O/C

Bhushan Power & Steel Ltd.
Vill. : Thelkoloi, P.O.: Lapanga-768212
Teh. : Rengali, Dist-Sambalpur (Odisha)
INDIA

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orissa@jswbpsl.in, www.jswbpsl.in
CIN : U27100DL1999PLC108350

JSWBPSL/ENV/OSPCB/21
25th September 2021.

GOVT. OF INDIA
MoEF & CC Integrated R.O.
Bhubaneswar-751023
27 SEP 2021
RECEIVED

To,
The Member Secretary,
Odisha State Pollution Control Board,
A/118, Nilakantha Nagar, Unit –VIII,
Bhubaneswar – 751012, Odisha.

Subject - Submission of Annual Environmental Statement for the financial year ending 31st March2021 for M/s Bhushan Power & Steel Limited, village-Thelkoloi, Po-Lapanga, Tehsil-Rengali, District- Sambalpur.

Reference - Rule -14 of Environment (Protection) Rule 1986.

Dear Sir,

Inviting your kind reference on the above mentioned on the above mentioned subject please find enclosed herewith Environmental Statement in Form-V dully filled under Rule -14 of the Environment (Protection) Rule 1986 for M/s Bhushan Power & Steel Limited for the year 2020-21.

If you required any further information/clarification we shall oblige to submit the same.

Thanking You,
Your's faithfully,
For, **Bhushan Power & Steel Limited.**

25/09/21

Ranjit Kumar Ghosh
Sr. GM –Environment Division

No.....Dt.....
27 SEP 2021
S.P.C. BOARD
BHUBANESWAR-12

Encl - As stated above

27-09-21

Copy to - 1. The Director General of Forest(C), Ministry of Environment, Forest & Climate Change, Eastern Regional Office (EZ) , A/3, Chandrasekharpur, Bhubaneswar, Pin-751023

2. The Regional Officer, Odisha State Pollution Control Board, Sambalpur.

ENVIRONMENTAL STATEMENT

For

Financial year ending the 31st March 2021

(In the prescribed form V as specified by rule14 of the Environment (P) Rules,1986

& Notified by G.S.R-396(E) dated 22.4.1993

JSW Bhushan Power & Steel Limited

At-Thelkoloi, Post-Lapanga, Dist-Sambalpur,
Pin-768232, Odisha

PART-A

GENERAL INFORMATION ABOUT THE PLANT

<table>
<tr><td>1</td><td>Name and address of the owner/occupier of the industry operation or process.</td><td>Shri Anil Kumar Singh
Director & Occupier
M/s. Bhushan Power & Steel Limited
Village-Thelkoloi, Po-Lapanga, Tehsil-Rengali
District- Sambalpur, Odisha, Pin-768232</td></tr>
<tr><td>1.a</td><td>Authorized person for the occupier</td><td>Shri Ranjit Kumar Ghosh
Sr. General Manager-EMD
M/s. Bhushan Power & Steel Limited
Village-Thelkoloi, Po-Lapanga, Tehsil-Rengali
District- Sambalpur, Odisha, Pin-768232</td></tr>
<tr><td>2</td><td>Industry category</td><td>Red Category</td></tr>
<tr><td>3.a</td><td>Production capacity</td><td>3.0 MTPA</td></tr>
<tr><td>3.b</td><td>Units</td><td>
<table>
<tr><th>Sl.no</th><th>Plant Units</th><th>Installed Capacity</th></tr>
<tr><td>01</td><td>Sponge Iron (DRI Kiln)</td><td>(12× 500 TPD)</td></tr>
<tr><td>02</td><td>Coal Washery (2 nos.)</td><td>1×1.0+1×3.5MTPA</td></tr>
<tr><td rowspan="5">03</td><td>Steel Melting Shop-I</td><td></td></tr>
<tr><td>Electric Arc Furnace (EAF)</td><td>(2×90T) + (2 ×100T)</td></tr>
<tr><td>Ladle Furnace</td><td>(2×90T) + (2 ×100T)</td></tr>
<tr><td>Billet Caster</td><td>(1×2)+(1×4) Strand</td></tr>
<tr><td>Single continuous thin slab caster</td><td>(2×1) Strand</td></tr>
<tr><td rowspan="4">04</td><td>Steel Melting Shop-II</td><td></td></tr>
<tr><td>Electric Arc Furnace (EAF)</td><td>(1×70T)</td></tr>
<tr><td>Ladle Furnace</td><td>(1×70 T)</td></tr>
<tr><td>Billet Caster</td><td>1×3 Strand</td></tr>
<tr><td>05</td><td>Captive Power Plants (CPP)</td><td>1×40 MW
1×60 MW
3×130 MW</td></tr>
<tr><td>06</td><td>Blast Furnace-I</td><td>1×1008 m^3</td></tr>
</table>
</td></tr>
</table>

		07	Blast Furnace-II	1×2015 m^3
		08	Sinter Plant - 1	(1×105 m^2)
		09	Coke Oven – 1 (Non recovery Type)	(1×0.45 MTPA)
		10	Coke Oven –2 (Recovery Type)	(1×0.5 MTPA)
		11	Oxygen Plant	(1×400)+(1x660) TPD
		12	CSP (Hot Rolling Mill)	1.8 MTPA
		13	Lime and Dolo Plant	(3×300 TPD)
		14	Wire & Rod Mill Complex (WRM)	0.45 MTPA
		15	Pipe & Tube Mill	0.20 MTPA
		16	Iron Ore Beneficiation Plant	1200 TPH
		17	Pellet Plant	3.5 MTPA
		18	Cold Rolling Mill	1.0MTPA
			Galvanizing /Galvalume Unit	0.50 MTPA
			Color Coating Unit	0.45 MTPA
4	Year of Establishment (Commercial Production Declared)	March-2005		
5	Date of the Last Environmental Statement Submitted	16th of September 2020		

PART-B

WATER AND RAWMATERIAL CONSUMPTION

i. Water consumption m3/d:

Type of water	**Water Consumption in m3**	
	During the previous financial year (2019-20)	During the current financial year (2020-21)
Industrial	18450912	18929024
Domestic	1628078	1616742

ii.Process water consumption per unit of product

Name of Product	**Process Water Consumption per unit of product out put**	
	During the Previous Financial Year 2019-20	During the current Financial Year 2020-21
Crude Steel	3.77 M^3/MT	2.96 M^3/MT

Monthly Breakup of Water consumption

Specific Water Consumption for 2020-21			
Month	**Total Pig+Billet+Slab(MT)**	**Total water Consumption up to CSP(M3)**	**Specific Consumption(M3/tcs)**
Apr-20	2135	154403	72.32
May-20	100734	430767	4.28
Jun-20	174236	524930	3.01
Jul-20	198273	618514	3.12
Aug-20	181365	514990	2.84
Sep-20	201615	542609	2.69
Oct-20	206971	590285	2.85
Nov-20	209206	536486	2.56
Dec-20	240163	615861	2.56
Jan-21	239755	668157	2.79
Feb-21	216400	600821	2.78
Mar-21	234994	730173	3.11
Total	**2205847**	**6527996**	**2.96**

ii) **Raw Material Consumption**

Name of Raw Materials	Name of Products	Consumption of Raw Material per unit of output	
		During the Financial Year 2019-20	During the Current Financial Year 2020-21
Iron Ore	Sponge Iron	1.469MT/MT of Sponge Iron	1.461MT/MT of Sponge Iron
Non Cooking Coal		1.167MT/MT of Sponge Iron	0.88MT/MT of Sponge Iron
Dolomite		0.050MT/MT of Sponge Iron	0.038MT/MT of Sponge Iron
Iron Ore	Hot Metal/ Pig Iron	0.90 MT/ MT of Hot Metal	1.16 MT/ MT of Hot Metal
Cooking Coal			
PCI Coal			0.015 MT/ MT of Hot Metal
Coke		0.61 MT/ MT of Hot Metal	0.603 MT/ MT of Hot Metal
Dolomites		0.05MT/ MT of Hot Metal	0.028 MT/ MT of Hot Metal
Lime Stone		0.04MT/ MT of Hot Metal	0.101 MT/ MT of Hot Metal
Iron Ore Fines	Pellet	1.158 MT/ MT of Pellet	1.176 MT/ MT of Pellet
Lime Stone/fines		0.0196MT/ MT of Pellet	0.020MT/ MT of Pellet
Dolomite		0.0005MT/ MT of Pellet	0.00062MT/ MT of Pellet
Iron Ore Fines	Sinter	0.606MT/ MT of Sinter	0.662MT/ MT of Sinter
Coke Fines		0.093 MT/ MT of Sinter	0.059 MT/ MT of Sinter
Lime Stone		0.098 MT/ MT of Sinter	0.064MT/ MT of Sinter
Dolomite		0.062 MT/ MT of Sinter	0.039MT/ MT of Sinter
Non –Cooking Coal	Power	0.767 MT/ MW of Power	0.760 MT/ MW of Power
Cooking Coal	Coke	1.369 MT/ MT of Coke	1.342 MT/ MT of Coke
PCI Coal		-	0.029 MT/ MT of Coke
Lime Stone	Lime	1.22 MT/ MT of Quick Lime	1.26 MT/ MT of Lime
Dolomite		0.047 MT/ MT of Dolo Lime	1.82 MT/ MT of Lime
Scrap	Billet/Bloom	0.056MT/MT of Billet/Bloom	0.049MT/MT of Billet/Bloom

Hot Metal	+ HR Coil	0.60MT/MT of Billet/Bloom	0.60MT/MT of Billet/Bloom
Pig Iron		0.022MT/MT of Billet/Bloom	0.009MT/MT of Billet/Bloom
Sponge Iron		0.594 MT/MT of Billet/Bloom	0.607 MT/MT of Billet/Bloom

Note-Sp coal consumption in sponge iron plant reduced as compared to previous year because the entire coal consumption is imported coal having high calorific value.

PART-C

POLLUTION DISCHARGEED TO ENVIRONMENT/UNIT OFOUTPUT

A-WATER

B-AIR

Water-

The yearly average of water quality parameters being monitored at the outlets is as below

Parameter	Concentration of pollutants discharge(mg/l)
pH	7.36
TSS	28.74
Oil & Grease	2.66
COD	69.27
BOD	11.87

The characteristic of water quality parameters are being monitored at the individual out let of treatment plant is given below

Parameter	pH	TSS mg/l	Oil & Grease mg/l	COD mg/l	BOD mg/l
WWTP-1	7.47	22.96	2.1	35.35	10.8
WWTP-2	7.46	18.22	2.5	55.92	11.6
WWTP-3	7.17	16.74	3	60.40	9.51
ETP	7.39	25.87	2.61	77.36	11.04
BETP	7.33	59.92	3.13	117.36	16.40

Air:

Quantity of pollutants measured around the plant is given below

Ambient Air Quality Monitoring: National Ambient Air Quality Monitoring Programme (NAAQM)

Guidelines for sampling and Measurement of notified Ambient Air Quality Parameters (NAAQMS2009)

Under the provisions of the Air(Prevention & Control of Pollution)Act 1981,the CPCB has notified fourth version of national Ambient Air quality Standards(NAAQMS)2009.

Ambient Air is being monitored at 3 stations- FY 2020-21

Due to covid 19 pandemic the plant, as well as the city was shut down as per government guidelines ,so third party monitoring was not carried out in the month of April2020.

1.Near Township

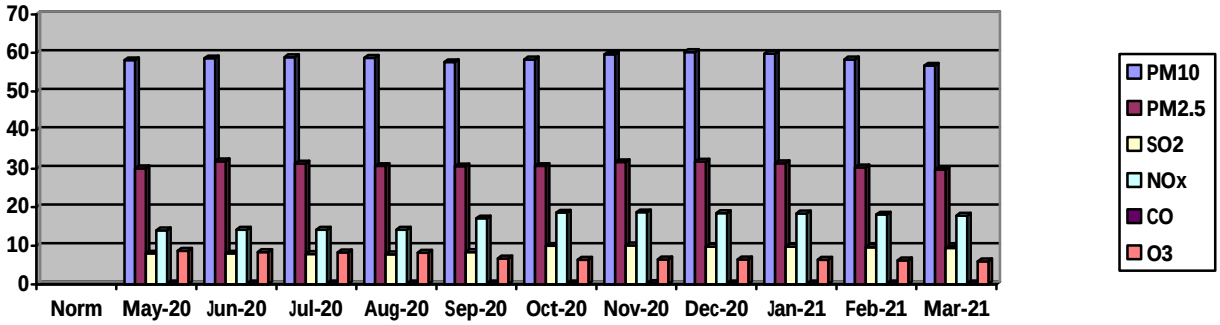
2.Near railway gate

3. Behind CRM

Ambient Air Quality Report-Town Ship-2020-21

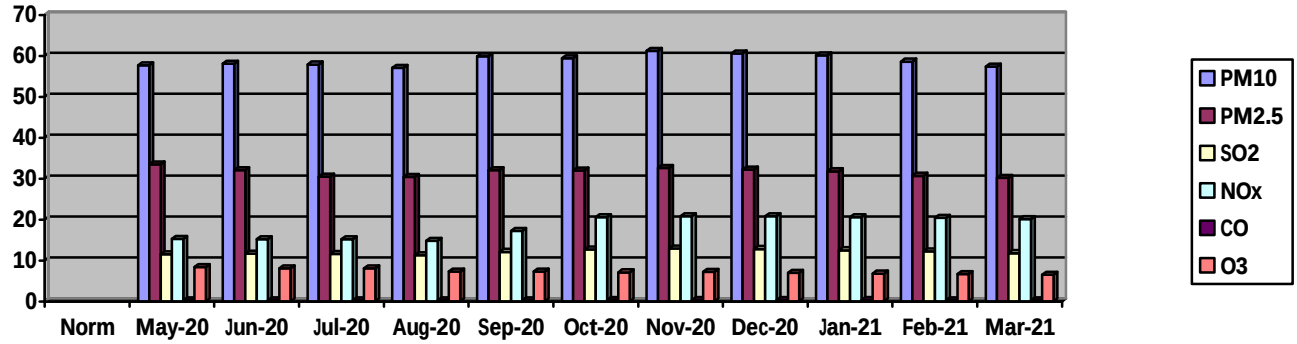
Parameter	Norm	May20	June20	July20	Aug20	Sept20	Oct20	Nov20	Dec20	Jan21	Feb21	Mar21
PM10	100µg/m3	58.10	58.6	58.9	58.7	57.6	58.3	59.6	60.20	59.8	58.3	56.7
PM2.5	60 µg/m3	30.07	31.9	31.3	30.70	30.60	30.7	31.7	31.80	31.4	30.30	29.7
SO2	80 µg/m3	8.0	8.0	7.9	7.8	8.4	10	10.10	9.8	9.8	9.60	9.4
NOx	80 µg/m3	14	14.2	14.2	14.2	17.1	18.6	18.7	18.5	18.4	18.1	17.8

CO	4000 µg/m3	0.29	0.29	0.29	0.29	0.29	0.31	0.32	0.31	0.29	0.28	0.28
O3	100 µg/m3	8.7	8.4	8.3	8.2	6.7	6.4	6.5	6.5	6.4	6.2	6



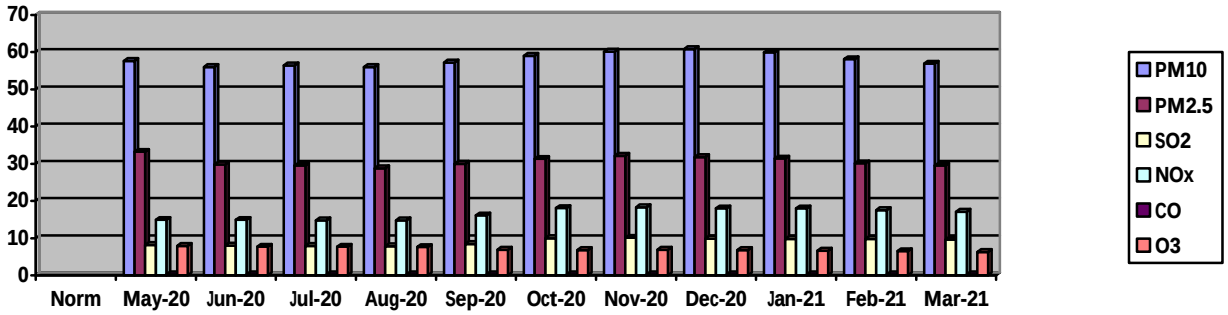
Ambient Air Quality Report-Near Railway Gate-2020-21

Parameter	Norm	May20	June20	July20	Aug20	Sept20	Oct20	Nov20	Dec20	Jan21	Feb21	Mar21
PM10	100µg/m3	57.70	58.1	57.9	57.10	59.9	59.4	61.2	60.6	60.10	58.6	57.4
PM2.5	60 µg/m3	33.50	32.1	30.5	30.40	32.10	32.0	32.6	32.2	31.8	30.7	30.2
SO2	80 µg/m3	11.5	11.7	11.6	11.30	12.10	12.7	12.9	12.8	12.5	12.2	11.8
NOx	80 µg/m3	15.3	15.20	15.2	14.80	17.2	20.6	20.8	20.8	20.6	20.4	20.10
CO	4000 µg/m3	0.26	0.26	0.27	0.25	0.28	0.32	0.31	0.30	0.3	0.29	0.29
O3	100 µg/m3	8.4	8.10	8.1	7.30	7.3	7.1	7.2	7.0	6.8	6.7	6.5



Ambient Air Quality Report-Behind CRM-2020-21

Parameter	Norm	May20	June20	July20	Aug20	Sept20	Oct20	Nov20	Dec20	Jan21	Feb21	Mar21
PM10	100µg/m3	57.60	56	56.40	56.0	57.2	59.0	60.10	60.80	59.9	58.10	56.9
PM2.5	60 µg/m3	33.2	29.8	29.5	28.8	30.0	31.3	32.1	31.8	31.4	30.1	29.5
SO2	80 µg/m3	8.2	8	7.9	7.8	8.4	10	10.1	9.9	9.8	9.8	9.6
NOx	80 µg/m3	14.9	14.9	14.8	14.8	16.1	18.1	18.3	18.0	18.0	17.5	17.1
CO	4000 µg/m3	0.25	0.26	0.26	0.27	0.26	0.28	0.29	0.29	0.30	0.28	0.27
O3	100 µg/m3	7.9	7.7	7.7	7.6	6.9	6.8	6.9	6.8	6.6	6.5	6.3


70
60
50
40
30
20
10
0
Norm
May-20
Jun-20
Jul-20
Aug-20
Sep-20
Oct-20
Nov-20
Dec-20
Jan-21
Feb-21
Mar-21
PM10
PM2.5
SO2
NOx
CO
O3

PART-D

HAZARDOUS WASTE

Hazardous Waste

Hazardous Waste	Total quantity(MT)		
		During the Financial Year 2019-20	During the Current Financial Year 2020-21
a) From Process	Used Oil	81.22 MT	49.73 MT
	Waste /residue containing Oil	66.78MT	84.14 MT
	Oil & Grease Skimming Residue	49.88 MT	15.0 MT
	Zinc Dross/Flux/Ash/Skimming	724.65 MT	1155.57
	Discarded Containers/Barrels	2942 nos	5496 nos
	Spent ion exchange resin SAC& SBA	2.84 MT	14.75 MT
(b) From Pollution Control Facilities	ETP Sludge	118.57MT	121.65 MT
	BETP Sludge (from Coke Oven-2)-	9.66 MT	95.16

B. Method of Disposal of Hazardous Wastes:

Hazardous waste			**Method of handling**
From Process	**Waste category**	**Waste generated**	
Used oil/ Spent Oil	5.1	49.73 MT	Stored in MS drum over concrete floor under shed and sale to authorized recycler /reprocesser having valid authorization from SPCB,Odisha.
Wastes/Residues Containing Oil	5.2	84.14 MT	Stored in the Hazardous waste container under shed and sale to authorized recycler,reprocessor or disposed through authorized Hazardous waste incinerator /CHWTSDF authorised by SPCB,Odisha.

Oil and Grease Skimming Residue from ETP	5.1	15.0 MT	Disposed through Authorized Hazardous waste incinerator/Common Hazardous Waste Treatment Storage Disposal facility (CHWTSDF) authorized by SPCB,Odisha.
Zinc Dross/Flux/Ash/Skimming	6.2	1155.57	Storage in impervious pit/containers under covered shed and sale to authorized recycler/reprocessor.
Empty barrel/Containers/Liners contaminated with hazardous chemicals/wastes	33.1	5496 nos	Bye back through Supplier/Actual user or disposed through authorized recycler.
Spent Ion exchange resin containing toxic metals	35.2	14.75 MT	Disposed through Authorized Hazardous waste incinerator/Common Hazardous Waste Treatment Storage Disposal facility (CHWTSDF) authorized by SPCB,Odisha.
Chemical Sludge from waste water treatment plant-	35.3	121.65 MT	Disposed through Authorized Hazardous waste incinerator/Common Hazardous Waste Treatment Storage Disposal facility (CHWTSDF) authorized by SPCB,Odisha.
BETP Sludge of Coke Oven	13.6	95.16	Disposed through Authorized Hazardous waste incinerator/Common Hazardous Waste Treatment Storage Disposal facility (CHWTSDF) authorized by SPCB,Odisha.

PART-E

SOLID WASTE

Generation and Utilization of Solid Waste

Types of Solid Waste		Total quantity(MT)		
		During the Previous Financial Year 2019-20	During the Current Financial Year 2020-21	Mode of Utilization
(a) From Process	Kiln Accretion	30230 MT	7631MT	
	Char	251428 MT	201916 MT	
	Fly Ash	1140202 MT	947576 MT	
	Bottom ash	242168 MT	251812 MT	
	SMS Slag	260000 MT	489525 MT	
	Sinter plant ESP dust	6988 MT	8773 MT	
	Granulated Slag of BF	436764 MT	494271 MT	
	Granulated iron oxide ARP	7294.93 MT	5788 MT	
(b) From Pollution Control Facilities	Sludge From STP	75 MT	14.95 MT	
	FES Dust from EAF/LAF	11820 MT	10800 MT	
(c) Quantity recycled or reutilized within the Unit	Char	251482 MT	201916 MT	Used in CPP
	Granulated slag of Blast Furnace	436764 MT	494271 MT	Sold to cement plant
	Granulated Iron Oxide from ARP	7294.93 MT	5788 MT	Recycled in sinter plant
	Fly Ash	1140202 MT	947576 MT	Utilized in Bricks plant, Quarry filling, Embankment raising, Land filling and road making
	Bottom Ash	242162 MT	251812 MT	Disposed in Solid Waste disposal site
	Sludge from STP	75 MT	14.95 MT	Mixed with soil & used as manure in Horticulture application inside plant premises.
	FES Dust from EAF/LRF	11820 MT	10800 MT	(Recycled in Sinter / Pellet plant
	Sinter plant ESP Dust	6988 MT	8773 MT	Recycled in Sinter / Pellet Plant

PART-F

Characteristic of Solid waste

Type of waste	Char	Accretion	Wet scrapper	Dedusting dust	Slag		Mill scale		
Source	**DRI**	**DRI**	**DRI**	**DRI**	**BF Granulated slag**	**SMS**	**CSP**	**WRM**	**Pipe & Tube Mill**
Fe(T)							73.94	72.03	
SiO2	47.21	49.96	40.15	37.35	35.18	14.10	2.68	1.36	2.06
Al2O3	27.58	22.13	21.75	20.54	20.02	9.22	0.611	0.75	1.53
CaO	7.01	1.21	4.56	1.80	34.10	34.19	4.96	0.92	1.41
MgO	4.51	0.86	1.1	1.01	7.44	9.87		0.25	0.67
MnO					0.8		0.191	0.637	0.164
TiO2	1.25			1.47	0.51	0.87			
S			0.5						
P									
C			22.71						

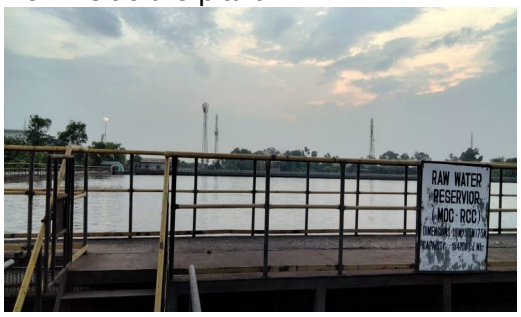
Type of waste	Fly Ash	Bottom Ash	WHRB Ash	Lime dust	Sludge			Flue dust	
Source	**CPP**	**CPP**	**DRI**		**ETP**	**BF**	**WRM**	**BF**	**Sinter plant**
Fe(T)					43.64	39.12	63.35		
SiO2	55.30	49.67		4.72	5.01	6.09	3.44	11.3	6.33
Al2O3	32.10	24.83		0.86	1.04	3.93	1.28	7.22	4.85
CaO	2.14	1.76		62.45	13.83	3.35	2.10	6.68	9.99
MgO	1.21			1.92	1.25	0.58	0.39	2.23	2.10
MnO	0.052				0.054	0.48			0.264
TiO2	1.162	0.958		0.12		0.069			0.048
S			0.51				0.135	0.14	
P									
C			14.49				8.39		

PART– G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES

Smooth operation of Pollution abatement measures has resulted in following impact in conservation of natural resources and the cost of production.

Water Environment:

Sl No	Description
01	BPSL receives water from Back water of Hirakud reservoir and stored in two nos of reservoir inside the plant.  Reservoir-1- Capacity 200000 M3  Reservoir-2- capacity 134000 M3
02	BPSL has installed 03 number of Waste water treatment plant for complete recycle of entire wastewater which is generated from surface runoff and storm water, blowdown water from cooling tower. After treatment in the waste water treatment plants, the water is used for makeup water for DRI, Pellet plant, CPP ash quenching,SMS slag quenching, fire fighting , sprinkling on haul roads to control fugitive emissions and for plantation purpose.   Waste Water Treatment Plant
03	BPSL has installed one ETP for CRM effluent one BETP for Coke Oven -2 and 03nos. of STP for Sewage of Township.

	 CRM ETP  Coke Oven-2-BETP  STP
04	Installation of RO system of Capacity 500 m3/hr. The permeate water generated of 350m3/hr are being utilized as DM water plant feed and cooling tower make up water.  
05	Following action taken for reduction in Raw water consumption. a)Acidic/Alkaline wastewater generated from DM plant is neutralized in neutralization pit and reused for ash conditioning. b)Cooling tower blow down water of CPP 3x 130 MW is completely reused for ash quenching in silos. c)Using treated effluent of ETP for dust suppression inside plant premises. d)Recycling backwash water from Sand filters to Waste Water Treatment plant. e)Increase OBR of Ion-exchangers beds in DM plant to reduce effluent generation by modifying flow-measuring instruments and RO water feed. f)Running of Cooling towers on High cycle of concentration (COC 5.0 to 6.0) and reducing of water losses through blow down.

Air Environment:

Sl No	Description
01	Reduction of green house gases by use of by product gases for power generation. a) The hot gas generated from coke oven is being utilized in the power generation passing through waste heat recovery boilers (WHRB) feeding to two numbers of turbo generators which generates 16 MW power. b) The hot gas generated from all DRI kilns is used for power generation through waste heat recovery boilers(WHRB).
02	Blast furnace gas after treatment in Gas Cleaning Plant utilized in tunnel furnace of CSP, Sinter Plant, Lime Plant, Electric Arc furnace, Cold Rolling Mill, Wire Rod Mill and Pellet plant.
03	Concreting of all internal roads work under progress to reduce the fugitive dust emissions inside plant premises.   Concrete Roads
04	Eight numbers of mobile water sprinkling tankers are being engaged for regular water sprinkling on haul roads and in construction areas for control of fugitive dust emissions.
05	Three truck mounted high vacuum road sweepers are engaged for continuous cleaning of concrete roads inside the plant premises to control fugitive dust.  Road Sweeper

06	Fixed water sprinklers have been installed the potential areas of DRI units, Raw material handling and stacking areas for suppression of fugitive dust emissions.
07	Installation of two nos. of wheel washing system to clean the wheel of heavy vehicle and control fugitive dust carrying outside.   Wheel washing System
08	Installation of Mercury (Hg) analyser has been completed in all the stacks of CPP  Mercury (Hg)Analyser
09	For compliance and effective monitoring by installation of CEMS, CAAQMS and CEEQMS.  

	Ambient Air Quality Monitoring  **Opacity Monitor**  **Gas Analyzer**
10	For proper maintenance of all the online monitoring system a dedicated AMC team engaged and also for transmission of data to OSPCB /CPCB server a dedicated AMC team has been engaged.

PART – H

ADDITIONAL MEASURES/INVESTMENT PROPOSAL FOR ENVIRONMENTAL PROTECTION

Efficient measures for abatement of pollution were implemented under the project these are working satisfactorily. However, following additional measures have been taken for overall environmental improvement.

Water Pollution:

Installation of ZLD/RO plant of capacity 500 m3/hr .


Reverse Osmosis Plant

Up gradation of CRM Effluent Treatment plant.

Air Pollution:

Individual Fume treatment Plant (FTP) attached to EAF-1 ,EAF-2,EAF-3 and EAF-4 has been provided for control of Primary as well as secondary emission from SMS-1.


Fumes Treatment Plant (FTP)

6 numbers of High pressure mist beam sprinkler has been installed at raw material stacking yard for

control of fugitive dust 
Conveyor belt of DRI & lime transfer for DRI and SMS-2

Waste Disposal:

Disposal of E-waste as per the rule to the authorized E-waste dismantler and recycler M/s Greenex India Resources Pvt.limited.
Bio medical waste has been disposed of through Mediaid marketing services at common facility at Sundargarh.
Installation of organic waste converter of capacity 500 kg /day (composting facility).
BF granulated sold to Cement Manufacture  
Construction of Covered Hazardous storage Shed..

Others:

Continuous development of flora by tree plantation and green belt development. In the year 2020-21, 40000 numbers of saplings planted in and around the plant. Plan for the year 2021-22 is 20000 plants.

Plantation at Derba Solid waste Disposal site

Two nos of IP camera installed and connected to OSPCB server

IP camera Installed at Roof top of Fire & safety Building

Adequate capacity silencer has been installed in drain and vent lines of turbine of blower house of Blast Furnace to reduce Noise Pollution while rolling of Turbine & stopping of Turbine.

For Environment Improvement Project activities budget allocated for the year 2021-22

S N	Project planned	Particular	Budget In Cr
1	Environment Management Department building expansion	Expansion of building - civil	0.50
2	Lab establishment	Civil work for lab and Modular lab	0.75
		Interiors for office and Lab	0.25
3	Lab Instruments procurement	Instruments, glass wares and chemicals	2.0
4	One CAAQMS	One instruments system with station	1.25
5	One EQMS	For BETP with cyanide etc	0.65
6	Connectivity of all CEMS, CAAQMS, EQMS to our server, CPCB, OSPCB	Connectivity of all existing systems to our server for daily online monitoring and data reporting and also connections to CPCB and SPCB	0.20
07	IP Cameras	15 Cameras installation for compliance	1.2
08	Mobile Monitoring Van	Procuring one mobile monitoring van having air, water, noise and meteorological monitoring systems for monitoring in surrounding areas	2 .0
09	Mobile Environmental APP	For developing a mobile APP which can be installed in HODs mobile for quick environmental data access and taking action	0.10
10	Relocation 3 old CAAQMS and new one station and finishing work in mercury analyser rooms.	All 3 stations are not at proper locations so need to shift	0.50

11	Procuring 4 mobile tanker based sprinklers for dusty areas	Mobile tankers having provision of - • Water sprinkling for road dust • Road washer • Tree washer	1.60
12	Installation of additional Tyre washing systems	4 Nos	0.50
13	Implementing Compliance Management System	We will be having about 100 compliances to implement. For quick monitoring we can have online compliance management system	0.25
14	Implementation of 5 S	If any department needs any help on 5S implementation or old wastes to be disposed etc.	1.0
15	Rain Water Harvesting	For ground water recharge and compliance to EC condition.	1.25
		Total	**14.0 Cr**

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF THE ENVIRONMENT

The possible areas of resource conservation and the source of pollutants are identified, assessed and subsequently proper arrangements for their control are incorporated. Some actions taken in direction to improve the quality of Environment at Bhushan Power & Steel Limited are:

Key performance Indicators (KPI)

The key environmental performance parameters for Iron & Steel Industry is being measured for benchmarking with best practices in the industry. Though there are no regulatory norms, these parameter provide guide for overall improvements. We are monitoring the below mention parameter on monthly basis.

Sl No	Key performance indicator
01	Sp water consumption (m3/tcs)
02	PM Emission(kg/tcs)
03	SO2 Emission (kg/tcs)
04	NOx Emission(kg/tcs)
05	Sp solid waste generation
06	% solid waste utilization

Implementation of ISO System:

Accredited ISO-14001:2015 [Environmental Management System] and ISO 9001:2015 [Quality Management System]for operations of Integrated Steel Plant.

DNV

MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 184522-2015-AE-IND-RvA | Initial certification date: 03 September 2009 | Valid: 03 September 2021 – 02 September 2024

This is to certify that the management system of
Bhushan Power & Steel Limited
Village: Thelkoloi, P.O.: Lapanga, Tehshil: Rengali, District: Sambalpur – 768 232, Orissa, India

has been found to conform to the Environmental Management System standard:
ISO 14001:2015

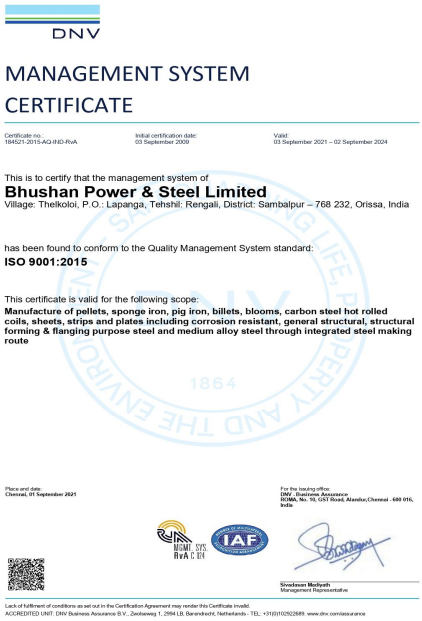
This certificate is valid for the following scope:
Manufacture of pellets, sponge iron, pig iron, billets, blooms, carbon steel hot rolled coils, sheets, strips and plates including corrosion resistant, general structural, structural forming & flanging purpose steel and medium alloy steel through integrated steel making route

Place and date: Chennai, 01 September 2021

For the issuing office: DNV - Business Assurance ROMA, No. 10, GST Road, Alandur,Chennai - 600 016, India

Sivadasan Madiyath
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV Business Assurance B.V., Zwolseweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102922689. www.dnv.com/assurance



DNV

MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 184521-2015-AQ-IND-RvA | Initial certification date: 03 September 2009 | Valid: 03 September 2021 – 02 September 2024

This is to certify that the management system of
Bhushan Power & Steel Limited
Village: Thelkoloi, P.O.: Lapanga, Tehshil: Rengali, District: Sambalpur – 768 232, Orissa, India

has been found to conform to the Quality Management System standard:
ISO 9001:2015

This certificate is valid for the following scope:
Manufacture of pellets, sponge iron, pig iron, billets, blooms, carbon steel hot rolled coils, sheets, strips and plates including corrosion resistant, general structural, structural forming & flanging purpose steel and medium alloy steel through integrated steel making route

Place and date: Chennai, 01 September 2021

For the issuing office: DNV - Business Assurance ROMA, No. 10, GST Road, Alandur,Chennai - 600 016, India

Sivadasan Madiyath
Management Representative

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Accredited OHSAS 18001:2007(Occupational Health and Safety Management System) for operation of Integrated Steel Plant.

DNV

MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 10000440664-MSC-RvA-IND | Initial certification date: 07 January 2015 | Valid: 07 January 2021 – 06 January 2024

This is to certify that the management system of
Bhushan Power & Steel Limited
Village: Thelkoloi, P.O.: Lapanga, Tehshil: Rengali, Distt.: Sambalpur - 768 232, Odisha, India

has been found to conform to the Occupational Health and Safety Management System standard:
ISO 45001:2018

This certificate is valid for the following scope:
Manufacture of cold rolled, galvanized, aluminium zinc alloy metallic coated and colour coated steel strips & sheets
Manufacture of steel wires, rods, bright bars, pipes and tubes
Operation of other support services like captive power plant and oxygen plant

Place and date: Barendrecht, 02 July 2021
For the issuing office: DNV - Business Assurance, Zwolseweg 1, 2994 LB Barendrecht, Netherlands

MGMT. SYS. RvA C 024 IAF

Erie Koek
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV Business Assurance B.V., Zwolseweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102922689. www.dnv.com/assurance

DNV

MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 10000373858-MSC-RvA-IND | Initial certification date: 02 June 2015 | Valid: 02 June 2021 – 01 June 2024

This is to certify that the management system of
Bhushan Power & Steel Limited
Village: Thelkoloi, P.O.: Lapanga, Tehshil: Rengali,Distt.: Sambalpur - 768232, Odisha, India

has been found to conform to the Occupational Health and Safety Management System standard:
ISO 45001:2018

This certificate is valid for the following scope:
Manufacturing pellets, sponge iron, pig iron, billets, blooms, hot rolled coils, sheets, strips and plates including corrosion resistant, general structural, structural forming & flanging purpose steel and medium alloy steel through integrated steel making route including support services

Place and date: Barendrecht, 11 June 2021
For the issuing office: DNV - Business Assurance, Zwolseweg 1, 2994 LB Barendrecht, Netherlands

MGMT. SYS. RvA C 024 IAF

Erie Koek
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV GL Business Assurance B.V., Zwolseweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102922689. www.dnvgl.com/assurance

Display of WED Theme for the year 2020.

Implementation of 5S & TPM System in the plant is under progress.


5S JOURNEY TOWARDS EXCELLENCE
SUSTAINING
STANDARDIZING
SHINING
SET IN ORDER
SORTING


SMS-1
CSP
CRS
Tube Plant
CRM-1 & 2
BF-1
Sinter Plant-2
Coke Oven-2
Sinter Plant-1
Coke Oven-1
SMS-2, RMPP
LCP, WRM
20


DRY TYPE TRANSFORMER-1 KILN-
2 MVA, 6.6/0.433 KV


ONLY ONE EARTH TO SHARE
ONLY ONE EARTH TO CARE
ENVIRONMENT MANAGEMENT DIVISION
PLANT A TREE
GET OXYGEN FREE
ENVIRONMENT MANAGEMENT DIVISION