

An ISO 9001-2008 & OHSAS 18001:2007 Certified Company, Empanelled with OCCL, ORSAC and SPCB of Govt. of Odisha Accredited by NABET, QCI for EIA Studies as 'A' Category Consultant Organization. Empanelled with PCCF(Wildlife) &CWLW,Odisha Enlisted in Construction Industry Development Council (CIDC) established by the Planning Commission (Govt. of India) MoEF&CC, Govt. of India, Recognised Environment Laboratory under Environment (Protection) Act, 1986.NABL Accredited Laboratory

Reference No : CEMC/ASL/NOV-A/21

Name of Company : Ardent Steel Ltd.

Sample Description : Ambient Air Monitoring.

Date of Monitoring: 10.11.2021Date of Receiving: 11.11.2021Date of Analysis: 11.11.2021

Sample Collected by : Mr. B.K.Samantaray.

AMBIENT AIR QUALITY TEST REPORT (24 HOURLY AVERAGE)

Date	$PM_{10} \ (\mu g/m^3)$	PM _{2.5} (μg/m ³)	$SO_2 \ (\mu g/m^3)$	NOx (μg/m ³)	CO (mg/m³)	$\frac{NH_3}{(\mu g/m^3)}$	$O_3 \ (\mu g/m^3)$	Pb (μg/m ³)	Ni (ng/m³)	As (ng/m ³)	Benzene (µg/m³)	BaP (ng/m³)
At the boundary near the water harvesting pond (East Direction)	67.6	34.8	10.7	15.4	0.47	<20	<10	<0.06	<0.6	<0.44	<1	<1
At the Boundary near ESP (South Direction)	63.2	32.1	10.4	14.2	0.39	<20	<10	<0.06	<0.6	<0.44	<1	<1
At the Boundary near Coal Fines Stock yard (North Direction)	66.8	33.6	10.5	14.6	0.46	<20	<10	<0.06	<0.6	<0.44	<1	<1
Near Ball mill,Iron ore fines stock yard	64.6	32.4	10.2	14.0	0.44	<20	<10	<0.06	<0.6	< 0.44	<1	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
	IS: 5182 (Part-23)	IS: 5182 (Part- 24,2019)			IS: 5182 (Part-10)	IS: 5182 (Part- 25,2019)	IS: 5182 (Part-9)	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS		IS: 5182 (Part-12)

END OF REPORT

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Notes:

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Reference No : CEMC/ASL/ NOV -F/21

Name of Company : **Ardent Steel Ltd.**Sample Description : **Fugitive Emission**

Date of Monitoring : 10.11.2021
Date of Receiving : 11.11.2021
Date of Analysis : 11.11.2021

Sample Collected by : Mr. B.K.Samantaray.

FUGITIVE EMISSION TEST REPORT

Sl.		RESU	RESULT				
No.	LOCATION	RSPM (μg/m³)	SPM (μg/m ³)				
1	Proportioning System (Ash & Coke Fines Bunker)	344	1118				
2	Raw Material Transfer point of Mixture (Mixture Building)	284	1075				
3	Ball Mill (Cool Grinding)	306	1126				
4	Ball Mill (Flux & Coke Grinding)	264	1081				
5	Finished Product Transfer points and plant de-dusting system	255	1064				
6	Travelling Grate & Rotary Kiln	283	1048				
	MoEF Standard for SPM						

^{*} The standard is applicable at 10 m distance from the source

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Reference No : CEMC/ASL/NOV -N/21

Name of Company : Ardent Steel Ltd.

Sample Description : Noise Monitoring Report

Date of Monitoring : 10.11.2021

Sample Collected by : Mr. B.K.Samantaray.

NOISE LEVEL STUDY REPORT

Sl. No.	Location	Noise Level In Day Time dB(A)	Noise Level In Night Time dB(A)
01	Ball Mill (Cool Grinding)	71.2	66.6
02	Raw Material Transfer point of Mixture (Mixture Building)	69.8	65.2

NATIONAL STANDARD NOISE LEVEL

Area	Category of Area/Zone	Permissible Limit in dB (A)		
Code		Day Time	Night Time	
A	Industrial Area	75	70	
В	Commercial Area	65	55	
С	Residential Area	55	45	
D	Silence Zone	50	40	

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Reference No : CEMC/ASL/ NOV-St/21

Name of Company : Ardent Steel Ltd.
Sample Description : Stack Monitoring

Date of Monitoring : 10.11.2021
Date of Receiving : 11.11.2021
Date of Analysis : 11.11.2021

Sample Collected by : Mr. B.K.Samantaray.

Stack Height : 30m

STACK EMISSION REPORT

Sl. No.	Location of Sampling	Flue Gas	Concentration of Particulate Matter (PM) in mg/Nm ³		
	1 0	Temp. in K	Result		
01	ESP	399	38.4		

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Reference No : CEMC/ASL/ NOV -DW/21

Name of Company : **Ardent Steel Ltd.**Sample Description : **Drinking Water**

Date of Monitoring : 10.11.2021
Date of Receiving : 11.11.2021
Date of Analysis : 11.11.2021

Sample Collected by : Mr. B.K.Samantaray.
Sample Location : Canteen (RO Water)

GROUND WATER TEST REPORT

Sl. No	Parameter	Unit	Desired Limit of drinking water (BIS:10500:2012)	Permissible Limit of drinking water (BIS:10500:2012)	Result
1	Colour	Hazen	5	15	<5
2	Odour	-	Agreeable	Agreeable	AL
3	Taste	-	Agreeable	-	AL
4	Turbidity	NTU	1	5	<1
5	pH Value @ 25°C	-	6.5-8.5	No Relaxation	6.52
6	Total Dissolved Solid	mg/l	500	2000	68
7	Alkalinity as CaCO ₃	mg/l	200	600	40
8	Total Hardness as CaCO ₃	mg/l	200	600	28
9	Iron as Fe	mg/l	0.3	No Relaxation	0.08
10	Nitrate as NO ₃ -N	mg/l	45	No Relaxation	0.31
11	Sulphate as SO ₄	mg/l	200	400	2.8
12	Fluoride as F	mg/l	1.0	1.5	< 0.05
13	Calcium as Ca	mg/l	75	200	7.21
14	Chloride as Cl	mg/l	250	1000	6.9

N.B: AL – Agreeable *END OF REPORT*

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Reference No : CEMC/ASL/ NOV -GW/21

Name of Company : Ardent Steel Ltd.
Sample Description : Ground Water
Date of Monitoring : 10.11.2021

Date of Monitoring : 10.11.2021
Date of Receiving : 11.11.2021
Date of Analysis : 11.11.2021

Sample Collected by : Mr. B.K.Samantaray.

Sample Location : **BoreWell**

GROUND WATER TEST REPORT

Slr.						IS105	00:2012
No.	Parameters	Unit	BW1	BW2	BW3	Acceptable Limit	Permissible Limit
1	Colour	Hazen	<05	<05	<05	5	15
2	Odour		AL	AL	AL	AL	AL
3	Taste		AL	AL	AL	AL	AL
4	Turbidity	NTU	<1.0	<1.0	<1.0	1	5
5	pH Value @ 25℃	mg/l	7.53	7.61	7.42	6.5-8.5	No Relaxation
6	Total Hardness (as CaCO ₃)	mg/l	148	156	152	200	600
7	Iron (as Fe)	mg/l	0.24	0.22	0.23	0.3	No Relaxation
8	Chloride (as Cl)	mg/l	35	39	38	250	1000
9	Residual, free Chlorine	mg/l	ND	ND	ND	0.2	1.0
10	Total Dissolved Solids	mg/l	212	238	224	500	2000
11	Calcium (as Ca)	mg/l	40.08	42.5	41.68	75	200
12	Magnesium (as Mg)	mg/l	11.66	12.15	11.66	30	100
13	Copper (as Cu)	mg/l	< 0.03	< 0.03	< 0.03	0.05	1.5
14	Manganese (as Mn)	mg/l	< 0.05	< 0.05	< 0.05	0.1	0.3
15	Sulphate (as SO ₄)	mg/l	14.1	14.9	14.6	200	400
16	Nitrate (as NO ₃)	mg/l	4.2	5.1	4.9	45	No Relaxation
17	Fluoride (as F)	mg/l	0.16	0.18	0.17	1.0	1.5
18	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	<0.001	<0.001	<0.001	0.001	0.002
19	Mercury (as Hg)	mg/l	< 0.001	< 0.001	< 0.001	0.001	No Relaxation
20	Cadmium (as Cd)	mg/l	< 0.003	< 0.003	< 0.003	0.003	No Relaxation
21	Selenium (as Se)	mg/l	< 0.001	< 0.001	< 0.001	0.01	No Relaxation
22	Arsenic (as As)	mg/l	< 0.001	< 0.001	< 0.001	0.01	0.05
23	Cyanide (as CN)	mg/l	ND	ND	ND	0.05	No Relaxation
24	Lead (as Pb)	mg/l	< 0.01	< 0.01	< 0.01	0.01	No Relaxation
25	Zinc (as Zn)	mg/l	< 0.05	< 0.05	< 0.05	5	15
26	Chromium (as Cr)	mg/l	< 0.05	< 0.05	< 0.05	0.05	No Relaxation

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27	Mineral Oil	mg/l	< 0.05	< 0.05	< 0.05	0.5	No Relaxation
28	Total Alkalinity (as CaCO ₃)	mg/l	146	148	144	200	600
29	Aluminium (as Al)	mg/l	< 0.01	< 0.01	< 0.01	0.03	0.2
30	Boron (as B)		< 0.2	< 0.2	< 0.2	0.5	1.0
31	Total Coliform	MPN/100ml	Absent	Absent	Absent	Absent in 100 mL Sample	Absent
32	Faecal Coliform		Absent	Absent	Absent	Absent in 100 mL Sample	Absent

N.B: AL – Agreeable

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Reference No : CEMC/ASL/ NOV-SW/21

Name of Company : Ardent Steel Ltd.

Date of Monitoring : 10.11.2021
Date of Receiving : 11.11.2021
Date of Analysis : 11.11.2021

Sample Collected by : Mr. B.K.Samantaray.
Sample Location : Reservoir (settling pond)

SURFACE WATER TEST REPORT

Sl. No	Parameter	Unit	GSR 422E Standards	Result
1	Colour	Hazen		5
2	Odour	-		U/O
3	pH Value @ 25°C	-	5.5-9.0	7.64
4	Total Dissolved Solid	mg/l	2100	342
5	Iron as Fe	mg/l	3.0	0.34
6	Sulphate as SO ₄	mg/l	1000	15.2
7	Nitrate as NO ₃ -N	mg/l	9.6	12.8
8	Boron as B	mg/l	2.5	< 0.2
9	BOD for 3 days @ 27 ^o C	mg/l	3	2.6
10	COD	mg/l	250	20

N.B: U/O- Un-objectionable

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Reference No : CEMC/ASL/NOV - WW/21

Name of Company : Ardent Steel Ltd.
Sample Description : Waste Water
Date of Monitoring : 10.11.2021
Date of Receiving : 11.11.2021
Date of Analysis : 11.11.2021

Sample Collected by : Mr. B.K.Samantaray

Sample Location : STP

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Effluent Discharge Standard	Testing Method	Inlet	Outlet
1.	pH Value @ 25°C		6.5-9.0	APHA 4500 H ⁺ B	7.62	7.77
2.	Total Suspended Solids	mg/l	<20	APHA 2540 D	48.6	7.8
3.	B.O.D for 3 days @ 27°C	mg/l	<10	APHA 5210 B	76	8.2
4.	COD	mg/l	< 50	APHA 5220 C	160	20
5.	Oil & Grease	mg/l		APHA 5520 B	4.9	ND

N.B:-ND-Not Detectable

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Reference No : CEMC/ASL/ NOV -WT/21

Name of Company : Ardent Steel Ltd.
Sample Description : Waste material
Date of Monitoring : 10.11.2021
Date of Receiving : 11.11.2021
Date of Analysis : 11.11.2021

Sample Collected by : Mr. B.K.Samantaray

Sampling material : Used Oil

ANALYSIS RESULT

Sl. No	Parameter	Unit of measurement	As per HWMR-2016 Schedule-V,Part-A,Max	Used Oil
1	Polychlorinated biphenyls (PCBs)	ppm	<2	ND
2	Cadmium+Chromium+Nickel (as Cd+Cr+Ni)	ppm	500	1.61
3	Lead (as Pb)	ppm	100	0.15
4	Polyaromatic Hydrocarbon	%	6	ND
5	Arsenic (as As)	ppm	5.0	< 0.001

^{*}ND-Not Detected, ppm-parts per million

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^{*}The test parameter is within the standard limit