



JAMSHEDPUR MINERALS & CHEMICALS

Manufacturer of Ferro Alloys

J/C

17th May 2019

The Regional Officer,
Jharkhand State Pollution Control Board,
Adityapur, Jamshedpur.

Subject : Environmental Statement for the year ending 31.03.2019

Reference : Consent to Operate No. PC/JSR/AIR/J-76/14/395641/B-195 dtd. 19.01.2016.
Validity Period of CTO upto 30.09.2020.

We are pleased to enclose herewith the followings :

1. Environmental Statement for the year ending 31.03.2019
2. Ambient Air & Noise Test Report, *Stack Emission Report*.

Kindly acknowledge the receipt and oblige.

Thanks and Regards,

Sincerely yours

For Jamshedpur Minerals & Chemicals

JAMSHEDPUR MINERALS & CHEMICALS

Shiv Kumar Agarwal

(Shiv Kumar Agarwal PARTNER
Managing Partner

Encl : Environmental Statement
Ambient Air and Noise Test Report



FORM-V

ENVIRONMENTAL STATEMENT REPORT FOR THE YEAR ENDING 31st MARCH 2019

PART-A

- (i) Name and address of the occupier of the industry / operation or process. : Jamshedpur Minerals & Chemicals
B-29(P), VIth Phase, Adityapur Industrial Area, P.O - Gamharia- 832108
- Industry Category : SSI Unit
- Primary (SIC code) : -
- Secondary (SIC Code) : -
- (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 Statement submitted : 27 June 2018 and revised on 11.01.2019

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	During the current financial year
FERRO MANGANESE	Nil	Nil
FERRO MOLYBDENUM	Nil	Nil
FERRO TITANIUM	Nil	Nil

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[Signature]
PARTNER

(B) Raw Material Consumption :

Name of Raw Material	Consumption of raw material per unit of output:	
	During the previous financial year 2017-18 Total Production: 1169.50 Tons	During the current financial year 2018-19 Total Production: 969.971 Tons
ALUMINIUM SCRAP	341.853 M.T	394.054 M.T.
ALUMINIUM POWDER	2.550 M.T	0.650 M.T.
FERRO SILICON POWDER	18.162 M.T	0.00 M.T.
SILICO MANGANESE	584.530 M.T	488.554 M.T.
MANGANESE ORE	1284.105 M.T	1255.413 M.T.
M.S SCRAP	117.108 M.T	118.396 M.T.
LIME	438.831 M.T	162.454 M.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	No discharge of effluent.	NA	NA
(B) Air	Within norms as per the monitoring reports attached.		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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PART -E
SOLID WASTES

Solid waste	Total Quality (t/year)	
	During the previous Financial year 2017-18	During the Current Financial year 2018-19
a) From process Slag (FN+LC)	1366.995 M.T	1219.143 M.T.
(b) From pollution Control facility	RECYCLED	RECYCLED
Quantities recycled Or reutilized	1220.559 M.T	395.350 M.T.
. Sold . Disposed	149.155 M.T	303.000 M.T.
	NIL	NIL

PART- F

Characteristics of wastes and Indicative Disposal practice adopted
The slag generated from Low Carbon Ferro Manganese is used in lining of vessel for production of Low Carbon Ferro manganese.

PART- G

Impact of pollution control measures on conservation of natural resources and consequently on the cost of production.
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.

PART- H

Additional investment proposal for environment protection including abatement of pollution
Plantation, RWH, Regular maintenance of APCD & water sprinkling is being continued for abatement of Pollution. Estimated annual expenditure Rs. 5.00 lakhs

PART- I

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

AMSHEDPUR MINERALS & CHEMICALS

[Handwritten Signature]

PARTNER
Signature of Applicant



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ULR NO - TC510919000000309F

Format No. : EC/TRT/42/FM/01

TEST REPORT

<p>Report Release Date : 18.03.2019 Test Report No : EC/TR/42/03043 Type of Sample : Dust & Gaseous Emission Sample Collected by : Mr. Binod Singh & Team Sample Details : Stack Emission Name & Address : Jamshedpur Minerals & Chemicals B-29(P), VIth Phase A.I.A, Gamharia Dist - Saraikela Kharsawan Jharkhand</p>	<p>Sample Ref. No.(ARF) : EC/ARF/29/190321 Source of Sample : Ferro Alloys Plant Sampling Date : 06.03.2019 Period of Analysis : 09.03.2019 Sampling Location : Bag Filter Stack Sample Condition : Preserved & Sealed Sample Stamped as : TH - 270 Sample Drawn By : ECO CARE Sampling Plan & Procedure : EC/SOP/03/01 Remarks : ---- Deviation if any : None</p>
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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	: M.S.
5	Stack Height from G.L.	: 30.0 m
6	Height of Sampling Port from G.L.	: 15.0 m
7	Height of Sampling Port from L.D.Z.	: 3.7 m
8	Dimension of Stack at Sampling Port	: 0.70 m
9	Shape of the Stack	: Circular Ø
10	Working Load	: 1 MT/Cycle (1 Cycle = 48 hrs)

FUEL CHARACTERISTIC REPORT

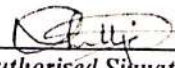
1	Source of Energy	: Aluminium
2	Energy Consumption	: 200 Kg/Cycle (1 Cycle = 48 hrs)
3	Calorific Value (K-Cal/Kg)	: ----

RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

		Method
1	Flue Gas Temperature	51 °C
2	Barometric Pressure	749 mm Hg
3	Velocity of Flue Gas	7.21 m/sec
4	Flue Gas Quantity	9055 NM ³ /hr
5	Concentration of Particulate Matter	69.35 mg/NM ³
6	Concentration of Carbon Dioxide %	2.4
7	Concentration of SO ₂	20.72 mg/NM ³
8	Concentration of NO _x	22.11 mg/NM ³

Note:- Latitude - 22°48'0.36274"(N), Longitude - 86°6'56.25832"(E)

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


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 Dy Technical Manager



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ULR NO - TC510919000000310P

Format No. : EC/TRT/42/FM/04

TEST REPORT

Report Release Date : 18.03.2019	Sample Ref. No (ARF) : EC/ARF/29/190321
Test Report No : EC/TR/42/03044	Source of Sample : Ferro Alloys Plant
Type of Sample : Suspended Dust & Gases	Sampling Date : 06.03.19 to 07.03.19
Sample Collection by : Mr. Binod Singh & Team	Period of Analysis : 09.03.19 to 16.03.19
Sample Details : Ambient Air	Sample Condition : Sealed & Preserved
Name & Address : Jamshedpur Minerals & Chemicals B-29(P), VI th Phase A.I.A, Gambaria Dist - Saraikela Kharsawan Jharkhand	Remarks : --- Sample Drawn By : ECO CARE Sampling Plan & Procedure : EC/SOP/03/01 Deviation if any : None

Sampling Location: Near Main Gate

SL NO	TESTS	PROTOCOL	Limit as per NAAQS	RESULT
1	Particulate Matter PM ₁₀ µg/m ³	IS 5182:Part 23:2006	100	78.22
2	Particulate Matter PM _{2.5} µg/m ³	EPA CFR40(pt50), Appendix I	60	43.39
3	Sulphur Dioxide (SO ₂), µg/m ³	IS 5182:Part 2:2001	80	25.81
4	Nitrogen Dioxide (NO _x), µg/m ³	IS 5182:Part 6:2006	80	28.90
5	Lead (Pb), µg/m ³	AAS METHOD AFTER SAMPLING	1.0	0.28
6	Arsenic (As), ng/m ³	AAS METHOD AFTER SAMPLING	6	< 0.50
7	Nickel (Ni), ng/m ³	AAS METHOD AFTER SAMPLING	20	5.67
8	Carbon Monoxide (CO), mg/m ³	NDIR SPECTROSCOPY	2	0.131
9	Ammonia (NH ₃), µg/m ³	INDO PHENOL BLUE METHOD	400	51.70
10	Benzo(Alpha) Pyrene, ng/m ³	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	1	0.124
11	Ozone (O ₃), µg/m ³	CHEMICAL METHOD	180	38.61
12	Benzene (C ₆ H ₆), µg/m ³	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	5	0.119

*Note:- Latitude-22°48'0.80075"(N)Longitude-86°6'54.15383"(E)

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ULR NO - TC51091900000311P

Format No. : EC/TRT/42/FM/04

TEST REPORT

Report Release Date : 18.03.2019	Sample Ref. NO(ARF) : EC/ARF/29/190321
Test Report No : EC/TR/42/03045	Source of Sample : Ferro Alloys Plant
Type of Sample : Suspended Dust & Gases	Sampling Date : 06.03.19 to 07.03.19
Sample Collection by : Mr. Binod Singh & Team	Period of Analysis : 09.03.19 to 16.03.19
Sample Details : Ambient Air	Sample Condition : Sealed & Preserved
Name & Address : Jamshedpur Minerals & Chemicals B-29(P), VI th Phase A.I.A, Gamharia Dist - Saraikela Kharsawan Jharkhand	Remarks : ---
	Sample Drawn By : ECO CARE
	Sampling Plan & Procedure : EC/SOP/03/01
	Deviation if any : None

Sampling Location: Near Administrative Building

SL NO	TESTS	PROTOCOL	Limit as per NAAQS	RESULT
1	Particulate Matter PM ₁₀ µg/m ³	IS 5182:Part 23:2006	100	66.81
2	Particulate Matter PM _{2.5} µg/m ³	EPA CFR40(pt50), Appendix I	60	32.37
3	Sulphur Dioxide (SO ₂), µg/m ³	IS 5182:Part 2:2001	80	19.71
4	Nitrogen Dioxide (NO _x), µg/m ³	IS 5182:Part 6:2006	80	22.92
5	Lead (Pb), µg/m ³	AAS METHOD AFTER SAMPLING	1.0	0.25
6	Arsenic (As), ng/m ³	AAS METHOD AFTER SAMPLING	6	< 0.25
7	Nickel (Ni), ng/m ³	AAS METHOD AFTER SAMPLING	20	5.82
8	Carbon Monoxide (CO), mg/m ³	NDIR SPECTROSCOPY	2	0.142
9	Ammonia (NH ₃), µg/m ³	INDO PHENOL BLUE METHOD	400	44.63
10	Benzo(Alpha) Pyrene, ng/m ³	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	1	0.128
11	Ozone (O ₃), µg/m ³	CHEMICAL METHOD	180	31.14
12	Benzene (C ₆ H ₆), µg/m ³	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	5	0.107

*Note:- Latitude-22°48'0.56689"(N)Longitude-86°6'53.8709"(E)

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ULR NO - TC510919000000313P

Format No. : EC/TR/42/FM/04

TEST REPORT

Report Release Date	: 18.03.2019	Sample Ref. No (ARF)	: EC/ARF/29/190321
Test Report No	: EC/TR/42/03047	Source of Sample	: Ferro Alloys Plant
Type of Sample	: Suspended Dust & Gases	Sampling Date	: 07.03.19 to 08.03.19
Sample Collection by	: Mr. Binod Singh & Team	Period of Analysis	: 09.03.19 to 16.03.19
Sample Details	: Ambient Air	Sample Condition	: Sealed & Preserved
Name & Address	: Jamshedpur Minerals & Chemicals B-29(P), VI th Phase A.I.A, Gamharia Dist - Saraikela Kharsawan Jharkhand	Remarks	: ---
		Sample Drawn By	: ECO CARE
		Sampling Plan & Procedure	: EC/SOP/03/01
		Deviation if any	: None

Sampling Location: South East Corner of the Plant

SL NO	TESTS	PROTOCOL	Limit as per NAAQS	RESULT
1	Particulate Matter PM ₁₀ , µg/m ³	IS 5182:Part 23:2006	100	73.92
2	Particulate Matter PM _{2.5} , µg/m ³	EPA CFR40(pt50), Appendix I	60	39.29
3	Sulphur Dioxide (SO ₂), µg/m ³	IS 5182:Part 2:2001	80	28.86
4	Nitrogen Dioxide (NO _x), µg/m ³	IS 5182:Part 6:2006	80	33.04
5	Lead (Pb), µg/m ³	AAS METHOD AFTER SAMPLING	1.0	0.37
6	Arsenic (As), ng/m ³	AAS METHOD AFTER SAMPLING	6	< 0.50
7	Nickel (Ni), ng/m ³	AAS METHOD AFTER SAMPLING	20	6.58
8	Carbon Monoxide (CO), mg/m ³	NDIR SPECTROSCOPY	2	0.133
9	Ammonia (NH ₃), µg/m ³	INDO PHENOL BLUE METHOD	400	47.46
10	Benzo(Alpha) Pyrene, ng/m ³	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	1	0.121
11	Ozone (O ₃), µg/m ³	CHEMICAL METHOD	180	40.40
12	Benzene (C ₆ H ₆), µg/m ³	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	5	0.126

*Note:- Latitude-22°48'0.594"(N)Longitude-86°6'56.13217"(E)

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ULR NO - TC510919000000312P

Format No. : EC/TRT/42/FM/04

TEST REPORT

Report Release Date : 18.03.2019	Sample Ref. No (ARF) : EC/ARF/29/190321
Test Report No : EC/TR/42/03046	Source of Sample : Ferro Alloys Plant
Type of Sample : Suspended Dust & Gases	Sampling Date : 07.03.19 to 08.03.19
Sample Collection by : Mr. Binod Singh & Team	Period of Analysis : 09.03.19 to 16.03.19
Sample Details : Ambient Air	Sample Condition : Sealed & Preserved
Name & Address : Jamshedpur Minerals & Chemicals B-29(P), VI th Phase A.I.A, Gamharia Dist - Saraikela Kharsawan Jharkhand	Remarks : --- Sample Drawn By : ECO CARE Sampling Plan & Procedure : EC/SOP/03/01 Deviation if any : None

Sampling Location: North East Corner of the Plant

SL NO	TESTS	PROTOCOL	Limit as per NAAQS	RESULT
1	Particulate Matter PM ₁₀ µg/m ³	IS 5182:Part 23:2006	100	71.62
2	Particulate Matter PM _{2.5} µg/m ³	EPA CFR40(pt50), Appendix 1	60	35.13
3	Sulphur Dioxide (SO ₂), µg/m ³	IS 5182:Part 2:2001	80	22.76
4	Nitrogen Dioxide (NO _x), µg/m ³	IS 5182:Part 6:2006	80	27.29
5	Lead (Pb), µg/m ³	AAS METHOD AFTER SAMPLING	1.0	0.31
6	Arsenic (As), ng/m ³	AAS METHOD AFTER SAMPLING	6	< 0.50
7	Nickel (Ni), ng/m ³	AAS METHOD AFTER SAMPLING	20	6.12
8	Carbon Monoxide (CO), mg/m ³	NDIR SPECTROSCOPY	2	0.138
9	Ammonia (NH ₃), µg/m ³	INDO PHENOL BLUE METHOD	400	41.81
10	Benzo(Alpha) Pyrene, ng/m ³	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	1	0.129
11	Ozone (O ₃), µg/m ³	CHEMICAL METHOD	180	27.55
12	Benzene (C ₆ H ₆), µg/m ³	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	5	0.114

*Note:- Latitude-22°48'1.40054"(N)Longitude-86°6'55.92071"(E)

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ULR NO - TC510919000000314F

Format No. : EC/TRT/42/FM/07

TEST REPORT

Report Release Date	: 18.03.2019	Sample Ref. No (ARF)	: EC/ARF/29/190321
Test Report No	: EC/TR/42/09048	Source of Sample	: Ferro Alloys Plant
Type of Sample	: Noise	Sampling Date	: 06.03.19 to 07.03.19
Sample Collected by	: Mr. Binod Singh & Team	Period of Analysis	: ----
Sample Details	: Ambient Noise	Sample Condition	: ----
Name & Address	: Jamshedpur Minerals & Chemicals B-29(P), VI th Phase A.I.A, Gamharia Dist - Saraikela Kharsawan Jharkhand	Remarks	: ----
		Sample Drawn By	: ECO CARE
		Sampling Plan & Procedure	: EC/SOP/03/01
		Deviation if any	: None

METEOROLOGICAL INFORMATION

1	Average Temperature (°C)	22.6
2	Average Relative Humidity (%)	63.0
3	Barometric Pressure (mm of Hg)	749
4	Weather Condition	Clear Day

AMBIENT NOISE QUALITY REPORT

Sampling Location		NOISE LEVEL		
		Minimum	Leq - Mean	Maximum
1. Near Main Gate Lat-22°48'0.80075"(N), Long-86°6'54.15383" (E)	Day	61.50 dB(A)	69.35 dB(A)	74.60 dB(A)
	Night	52.70 dB(A)	61.11 dB(A)	66.30 dB(A)
2. South West Corner of the Plant Lat-22°48'0.56689" (N), Long-86°6'53.8709" (E)	Day	53.20 dB(A)	63.74 dB(A)	69.00 dB(A)
	Night	49.50 dB(A)	59.52 dB(A)	65.10 dB(A)
3. North East Corner at the Plant Lat-22°48'0.594" (N), Long-86°6'56.17217" (E)	Day	46.20 dB(A)	56.23 dB(A)	61.70 dB(A)
	Night	42.30 dB(A)	51.75 dB(A)	56.90 dB(A)

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