jharkhand . Jamshedpu - 831011 , Jharkhand .  PAN No : AAGFJ4862R	Receipt No. : 3724 / 2020-21
	Date : 21-01-2021
	On account of : One Teacher School
	Pay Mode : Cheque
Amount in words : Sixty Six Thousand Rupees	Amount : Rs. 66000 /-
Reference : Cheque No. 001631, DT. 14.12.2020, bank of baroda	
This receipt is valid only after realisation of the payment. This donation is eligible for deduction U/S 80(G) of the Income Tax Act 1961 vide order NO: DIT(F)/3260/8E/73/89-90 Dt. 13-12-2011.	
For Friends of Tribals Society  Secretary / Treasurer	

JAMSHEDPUR MINERALS & CHEMICALS  
  
Partner

**ANNEXURE - 4**  
**FORM-V**

ENVIRONMENTAL STATEMENT REPORT FOR THE YEAR ENDING 31<sup>st</sup> MARCH 2021

PART-A

- (i) Name and address of the occupier : Jamshedpur Minerals & Chemicals  
Of the industry / operation or : B-29(P), Vith Phase, Adityapur Industrial  
Process. : Area, P.O - Gambaria- 832108
- Industry Category : SSI Unit
- Primary (SIC code) : -
- Secondary (SIC Code) : Ferro Alloys
- (ii) Production Category (Units)
- a) Ferro Manganese : 4800 TPA
- b) Ferro Molybdenum : 600 TPA
- c) Ferro Titanium : 600 TPA
- (iii) Year of establishment : 01.12.2014
- (iv) Date of last Environmental : 15.06.2020  
Statement submitted

PART- B  
WATER AND RAW MATERIAL CONSUMPTION

(A) Water Consumption

Process

Cooling

Domestic

0.8 KLD

Name of the product	Process water consumption per unit of product output.	
	During the previous financial year 2019-2020	During the current financial year 2020-2021
FERRO MANGANESE	Nil	Nil
FERRO MOLYBDENUM	Nil	Nil
FERRO TITANIUM	Nil	Nil

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Partner

**(B) Raw Material Consumption :**

Name of Raw Material	Consumption of raw material per unit of output:	
	During the previous financial year 2019-20 <b>Low Carbon Ferro Manganese Total Production: 425,734 Tons</b>	During the current financial year 2020-21 <b>Low Carbon Ferro Manganese Total Production: 97,723 Tons</b>
ALUMINIUM SCRAP	0.724 T/T	0.562 T/T
ALUMINIUM POWDER	0.000 T/T	0.000 T/T
FERRO SILICON POWDER	0.0012 T/T	0.000 T/T
SILICO MANGANESE	0.162 T/T	0.000 T/T
MANGANESE ORE	1.438 T/T	1.601 T/T
M.S SCRAP	0.088 T/T	0.119 T/T
LIME	0.0925 T/T	0.218 T/T

**PART- C**

**POLLUTION DISCHARGED TO ENVIRONMENT /UNIT OF OUTPUT (PARAMETER AS SPECIFIED IN THE CONSENT ISSUED)**

Pollutants	Quantity of pollutants Discharged (mass/day)	Concentrations of Pollutants Discharged (mass/volume)	Percentage of variation From prescribed Standards with reasons
(A) Water	<b>No discharge of effluent.</b>	NA	NA
(B) Air	<b>Within norms as per the monitoring reports attached.</b>		NA

**PART- D**

**HAZARDOUS WASTES**

**(AS SPECIFIED UNDER HAZARDOUS WASTES / MANAGEMENT AND HANDLING RULES, 1989)**

Hazardous Waste	Total Quantity (kg/years)
	During the current financial year
(a) From process	Nil
(b) From Pollution Control	Nil

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Partner



**PART -E**  
**SOLID WASTES**

Solid waste	Total Quality (t/year)	
	During the previous Financial year 2019-20	During the Current Financial year 2020-21
a)From process Slag (FN+LC)	<b>475.531 M.T</b>	<b>114.073 M.T</b>
(b) From pollution Control facility	<b>RECYCLED</b>	<b>RECYCLED</b>
Quantities recycled Or reutilized	<b>595.645 M.T.</b>	<b>235.455 M.T</b>
Sold Disposed	<b>182.970 M.T</b>	<b>153.57 M.T</b>
	<b>NIL</b>	<b>NIL</b>

**PART- F**

Characteristics of wastes and Indicative Disposal practice adopted
<b>The slag generated from Low Carbon Ferro Manganese is used in lining of vessel for production of Low Carbon Ferro manganese &amp; sold to the Customers.</b>

**PART- G**

Impact of pollution control measures on conservation of natural resources and consequently on the cost of production.
<b>Fume extraction system with cyclone and bag filter has been installed and slag is stored/reused properly. PPE provided to worker, thus work zone environment is maintained, resulting in improved efficiency.</b>

**PART- H**

Additional investment proposal for environment protection including abatement of pollution
<b>Plantation, RWH, Regular maintenance of APCD &amp; water sprinkling is being continued for abatement of Pollution. Estimated annual expenditure Rs. 15.00 lakhs</b>

**PART- I**

Any other particulars for improving in respect of environmental protection and abatement of pollution.
<b>PPEs provided and its use made regular. Directions of regulatory authorities complied with</b>

*Signature of Applicant*

JAMSHEDPUR MINERALS & CHEMICALS

*[Handwritten Signature]*  
Partner



**JHARKHAND STATE POLLUTION CONTROL BOARD**  
T.A Division Building (Ground Floor) HEC Campus, Dharwa, Ranchi- 834004,  
Phone No:-0651- 2400852, 2400851, Fax No:- 2400850.

Ref.no. PC/NOC/JSR/02/11-14/114

Ranchi, Dated 6.11.13

No Objection Certificate (Consent to establish) under section 25 & 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981.

1. Reference application no. 25679 dated 13.12.2012 of M/s. Jamsbedpur Minerals & Chemicals, 410, Ashiana Trade Centre, Adityapur, Dist. Saraikela Kharsawan for setting up a Plant for manufacturing of Ferro Manganese, Ferro Molybdenum & Ferro Titanium at Plot No. B-29 (P) Phase-VI, Mauza-Adityapur Industrial Area, P.O. Gambharia, Dist. Saraikela Kharsawan. The production capacity and proposed investment of the industry will be as follows :-

Ferro Manganese:	4800 TPA
Ferro Molybdenum	600 TPA
Ferro Titanium	600 TPA
Proposed investment	98.40 Lakh.

2. The documents relied upon :

- (i) The contents of N.O.C. application, Project report and the documents furnished in support of application.
- (ii) The related provisions of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986.
- (iii) Public Hearing conducted on 11.01.2011.
- (iii) On the basis of Environmental Clearance issued by MOEF vide letter no. F No.J-1101/76/2011-1A-II(I) dated 27.11.12.

3. After considering the above, N.O.C. (Consent to establish) is accorded subject to the compliance of the following conditions :-

- (i) That, the proponent shall obtain consent to operate from State Pollution Control Board under section 25 & 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 prior to commissioning of the plant.
- (ii) That, the proponent shall install water meter to measure the water to be consumed for different purposes to meet the requirement of the water, furnish returns of water to be consumed and pay water-cess under the Water (Prevention & Control of Pollution) Cess Act, 1977.
- (iii) That, the proponent shall obtain authorization under the Hazardous Waste (Management & Handling) Rules, 1989, the Bio-medical Waste (Management & Handling) Rules, 1998 and the Municipal Solid Waste (Management & Handling) Rules, 2000 whichever is applicable.
- (iv) That, the proponent shall abide by the provisions of the Environment (Protection) Act, 1986 and submit the reports of effluent, emission, ambient air quality and noise level monitored before and after commissioning of the plant in compliance of the standards prescribed in the Environment (Protection) Rules, 1986.
- (v) That, the proponent shall collect and treat the effluent in foolproof latest system and shall recycle treated effluent to the system for reuse and shall ensure the discharge of effluent (if at all necessary) in up stream of the water intake point.

- (vi) That, the proponent shall make stack(s) of the height and with the provision(s) of emission monitoring port hole(s), ladder(s) and platform(s) as prescribed by Central Pollution Control Board.
- (vii) That, the proponent shall ensure continuous and uninterrupted power supply with provision of separate energy meters for the pollution control systems to enable the pollution control systems to function uninterruptedly.
- (viii) That, the proponent shall use D.G. set(s) of standard as prescribed in the Environment (Protection) Rules, 1986 and shall house it (them) in integral acoustic enclosure(s) and shall keep the height of exhaust pipe as per Central Pollution Control Board norms.
- (ix) That, the proponent shall dispose of hazardous wastes, bio-medical wastes, municipal solid wastes and batteries wastes (whichever is applicable) in the manner as specified under respective Rules.
- (x) That the proponent shall install fixed type water sprinklers to cover all dusty places in the premises to impart water spraying intermittently.
- (xi) That, the proponent shall do tree plantation in at least 33% of vacant spaces of the premises.
- (xii) That, the proponent shall implement plan of rainwater harvesting with establishment of the project duly approved by the Directorate of Ground Water, Government of Jharkhand.
- (xiii) That, the total water requirement shall not exceed 1.5 m<sup>3</sup>/day. Zero effluent discharge shall be strictly followed and no waste water should be discharged out side the premises.
- (xiv) That, the proponent shall install air pollution control devices such as fume extraction system with bag filter etc. to control emission within prescribed limit.
- (xv) That, the proponent shall make arrangements to control secondary fugitive emission from all the sources within the latest permissible limits issued by the Ministry and shall be monitored regularly.
- (xvi) That, the proponent shall make all roads pucca inside the premises and shall maintain a good house keeping by regular cleaning and wetting of the roads and dust prone areas.
- (xvii) That, the proponent shall store all raw materials and products under shed and shall as far as practicable, do their processing and transfer under foolproof cover(s) and shall install dust catchers over uncovered spaces of processing and transfers.
- (xviii) That, the proponent shall install on-line stack monitoring system with connectivity of data to Head Office, Ranchi.
- (xix) That, the proponent shall use slag produced in Ferro Manganese production in manufacture of Silico-Manganese.
- (xx) That, the proponent shall use all the Ferro Alloys Slag in the preparation of building materials.
- (xxi) That, the proponent shall not manufacture Ferro Chrome without prior approval from Ministry of Environment & Forest, Govt. of India, New Delhi.
- (xxii) That, the proponent shall comply all the specific and general condition imposed in Environmental Clearance issued by the MOEF vide letter no. F. No. J-11011/76/2011-IA-II(I) dated 27.11.12.

- (xxiii) That, the proponent shall submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data to the Regional Office of MOEF, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board.
- (xxiv) That, the proponent shall use fly ash and or fly ash bricks in construction of the project.
- (xxv) That, the proponent shall maintain the quality and table of ground water.
- (xxvi) That, the proponent shall keep the waste water in close circuit.
- (xxvii) That, the proponent shall use all solid wastes as resource as a raw material or a product.
4. This shall be valid subject to authenticity of documents furnished in support of application and bonafide ownership and possession of the land by the proponent.
  5. The Jharkhand State Pollution Control Board reserves the right to revise and/or add any other conditions, if necessary, for the protection of Environment and to ensure pollution control or any.
  6. The present N.O.C. should not be considered as an assurance for granting consent to operate the proposed plant and is subject to installation of all pollution control devices and their monitoring facilities with establishment of the facilities and compliance of all conditions as mentioned above.
  7. This N.O.C. is valid for a period of six months from the date of issue.

Sd/-  
( S.K. Sinha )  
Member-Secretary

Memo no. PC/NOC JSR/251/08-16/11/14

Ranchi, Dated. 8.1.13

Copy forwarded to : M/s. Jamshedpur Minerals & Chemicals, 410, Ashiana Trade Centre, Adityapur, Dist. Saraikela Kharsawan /Chief Inspector of Factories, Doranda, Ranchi/Director Industries, Govt. of Jharkhand, Ranchi/Deputy Commissioner, Saraikela Kharsawan /Regional Office, J.S.P.C. Board, Jamshedpur/concerned officer dealing with consent.

( S.K. Sinha )  
Member-Secretary

JAMSHEDPUR MINERALS & CHEMICALS

*S.K. Sinha*  
Partner



## JHARKHAND STATE POLLUTION CONTROL BOARD

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI 834004  
Telephone: 0651-2400850 (Fax)/ 2400851/2400852/2401847/2400979/2400139

Ref No. JSPCB/HO/RNC/CTO-8949750/2020/1734

Dated : 2020-10-18

**Consent to operate (CTO) under section 25 /26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981**

1. Application (s) dated 2020-09-19 of Jamshedpur Minerals And Chemicals, Occupier Name :Shiv Kumar Agarwal for consent under section 25 (1)(b)/25 (1) (c)/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(1) of the Air (Prevention & Control of Pollution) Act, 1981..

**2. Documents Relied Upon:**

(a) The content of Environmental Clearance granted by MoEF&CC, GoI vide ref. no. J-11011/76/2011-I(A).II(I), dated 27.11.2012 for 6000 TPA Low and Medium Carbon Ferro Alloys Project at Adityapur Industrial Area with compliance report and photographs as compliance;

(b) The content of Consent-to-Establish (CTE), Ref No. G-114 Ranchi, Dated 06.01.2013 for G-114 dated 08.01.2013 for Ferro Manganese - 4800 TPA, Ferro Molybdenum- 600 TPA, Ferro Titanium - 600 TPA;

(c) The content of Consent-to-Operate (CTO), vide Ref No. PC/JSR/AIR/J-76/14/395641/ RANCHI Dated : 2016-01-18 for Ferro Manganese - 4800 TPA, Ferro Molybdenum- 600 TPA, Ferro Titanium - 600 TPA valid up to 30.09.2020 with compliance report;

(d) The content of Declaration that no Hazardous wastes is generated and as there is no water in the process so, no ETP is required; AND Self declaration to procure raw material from valid sources and submitted list of Raw materials supplier of Manganese Ore;

(e) The content of Registered land lease agreement made on 04.11.2008 with AIADA for the period of 30 years and also uploaded copy of possession certificate;

(f) The content of Inspection Report (I/R), Ref No. 939 dated 25.09.2020 Regional Officer, Regional Office-Cum-Laboratory, Jamshedpur;

3. The consent is granted under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 to operate the project in Mauza -Gangpur , P S -Adityapur Industrial Area , District -SERAIKELA KHARSAWAN , as follows:

Project	Site-Area		Investment (Rs)	Product & Capacity	Period of CTO
	Plot Nos.	Area			Date of issue To

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Before Expansion	B-29 (P), Phase VI, Adityapur Industrial Area, Gamharia, Dist. - Saraikela Kharsawan	0.46 Acres	160 Lac	Ferro Manganese : 4800 TPA, Ferro Molybdenum - 600 TPA, Ferro Titanium - 600 TPA	30/09/2025
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**(A) Specific Conditions:**

1. That, the occupier shall not utilize ferro chrome without prior approval from Ministry of Environment, Forest & Climate change;
2. That, the occupier shall comply with all the conditions mentioned in environmental clearance and NOC.
3. That the occupier shall submit compliance report of CTO Conditions every year to the Board.
4. That, the total water requirement shall not exceed 1.5 m<sup>3</sup>/day
5. That, the occupier shall utilize slag produced in Ferro-Manganese production in manufacture of Silica Manganese and shall utilize other ferro alloy slag in the preparation of building materials.
6. That, the occupier shall install and operate online stack emission monitoring system with connectivity to Jharkhand State Pollution Control Board server
7. That, the occupier shall operate and maintain air pollution control equipment such as fume extraction system, Bag filters, Cyclone separators regularly.
8. That, the occupier shall make necessary arrangement for control of secondary fugitive emission and shall follow the guidelines/code of practice issued by Central Pollution Control Board.
9. That, the occupier shall not use charcoal as fuel and Pet coke shall be used as fuel.
10. That, the occupier shall submit applications for renewal of consent under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 again 120 days prior to the date of expiry of this consent i.e. 30.09.2025, with requisite fee and documents showing compliance of all of the above conditions.

**(B) General Conditions :**

- (1) That, the occupier shall maintain the **National Ambient Air Quality Standard** given below:

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S N	Pollutant	Time Weighted Average	Concentration in Ambient Air	
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Govt.)
(1)	(2)	(3)	(4)	(5)
1.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Annual 24 hours	50 80	20 80
2.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Annual 24 hours	40 80	30 80
3.	Particulate Matter (size less than 10 µm) or PM <sub>10</sub> , µg/m <sup>3</sup>	Annual 24 hours	60 100	60 100
4.	Particulate Matter (size less than 2.5 µm) or PM <sub>2.5</sub> , µg/m <sup>3</sup>	Annual 24 hours	40 60	40 60
5.	Ozone(O <sub>3</sub> ), µg/m <sup>3</sup>	8 hours 1 hour	100 180	100 180
6.	Lead (Pb) µg/m <sup>3</sup>	Annual 24 hours	0.50 1.0	0.50 1.0
7.	Carbon Monoxide (CO) mg/m <sup>3</sup>	8 hours 1 hour	02 04	02 04
8.	Ammonia (NH <sub>3</sub> ) µg/m <sup>3</sup>	Annual 24 hours	100 400	100 400
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) µg/m <sup>3</sup>	Annual	05	05
10.	Benzo(a) Pyrene(BaP) Particulate Phase only ng/m <sup>3</sup>	Annual	01	01
11.	Arsenic (As) ng/m <sup>3</sup>	Annual	06	06
12.	Nickel (Ni) ng/m <sup>3</sup>	Annual	20	20

Note : Serial no. 1 to 4 – Mandatory  
Serial no. 5 to 12 As applicable for specific type of industry.

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*[Signature]*  
Partner

- (2) That, the occupier shall maintain the emission quality within the standard and the quantity, as follows:

S N	Parameter	Standard
1	Particulate Matter	100 mg/ Nm <sup>3</sup>

- (3) That, the occupier shall keep process effluent in close-circuit and the quality of effluent from other sources in conformity with the standard (s) and the discharge quantity as below:

S N	Parameter	Standard
1	Total Suspended Solids	100 mg/L
2	BOD	30 mg/L
3	COD	250 mg/L
4	Oil & Grease	10 mg/L

- (4) That, the occupier shall dispose of solid wastes as follows:

S N	Waste Type	Mode of Disposal
1	Hazardous Carbonaceous Wastes	In co-processing in high temperature furnaces or kilns
2	Hazardous Non-Carbonaceous Wastes	In TSDF
3	Non-Carbonaceous Non-Hazardous solid wastes/ Mine Over Burden	As a substitute of Soil or Mineral

- (5) That, the occupier shall keep D G Set(s) within acoustic enclosure and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm.
- (6) That, the occupier shall install and maintain Central Ground Water Board/ State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge and submit the photographic view of the structures within a month.
- (7) That, the occupier shall grow and maintain greenery of the project in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.
- (8) That, the occupier shall submit environmental statement with supporting stoichiometric calculations analyses reports, every year latest by 30th September of the next financial year.
- (9) That, the occupier shall submit report(s) duly monitored and issued by an NABL accredited / ISO 9001:2008 and OHSAS 18001:2007 certified laboratory in compliance sub-para (2), (3), (4) and (5) of paragraph 3 of this CTO yearly at required periodicity.



- (10) That, this CTO is valid subjected to the validity of mining Lease/Mining Plan/Ecofriendly/Environmental Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, this consent shall be treated as revoked automatically.
- (11) That, this CTO is issued from the environmental angle only and does not absolve the occupier from other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with these conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ occupier.
- (12) That, this CTO shall not in any way, adversely affect or jeopardize the legal proceeding , if any, instituted in the past or that could be , instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.
- (13) That, the occupier shall comply with all applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974; the Water (Prevention & Control of Pollution) Cess Act, 1977; the Air (Prevention & Control of Pollution) Act, 1981; and the Environment (Protection) Act, 1986 and Rules made there under.
4. That, this CTO shall not absolve the occupier from making compliance of other statutory prescribed under any law or direction of courts or any other instrument for the time being in force.
5. That, this CTO is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTO will be revoked if any of the information/documents/certificates/undertaking given by the occupier is found false/fictitious/forged in future.
6. The Order shall be valid subject to compliance of all other legal requirements applicable to the unit.
7. The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alteration in conditions of this consent.

This is issued with the approval of the Competent authority

DINESH PRASAD SINGH  
Digitally signed by DINESH PRASAD SINGH  
Date: 2020.10.18 13:01:24 +05'30'  
(Dinesh Prasad Singh)  
Environmental Engineer

Dated : 2020-10-18

Memo No. : JSPCB/HO/RNC/CTO-8949750/2020/1734

**Copy to:** M/s Jamshedpur Minerals & Chemicals, At- B-29(P), Phase - VI, Adityapur Industrial Area, Gamharia, Dist. - Saraikela Kharsawan / the Director of Industry, Government of Jharkhand, Ranchi/ the Deputy Commissioner, Saraikela Kharsawan/ the Chief Inspector of Factories, Ranchi/ the Regional Office-cum-Laboratory, Jamshedpur for information & necessary action. Regional Officer is requested to examine the status of compliance every year and shall submit the report to the Board.

DINESH PRASAD SINGH  
Digitally signed by DINESH PRASAD SINGH  
Date: 2020.10.18 13:01:35 +05'30'  
(Dinesh Prasad Singh)  
Environmental Engineer

JAMSHEDPUR MINERALS & CHEMICALS

*[Signature]*  
Partner

**TEST REPORT OF AMBIENT AIR QUALITY MONITORING**

Test Report No.	: ELES/RNC/2021/0600	Report Release Date	: 21.04.2021
ULR No	: TC88392100000290P		

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Jamshedpur Minerals & Chemicals	Sample Ref. No.	: ELES/RNC/2021/AA/251
Address	: B-29(P), VI <sup>th</sup> Phase, A.I.A, Gamharia, Dist.-Saraikela Kharasawan	Location	: Near Main Gate
Plant Status	: Operational	Sampling Date	: 17.03.2021 to 18.03.2021
Period of Analysis	: 19.03.2021 to 21.04.2021	Sample Received Date	: 19.03.2021
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 32	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 53	4	Weather Condition	: Clear
5	Longitude	: 86°06'54.15"E	6	Latitude	: 22°48'00.80"N
7	NABL Group	: Atmospheric Pollution	8	Discipline	: Chemical

**TEST REPORT**

NABL Accredited Tests										
PARAMETER	Units	TEST PROTOCOL	RESULTS				24 hourly AVG.	LIMIT		
Particulate Matter (PM10)	µg/m <sup>3</sup>	IS 5182 (Part-23): 2006; RA2017	Duration				78	100 (24hrs)		
			10:05 - 18:04	18:04 - 02:15	02:24 - 10:25					
			80	71	84					
Fine Particulate Matter (PM2.5)	µg/m <sup>3</sup>	USEPA CFR40	44				44	60 (24hrs)		
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-2): 2001; RA2017	Duration				14.3	80 (24hrs)		
			10:05 - 14:04	14:04 - 18:04	18:12 - 22:19	22:19 - 02:15			02:24 - 06:24	06:24 - 10:25
			13.5	16.1	19.2	8.3			11.4	17.3
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-6): 2001; RA2017	Duration				35.5	80 (24hrs)		
			10:05 - 14:04	14:04 - 18:04	18:12 - 22:19	22:19 - 02:15			02:24 - 06:24	06:24 - 10:25
			39.4	42.1	30.7	34.2			26.1	40.5
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	401; Methods of Air Sampling & Analysis	Duration				23.3	400 (24hrs)		
			10:05 - 14:04	14:04 - 18:04	18:12 - 22:19	22:19 - 02:15			02:24 - 06:24	06:24 - 10:25
			26.6	29.4	22.7	23.6			15.5	22.2



# ENVIRONMENTAL LABORATORIES &



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA  
HATIA, RANCHI-834003 (JHARKHAND)  
Email: info@elespl.com ; eles.ranchi@gmail.com  
GST NO:- 20AAECE9713D1Z4 ; 0651-2290103, 9931289451

ENGINEERING SERVICES PVT. LTD.

ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED  
NABL Accredited & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis

CIN: U74999JH2018PTC011125

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2021/0600	Report Release Date : 21.04.2021
ULR No : TC883921000000290P	

### TEST REPORT

NABL Accredited Tests												
PARAMETER	Units	TEST PROTOCOL	RESULTS						24 hourly AVG.	LIMIT		
Lead * (as Pb)	µg/m <sup>3</sup>	IS 5182 (Part-22): 2004; RA2014	0.03						0.03	1 (24hrs)		
Nickel * (as Ni)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	3.0						3.0	20 (Annual)		
Arsenic * (as As)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	2.8						2.8	6 (Annual)		
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	<2.0						<2.0	5 (Annual)		
Benzo-(a)-Pyrene*	ng/m <sup>3</sup>	USEPA 8270 C TO-13A	0.31						0.31	1 (Annual)		
Carbon Monoxide* (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	1.0						1.0	2 (8hrs)		
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Duration							<10.0	100 (8hrs)	
			10:05-11:04	11:04-12:02	12:02-13:10	13:10-14:04	14:04-15:03	15:03-16:02	16:02-17:07			17:07-18:04
			<10.0	<10.0	12.3	13.1	10.5	<10.0	<10.0			<10.0
			Duration							<10.0		
			18:12-19:20	19:20-20:15	20:15-21:12	21:12-22:19	22:19-23:10	23:10-00:14	00:14-01:12			01:12-02:15
			<10.0	<10.0	10.3	<10.0	<10.0	<10.0	<10.0	<10.0		
Duration							<10.0					
02:24-03:20	03:20-04:22	04:22-05:22	05:22-06:24	06:24-07:21	07:21-08:20	08:20-09:23		09:23-10:25				
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0					

\*\*\*\*End of Report\*\*\*\*

Remarks: 1. ( \* ) - Parameters are out sourced to NABL accredited Lab.

*Sandip Bera*  
Authorized Signatory  
**SANDIP BERA**  
SENIOR MANAGER  
ELES PVT. LTD.



# ENVIRONMENTAL LABORATORIES &



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA  
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GST NO:- 20AAECE9713D124 ; 0651-2290103, 9931289451

ENGINEERING SERVICES PVT. LTD.

ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED  
NABL Accredited & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2021/0601	Report Release Date : 21.04.2021
ULR No : TC883921000000291P	

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Jamshedpur Minerals & Chemicals	Sample Ref. No.	: ELES/RNC/2021/AA/252
Address	: B-29(P), VI <sup>th</sup> Phase, A.I.A., Gamharia, Dist.-Saraikela Kharasawan	Location	: South West Corner of the Plant
Plant Status	: Operational	Sampling Date	: 17.03.2021 to 18.03.2021
Period of Analysis	: 19.03.2021 to 21.04.2021	Sample Received Date	: 19.03.2021
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 32	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 53	4	Weather Condition	: Clear
5	Longitude	: 86°06'53.87"E	6	Latitude	: 22°48'00.56"N
7	NABL Group	: Atmospheric Pollution	8	Discipline	: Chemical

### TEST REPORT

NABL Accredited Tests										
PARAMETER	Units	TEST PROTOCOL	RESULTS				24 hourly AVG.	LIMIT		
Particulate Matter (PM10)	µg/m <sup>3</sup>	IS 5182 (Part-23): 2006; RA2017	Duration				75	100 (24hrs)		
			10:14 - 18:14	18:21 - 02:24	02:31 - 10:32					
			78	67	81					
Fine Particulate Matter (PM2.5)	µg/m <sup>3</sup>	USEPA CFR40	39				39	60 (24hrs)		
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-2): 2001; RA2017	Duration				15.6	80 (24hrs)		
			10:14 - 14:09	14:09 - 18:14	18:21 - 22:20	22:20 - 02:24			02:31 - 06:32	06:32 - 10:32
			17.1	14.8	15.2	19.5			10.5	16.6
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-6): 2001; RA2017	Duration				31.5	80 (24hrs)		
			10:14 - 14:09	14:09 - 18:14	18:21 - 22:20	22:20 - 02:24			02:31 - 06:32	06:32 - 10:32
			28.6	33.7	36.1	24.7			27.6	38.4
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	401; Methods of Air Sampling & Analysis	Duration				20.8	400 (24hrs)		
			10:14 - 14:09	14:09 - 18:14	18:21 - 22:20	22:20 - 02:24			02:31 - 06:32	06:32 - 10:32
			18.6	23.8	25.4	16.2			18.1	22.4

JAMSHEDPUR MINERALS & CHEMICALS

"Saving Environment will only save the Future"

Partner



# ENVIRONMENTAL LABORATORIES &



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA  
HATIA, RANCHI-834003 (JHARKHAND)

Email: info@elespl.com ; eles.ranchi@gmail.com

ENGINEERING SERVICES PVT. LTD.

ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED

NABL Accredited & JSPCB Certified Lab. for

Environmental Pollution Monitoring & Analysis

CIN: U74999JH2012PTC011125

GST NO:- 20AAECE9713D124 & : 0651-2290103, 9931289451

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2021/0601	Report Release Date : 21.04.2021
ULR No : TC883921000000291P	

### TEST REPORT

NABL Accredited Tests												
PARAMETER	Units	TEST PROTOCOL	RESULTS						24 hourly AVG.	LIMIT		
Lead * (as Pb)	µg/m <sup>3</sup>	IS 5182 (Part-22): 2004; RA2014	0.03						0.03	1 (24hrs)		
Nickel * (as Ni)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	4.3						4.3	20 (Annual)		
Arsenic * (as As)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	2.2						2.2	6 (Annual)		
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	<2.0						<2.0	5 (Annual)		
Benzo-(a)-Pyrene*	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	<0.20						<0.20	1 (Annual)		
Carbon Monoxide* (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	1.1						1.1	2 (8hrs)		
Ozone (O <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Duration							<10.0	100 (8hrs)	
			10:14-11:12	11:12-12:13	12:13-13:10	13:10-14:09	14:09-15:14	15:14-16:12	16:12-17:16			17:16-18:14
			10.8	<10.0	<10.0	<10.0	<10.0	12.7	<10.0			<10.0
			Duration							<10.0		
			18:21-19:20	19:20-20:18	20:18-21:15	21:15-22:20	22:20-23:19	23:19-00:20	00:20-01:22			01:22-02:24
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0			<10.0
Duration							<10.0					
02:31-03:30	03:30-04:35	04:35-05:27	05:27-06:32	06:32-07:30	07:30-08:31	08:31-09:29		09:29-10:32				
<10.0	<10.0	<10.0	<10.0	<10.0	10.4	<10.0		11.4				

\*\*\*\*End of Report\*\*\*\*

Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab.

**SANDIP BERA**  
SENIOR MANAGER  
ELES PVT. LTD.



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CIN: U74999JH2018PTC011125

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Environmental Pollution Monitoring & Analysis

GST NO:- 20AAECE9713D124 T : 0651-2290103, 9931289451

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2021/0602	Report Release Date : 21.04.2021
ULR No : TC883921000000292P	

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Jamshedpur Minerals & Chemicals	Sample Ref. No.	: ELES/RNC/2021/AA/253
Address	: B-29(P), VI <sup>th</sup> Phase, A.I.A., Gamharia, Dist.-Saraikela Kharasawan	Location	: North East Corner of the Plant
Plant Status	: Operational	Sampling Date	: 17.03.2021 to 18.03.2021
Period of Analysis	: 19.03.2021 to 21.04.2021	Sample Received Date	: 19.03.2021
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 32	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 53	4	Weather Condition	: Clear
5	Longitude	: 86°06'56.17"E	6	Latitude	: 22°48'00.59"N
7	NABL Group	: Atmospheric Pollution	8	Discipline	: Chemical

### TEST REPORT

NABL Accredited Tests										
PARAMETER	Units	TEST PROTOCOL	RESULTS				24 hourly AVG.	LIMIT		
Particulate Matter (PM10)	µg/m <sup>3</sup>	IS 5182 (Part-23): 2006; RA2017	Duration				81	100 (24hrs)		
			10:20 - 18:22	18:30 - 02:31	02:40 - 10:40					
			83	74	85					
Fine Particulate Matter (PM2.5)	µg/m <sup>3</sup>	USEPA CFR40	50				50	60 (24hrs)		
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-2): 2001; RA2017	Duration				11.9	80 (24hrs)		
			10:20 - 14:21	14:21 - 18:22	18:30 - 22:25	22:25 - 02:31			02:40 - 06:32	06:32 - 10:40
			11.6	16.2	15.5	6.3			9.5	12.1
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-6): 2001; RA2017	Duration				34.4	80 (24hrs)		
			10:20 - 14:21	14:21 - 18:22	18:30 - 22:25	22:25 - 02:31			02:40 - 06:32	06:32 - 10:40
			36.6	40.4	35.6	29.4			24.5	39.5
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	401: Methods of Air Sampling & Analysis	Duration				24.1	400 (24hrs)		
			10:20 - 14:21	14:21 - 18:22	18:30 - 22:25	22:25 - 02:31			02:40 - 06:32	06:32 - 10:40
			22.6	27.4	25.2	21.2			19.2	28.7



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## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2021/0602	Report Release Date : 21.04.2021
ULR No : TC883921000000292P	

### TEST REPORT

NABL Accredited Tests												
PARAMETER	Units	TEST PROTOCOL	RESULTS						24 hourly AVG.	LIMIT		
Lead * (as Pb)	µg/m <sup>3</sup>	IS 5182 (Part-22): 2004; RA2014	0.04						0.04	1 (24hrs)		
Nickel * (as Ni)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	5.2						5.2	20 (Annual)		
Arsenic * (as As)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	3.4						3.4	6 (Annual)		
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	<2.0						<2.0	5 (Annual)		
Benzo(a)-Pyrene*	ng/m <sup>3</sup>	USEPA 8270 C TO-13A	0.37						0.37	1 (Annual)		
Carbon Monoxide* (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	<1.0						<1.0	2 (8hrs)		
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Duration						<10.0	100 (8hrs)		
			10:20-11:19	11:19-12:22	12:22-13:24	13:24-14:21	14:21-15:24	15:24-16:25			16:25-17:28	17:28-18:22
			11.4	<10.0	<10.0	12.3	<10.0	<10.0			<10.0	<10.0
			Duration						<10.0			
			18:30-19:31	19:31-20:29	20:29-21:20	21:20-22:25	22:25-23:27	23:27-00:30			00:30-01:32	01:32-02:31
			<10.0	11.2	10.8	<10.0	<10.0	<10.0			<10.0	<10.0
			Duration						<10.0			
			02:40-03:42	03:42-04:38	04:38-05:35	05:35-06:32	06:32-07:37	07:37-08:31			08:31-09:30	09:30-10:40
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0			<10.0	<10.0

\*\*\*\*End of Report\*\*\*\*

Remarks: 1. ( \* ) - Parameters are out sourced to NABL accredited Lab.

Authorised Signatory  
**SANDIP BERA**  
SENIOR MANAGER  
ELES PVT. LTD.

Partner



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CIN: U74999JH2018PTC011125

GST NO:- 20AAECE9713D124 / : 0651-2290103, 9931289451

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2021/0603	Report Release Date : 21.04.2021
ULR No : TC883921000000293P	

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name : Jamshedpur Minerals & Chemicals	Sample Ref. No. : ELES/RNC/2021/AA/254	Location : Administration Building	Sampling Date : 17.03.2021 to 18.03.2021
Address : B-29(P), VI <sup>th</sup> Phase, A.I.A., Gamharia, Dist.-Saraikela Kharasawan	Sample Received Date : 19.03.2021	Type of Sample : Ambient Air	Sampling Procedure : ELES/DOC/SMPL/02
Plant Status : Operational	Sample Drawn By : ELES Pvt. Ltd.	Sample Condition : Sealed & Preserved	
Period of Analysis : 19.03.2021 to 21.04.2021			

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 32	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 53	4	Weather Condition	: Clear
5	Longitude	: 86°06'53.87"E	6	Latitude	: 22°48'00.56"N
7	NABL Group	: Atmospheric Pollution	8	Discipline	: Chemical

### TEST REPORT

NABL Accredited Tests										
PARAMETER	Units	TEST PROTOCOL	RESULTS				24 hourly AVG.	LIMIT		
Particulate Matter (PM10)	µg/m <sup>3</sup>	IS 5182 (Part-23): 2006; RA2017	Duration				82	100 (24hrs)		
			10:27 - 18:27	18:34 - 02:34	02:40 - 10:45					
			86	72	89					
Fine Particulate Matter (PM2.5)	µg/m <sup>3</sup>	USEPA CFR40	56				56	60 (24hrs)		
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-2): 2001; RA2017	Duration				12.3	80 (24hrs)		
			10:27 - 14:22	14:22 - 18:27	18:34 - 22:31	22:31 - 02:34			02:40 - 06:41	06:41 - 10:45
			15.7	12.5	16.6	9.5			7.7	11.8
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-6): 2001; RA2017	Duration				29.6	80 (24hrs)		
			10:27 - 14:22	14:22 - 18:27	18:34 - 22:31	22:31 - 02:34			02:40 - 06:41	06:41 - 10:45
			32.6	37.1	23.6	28.2			24.7	31.4
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	401: Methods of Air Sampling & Analysis	Duration				19.9	400 (24hrs)		
			10:27 - 14:22	14:22 - 18:27	18:34 - 22:31	22:31 - 02:34			02:40 - 06:41	06:41 - 10:45
			19.5	26.3	15.2	17.5			19.2	21.5





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ULR No. : TC883921000000293P	

### TEST REPORT

NABL Accredited Tests												
PARAMETER	Units	TEST PROTOCOL	RESULTS				24 hourly AVG.	LIMIT				
Lead * (as Pb)	µg/m <sup>3</sup>	IS 5182 (Part-22): 2004; RA2014	0.02				0.02	1 (24hrs)				
Nickel * (as Ni)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	<2.0				<2.0	20 (Annual)				
Arsenic * (as As)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	2.3				2.3	6 (Annual)				
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	<2.0				<2.0	5 (Annual)				
Benzo-(a)-Pyrene*	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	<0.20				<0.20	1 (Annual)				
Carbon Monoxide* (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	<1.0				<1.0	2 (8hrs)				
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Duration						<10.0	100 (8hrs)		
			10:27-11:20	11:20-12:25	12:25-13:28	13:28-14:22	14:22-15:27	15:27-16:23			16:23-17:22	17:22-18:27
			10.8	13.2	<10.0	11.4	<10.0	<10.0			<10.0	<10.0
			Duration						<10.0			
			18:34-19:30	19:30-20:32	20:32-21:33	21:33-22:31	22:31-23:34	23:34-00:32			00:32-01:34	01:34-02:34
			<10.0	<10.0	10.8	<10.0	<10.0	<10.0	<10.0		<10.0	
Duration						<10.0						
02:40-03:41	03:41-04:42	04:42-05:44	05:44-06:41	06:41-07:45	07:45-08:44		08:44-09:42	09:42-10:45				
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0					



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CIN: U74999JH2012PTC011125

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING


Test Report No. : ELES/RNC/2021/0603	Report Release Date : 21.04.2021
ULR No. : TC883921000000293P	

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS	24 hourly AVG.	LIMIT
Carbon Monoxide (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	<1.0	<1.0	2 (8hrs)

\*\*\*\*End of Report\*\*\*\*

Remarks: 1. ( \* ) - Parameters are out sourced to NABL accredited Lab.

  
 Authorised Signatory  
**SANDIP BERA**  
 SENIOR MANAGER  
 ELES PVT. LTD.



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## TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

Test Report No.	: ELES/RNC/2021/0604	Report Release Date	: 21.04.2021
ULR No.	: TC883921000000294P		
<b>CUSTOMER DETAILS</b>		<b>SAMPLE DETAILS</b>	
Customer Name	: Jamshedpur Minerals & Chemicals	Sample Ref. No.	: ELES/RNC/2021/SM/255
Address	: B-29(P), VI <sup>th</sup> Phase, A.I.A., Gamharia, Dist.-Saraikela Kharasawan	Location	: Bag Filter Stack
Plant Status	: Operational	Sampling Date	: 17.03.2021
Period of Analysis	: 19.03.2021 to 24.03.2021	Sample Received Date	: 19.03.2021
		Type of Sample	: Flue Gas
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

### GENERAL INFORMATION

1	Particular of the Plant	: Ferro Alloys Plant
2	Emission Due to	: Process Activity
3	Stack Connected to	: Reactor Vessels
4	Material of Construction of Duct	: M.S
5	Stack Height from Ground Level (m)	: 30.0
6	Height of Sampling Port from Ground Level (m)	: 15.0
7	Inner Diameter of Stack at Sampling Point (m)	: 0.7
8	Shape of the Stack	: Circular
9	Working Load of the Stack	: 1 MT/Cycle
10	Pollution Control System	: Bag Filter
11	Ladder & Platform	: Permanent

### FUEL CHARACTERISTICS DETAILS

1	Type of Fuel Used	: Aluminium
2	Fuel Consumption	: 200 Kg/Cycle
3	Calorific Value of Fuel (Kcal/Kg)	: --

### TEST REPORT

PARAMETER	UNITS	TEST PROTOCOL	RESULTS
Particulate Matter (PM)	mg/Nm <sup>3</sup>	IS 11255(Part 1):1985; RA 2014	56
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	USEPA 2008 (Method-7E)	32.5
Flue Gas Temperature	°C	IS 11255 (Part 3): 2008; RA 2018	56
Barometric Pressure	mmHg	IS 11255 (Part 3): 2008; RA 2018	750
Velocity of Flue Gas	m/sec	IS 11255 (Part 3): 2008; RA 2018	7.35
Quantity of Gas Flow	Nm <sup>3</sup> /hr	IS 11255 (Part 3): 2008; RA 2018	8060.51



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## TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

Test Report No. : ELES/RNC/2021/0604	Report Release Date : 21.04.2021		
ULR No. : TC883921000000294P			
PARAMETER	UNITS	TEST PROTOCOL	RESULTS
Sulphur Di-Oxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	USEPA 6A	16.7

\*\*\*\*End of Report\*\*\*\*

  
Authorized Signatory  
**SANDIP BERÁ**  
SENIOR MANAGER  
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## TEST REPORT OF NOISE QUALITY MONITORING

Test Report No. : ELES/RNC/2021/0605	Report Release Date : 21.04.2021		
ULR No. : TC883921000000295F			
CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name : Jamshedpur Minerals & Chemicals	Address : B-29(P), VI <sup>th</sup> Phase, A.I.A., Gamharia, Dist.-Saraikela Kharasawan	Sampling Date : 17.03.2021 to 18.03.2021	Sample Received Date : 19.03.2021
Plant Status : Operational		Type of Sample : Ambient Noise	Sampling Procedure : ELES/DOC/SMPL/03
		Sample Drawn By : ELES Pvt. Ltd.	Period of Analysis : 19.03.2021 to 24.03.2021

### METEOROLOGICAL INFORMATION

1	Average Temperature (°C) : 31	2	Barometric Pressure (mmHg) : 750
3	Relative Humidity (%) : 52	4	Weather Condition : Clear

### TEST REPORT

LOCATION	Units	TEST PROTOCOL	RESULTS			LIMITS
			Time	L <sub>Max</sub>	L <sub>Min</sub>	
Near Main Gate	dB(A)	IS 9989:1981, RA 2001	Time	L <sub>Max</sub>	L <sub>Min</sub>	L <sub>eq</sub>
Sample ID ELES/RNC/2021/AN/256			Day Time	70.1	49.2	62
Latitude:22°48'000.80"N Longitude :86°06'54.15"E			Night Time	42.7	39.4	41
South East Corner of the Plant	dB(A)	IS 9989:1981, RA 2001	Time	L <sub>Max</sub>	L <sub>Min</sub>	L <sub>eq</sub>
Sample ID ELES/RNC/2021/AN/257			Day Time	67.3	45.6	61
Latitude:22°48'00.56"N Longitude :86°06'53.87"E			Night Time	42.6	38.1	40
North East Corner of the Plant	dB(A)	IS 9989:1981, RA 2001	Time	L <sub>Max</sub>	L <sub>Min</sub>	L <sub>eq</sub>
Sample ID ELES/RNC/2021/AN/258			Day Time	69.8	40.7	63
Latitude:22°48'00.59"N Longitude :86°06'56.17"E			Night Time	43.6	36.2	41

Page 1 of 2

JAMSHEDPUR MINERALS & CHEMICALS

"Saving Environment will only save the Future"

Partner



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## TEST REPORT OF NOISE QUALITY MONITORING

Test Report No.	: ELES/RNC/2021/0605	Report Release Date	: 21.04.2021
ULR No.	: TC883921000000295F		
<b>CUSTOMER DETAILS</b>		<b>SAMPLE DETAILS</b>	
Customer Name	: Jamshedpur Minerals & Chemicals	Sampling Date	: 17.03.2021 to 18.03.2021
Address	: B-29(P), VI <sup>th</sup> Phase, A.I.A, Gamharia, Dist.-Saraikela Kharasawan	Sample Received Date	: 19.03.2021
		Type of Sample	: Ambient Noise
		Sampling Procedure	: ELES/DOC/SMPL/03
		Sample Drawn By	: ELES Pvt. Ltd.
Plant Status	: Operational	Period of Analysis	: 19.03.2021 to 24.03.2021

### METEOROLOGICAL INFORMATION

1	Average Temperature (°C)	: 31	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 52	4	Weather Condition	: Clear

### TEST REPORT

LOCATION	Units	TEST PROTOCOL	RESULTS			LIMITS	
			Time	L <sub>Max</sub>	L <sub>Min</sub>	L <sub>eq</sub>	L <sub>eq</sub>
Near Administration Building	dB(A)	IS 9989:1981, RA 2001	Day Time	72.2	56.7	66	75 dB(A) Day Time & 70 dB(A) Night Time
Sample ID ELES/RNC/2021/AN/258(A)			Night Time	44.3	39.2	42	
Latitude: 22°48'00.56"N							
Longitude: 86°06'53.87"E							

\*\*\*\*End of Report\*\*\*\*

*Sandip Bera*  
 Authorised Signatory  
**SANDIP BERA**  
 SENIOR MANAGER  
 ELES PVT. LTD.