

An ISO 9001-2015 & OHSAS 45001:2018 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.

Report No. - CEMC/ASL/310123/A

Issued Date-31.01.2023

AMBIENT AIR OUALITY MONITORING TEST REPORT

Name of Company : Ardent Steel Ltd., Keonjhar, Odisha.

Sample Description:Ambient AirDate of Monitoring:24.01.2023Date of Receiving:26.01.2023Date of Analysis:26.01.2023

Sample Collected by : Mr. Bhaktahari Dash.

ANALYSIS RESULT

Sl.	LOCATION	MONITO	NITORING REPORT					
No.	LOCATION	$\frac{PM_{10}}{(\mu g/m^3)}$	$PM_{2.5} (\mu g/m^3)$	SO_2 (µg/m ³)	NO_x $(\mu g/m^3)$	CO (mg/m ³)	NH_3 $(\mu g/m^3)$	
1	At the boundary near the water harvesting pond (East Direction)	63.2	34.4	12.4	16.2	0.24	<20	
2	At the Boundary near ESP (South Direction)	58.2	31.2	10.2	15.0	0.2	<20	
3	At the Boundary near Coal Fines Stock yard (North Direction)	56.8	30.2	9.2	13.8	0.3	<20	
4	Near Ball mill,Iron ore fines stock yard	65.2	36.0	14.4	19.2	0.46	<20	
NAA	NAAQ Standard-2009		60	80	80	4.0	400	
		IS: 5182 (Part-23)	IS: 5182 (Part- 24,2019)	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part- 25,2019)	



The results relate only to the sample tested.

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Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS&GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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Sample Description:Ambient AirDate of Monitoring:24.01.2023Date of Receiving:26.01.2023Date of Analysis:26.01.2023

Sample Collected by : Mr. Bhaktahari Dash.

Sl.			M	ONITORI	NG REPO	RT		
No.	LOCATION	O3	Pb	Ni	As	Benzene	BaP	
110.		(µg/m3)	(µg/m3)	(ng/m3)	(ng/m3)	$(\mu g/m3)$	(ng/m3)	
1	At the boundary near the water harvesting pond (East Direction)	<10	<0.06	<0.6	< 0.44	<1	<1	
2	At the Boundary near ESP (South Direction)	<10	< 0.06	<0.6	< 0.44	<1	<1	
3	At the Boundary near Coal Fines Stock yard (North Direction)	<10	<0.06	<0.6	<0.44	<1	<1	
4	4 Near Ball mill,Iron ore fines stock yard		< 0.06	< 0.6	< 0.44	<1	<1	
NAA	Q Standard-2009	100	1.0	20	6	5	1	
Methods of Analysis		IS: 5182 (Part-9)	IS: 5182 (Part- 22)	IS: 5182 (Part- 26)	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part- 12)	

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Report No. - CEMC/ASL/310123/F

Issued Date-31.01.2023

FUGITIVE EMISSION MONITORING TEST REPORT

Name of Company : Ardent Steel Ltd., Keonjhar, Odisha.

Sample Description : Fugitive Emission

 Date of Monitoring
 : 24.01.2023

 Date of Receiving
 : 26.01.2023

 Date of Analysis
 : 26.01.2023

Sample Collected by : Mr. Bhaktahari Dash.

ANALYSIS RESULT

Sl.		RESULT		
No.	LOCATION	RSPM (µg/m³)	SPM (μg/m³)	
1	Proportioning System (Ash & Coke Fines Bunker)	451	1036	
2	Raw Material Transfer point of Mixture (Mixture Building)	430	1084	
3	Ball Mill (Cool Grinding)	362	1144	
4	Ball Mill (Flux & Coke Grinding)	472	1092	
5	Finished Product Transfer points and plant de-dusting system	375	996	
6	Travelling Grate & Rotary Kiln	372	982	
Stand	ard as per Environment (Protection Act)3 rd Amendment		2000*	
Rules	-2012 by MoEF & CC. at 10 m distance from the source			

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Report No. - CEMC/ASL/310123/N

Issued Date-31.01.2023

AMBIENT NOISE MONITORING TEST REPORT

Name of Company : Ardent Steel Ltd., Keonjhar, Odisha.

Sample Description : Noise Monitoring

Date of Monitoring : 24.01.2023

Sample Collected by : Mr. Bhaktahari Dash.

ANALYSIS RESULT

Sl. No.	Location	Noise Level In Day Time dB(A)	Noise Level In Night Time dB(A)	
01	Ball Mill (Cool Grinding)	83.0	78.1	
02	Raw Material Transfer point of Mixture (Mixture Building)	78.2	71.3	

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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Report No. - CEMC/ASL/310123/DW

Issued Date-31.01.2023

DRINKING WATER TEST REPORT

Name of Company : Ardent Steel Ltd., Keonjhar, Odisha.

Sample Description : Ground Water
Date of Monitoring : 24.01.2023
Date of Receiving : 26.01.2023
Date of Analysis : 26.01.2023

Sample Collected by : Mr. Bhaktahari Dash.
Sample Location : Canteen(RO Water)

ANALYSIS RESULT

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	6.27
6	Total Dissolved Solid	mg/l	500	2000	54.8
7	Alkalinity as CaCO ₃	mg/l	200	600	30
8	Total Hardness as CaCO ₃	mg/l	200	600	30
9	Iron as Fe	mg/l	0.3	No Relaxation	0.14
10	Nitrate as NO ₃ ⁻ -N	mg/l	45	No Relaxation	0.33
11	Sulphate as SO ₄	mg/l	200	400	3.0
12	Fluoride as F	mg/l	1.0	1.5	< 0.05
13	Calcium as Ca	mg/l	75	200	12.02
14	Chloride as Cl ⁻	mg/l	250	1000	7.9

N.B: AL – Agreeable

Authorized Signatory

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E-mail- cemc_consultancy@yahoo.co.in, cemc122@gmail.com, website: www.cemc.in.

Laboratory At: Plot No. 800/1274, Johal, Pahal, Bhubaneswar-752101, Odisha, India, ,Mobile: 7752014842



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Report No. - CEMC/ASL/310123/SW

Issued Date-31.01.2023

SURFACE WATER TEST REPORT

Name of Company : Ardent Steel Ltd., Keonjhar, Odisha.

Sample Description:Surface WaterDate of Monitoring:24.01.2023Date of Receiving:26.01.2023Date of Analysis:26.01.2023

Sample Collected by : Mr. Bhaktahari Dash.

Sample Location : Reservoir

ANALYSIS RESULT

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	5.65
4	Total Dissolved Solid	mg/l	2100	145
5	Iron as Fe	mg/l	3.0	0.26
6	Sulphate as SO ₄	mg/l	1000	11.4
7	Nitrate as NO ₃ -N	mg/l	50	14.2
8	Boron as B	mg/l	2.0	0.06
9	BOD for 3 days @ 27°C	mg/l	30	8.0
10	COD	mg/l	250	30

N.B: U/O- Un-objectionable

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Report No. - CEMC/ASL/310123/WW

Issued Date-31.01.2023

WASTE WATER TEST REPORT

Name of Company : Ardent Steel Ltd., Keonjhar, Odisha.

Sample Description: Waste WaterDate of Monitoring: 24.01.2023Date of Receiving: 26.01.2023Date of Analysis: 26.01.2023

Sample Collected by : Mr. Bhaktahari Dash.

Sample Location : STP Outlet

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Effluent Discharge Standard	Testing Method	Result
1.	pH Value @ 25°C		6.5-9.0	APHA 4500 H ⁺ B	6.94
2.	Total Suspended Solids	mg/l	<20	APHA 2540 D	26.2
3.	B.O.D for 3 days @ 27°C	mg/l	<10	APHA 5210 B	18.8
4.	COD	mg/l	< 50	APHA 5220 C	66
5.	Oil & Grease	mg/l		APHA 5520 B	2.3

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Report No. - CEMC/ASL/310123/BW

Issued Date-31.01.2023

WATER TEST REPORT

Name of Company : Ardent Steel Ltd., Keonjhar, Odisha.

Sample Description : Bore Well Water

Date of Monitoring:24.01.2023Date of Receiving:26.01.2023Date of Analysis:26.01.2023

Sample Collected by : Mr. Bhaktahari Dash.

Sample Location : **Bore Well**

GROUND WATER TEST REPORT

Slr.						IS10500:2012		
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°C	mg/l	7.07	7.21	7.3	6.5-8.5	No Relaxation	
6	Total Hardness (as CaCO ₃)	mg/l	152	146	166	200	600	
7	Iron (as Fe)	mg/l	0.26	0.32	0.22	0.3	No Relaxation	
8	Chloride (as Cl)	mg/l	31.9	33.9	30.9	250	1000	
9	Residual, free Chlorine	mg/l	ND	ND	ND	0.2	1.0	
10	Total Dissolved Solids	mg/l	251	242	252	500	2000	
11	Calcium (as Ca)	mg/l	42.64	40.96	46.57	75	200	
12	Magnesium (as Mg)	mg/l	11.1	10.64	12.1	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	13.6	14.2	13.0	200	400	
16	Nitrate (as NO ₃)	mg/l	4.0	4.2	5.2	45	No Relaxation	
17	Fluoride (as F)	mg/l	< 0.05	0.11	0.15	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	

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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
27	Mineral Oil	mg/l	< 0.05	< 0.05	< 0.05	0.5	No Relaxation
28	Total Alkalinity (as CaCO ₃)	mg/l	122	130	142	200	600
29	Aluminium (as Al)	mg/l	< 0.01	< 0.01	< 0.01	0.03	0.2
30	Boron (as B)	mg/l	< 0.2	< 0.2	< 0.2	0.5	1.0
31	Total Coliform	MPN/100ml	Absent	Absent	Absent	Absent in 100 mL Sample	
32	Faecal Coliform	MPN/100ml	Absent	Absent	Absent	Absent in 100 mL Sample	

N.B: AL – Agreeable

END OF REPORT

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Report No. - CEMC/ASL/310123/SW

Issued Date-31.01.2023

WATER TEST REPORT

Name of Company:Ardent Steel Ltd.Sample Description:Waste materialDate of Monitoring:24.01.2023Date of Receiving:26.01.2023Date of Analysis:26.01.2023

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	1.14
3	Lead (as Pb)	ppm	100	0.22
4	Polyaromatic Hydrocarbon	%	6	ND
5	Arsenic (as As)	ppm	5.0	< 0.001

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

END OF REPORT

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