

Bhushan Power & Steel Ltd.
Vill. : Thekoloi, P.O.: Lapanga - 768212
Teh. : Rengali, Dist-Sambalpur (Odisha)
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JSWBPSL/ENV/2022-23/047.
24th September, 2022.

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 March 2022 for M/s Bhushan Power & Steel Limited, Village Thekoloi, Post Lapanga, Tehasil Rengali, District Sambalpur, Odisha, Pin-768212.

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

Dear Sir,

Inviting your kind reference 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 the year 2021-22.

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

Thanking You,

Yours faithfully,

For Bhushan Power & Steel Limited

Ranjit Kumar Ghosh
Associate Vice President – Environment

Encl - As stated above

Copy to - Deputy Director General, Ministry of Environment, Forest & Climate Change, Eastern Regional Office (EZ) A/3, Chandrasekharpur, Bhubaneswar, Pin-751023, Email-roez_bsr-mef@nic.in

- Regional Officer, Odisha State Pollution Control Board, Sambalpur.



PART-A

GENERAL INFORMATION ABOUT THE PLANT

1	Name and address of the owner/occupier of the industry operation or process.	Shri Anil Kumar Singh President, WTD & Occupier. M/s. Bhushan Power & Steel Limited Village-Thekoloji, Po-Lapanga, Tehsil-Rengali District- Sambalpur, Odisha, Pin-768232		
1.a	Authorized person for the occupier	Shri Ranjit Kumar Ghosh AVP - Environment M/s. Bhushan Power & Steel Limited Village-Thekoloji, Po-Lapanga, Tehsil-Rengali District- Sambalpur, Odisha, Pin-768212		
2	Industry category	Red Category		
3.a	Production capacity	3.0 MTPA		
3.b	Units	Sl. No	Plant Units	Installed Capacity
		01	Sponge Iron (DRI Kiln)	(12× 500 TPD)
		02	Coal Washery (2 nos.)	1×1.0+1×3.5MTPA
		03	Steel Melting Shop-I	
			Electric Arc Furnace (EAF)	(2×90T) + (2 ×100T)
			Ladle Furnace	(2×90T) + (2 ×100T)
			Billet Caster	(1×2)+(1×4) Strand
			Single continuous thin slab caster	(2×1) Strand
		04	Steel Melting Shop-II	
			Electric Arc Furnace (EAF)	(1×70T)
			Ladle Furnace	(1×70 T)

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			Billet Caster	1×3 Strand
		05	Captive Power Plants (CPP)	1×40 MW 1×60 MW 3×130 MW
		06	Blast Furnace-I	1×1008 m ³
		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)	(1×1.0 MTPA)
		11	Oxygen Plant	(1×400)+(1×660) 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	27 th of September 2021.		

PART-B

WATER AND RAWMATERIAL CONSUMPTION

i. Water consumption m3/d:

Type of water	Water Consumption in m3	
	During the previous financial year (2020-21)	During the current financial year (2021-22)
Industrial	18929024	21489259
Domestic	1616742	1632265

ii. Process water consumption per unit of product

Name of Product	Process Water Consumption per unit of product out put
	During the current Financial Year 2021-22
Crude Steel	3.4 M3/TCS

Monthly Breakup of Water consumption

Specific Water Consumption for 2021-22			
Month	Crude Steel In MT	Total water Consumption up to CSP (M3)	Specific Consumption(M3/tcs)
Apr-21	227045	823489	3.63
May-21	233216	916852	3.93
Jun-21	232271	839355	3.61
Jul-21	233772	829126	3.55
Aug-21	233118	841482	3.61
Sep-21	221973	754240	3.40
Oct-21	181293	726570	4.01
Nov-21	222509	734072	3.30
Dec-21	234561	740210	3.16
Jan-22	242531	725316	2.99
Feb-22	216273	641570	2.97

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Mar-22	243517	829152	3.40
Total	2722079	9401434	3.45

ii) Raw Material Consumption

Name of Raw Materials	Name of Products	Consumption of Raw Material per unit of output	
		During the Financial Year 2020-21	During the Current Financial Year 2021-22
Iron Ore	Sponge Iron	1.461MT/MT of Sponge Iron	1.45 MT/MT of Sponge Iron
Non Cooking Coal		0.88MT/MT of Sponge Iron	0.94 MT/MT of Sponge Iron
Dolomite		0.038MT/MT of Sponge Iron	0.028 MT/MT of Sponge Iron
Iron Ore/	Hot Metal/ Pig Iron	1.16 MT/ MT of Hot Metal	1.85 MT/ MT of Hot Metal
PCI Coal		0.015 MT/ MT of Hot Metal	0.05 MT/ MT of Hot Metal
Coke		0.603 MT/ MT of Hot Metal	0.65 MT/ MT of Hot Metal
Dolomites		0.028 MT/ MT of Hot Metal	0.05 MT/ MT of Hot Metal
Lime Stone		0.101 MT/ MT of Hot Metal	0.11 MT/ MT of Hot Metal
Iron Ore Fines	Pellet	1.176 MT/ MT of Pellet	1.15 MT/ MT of Pellet
Lime Stone/fines		0.020MT/ MT of Pellet	0.021 MT/ MT of Pellet
Dolomite		0.00062MT/ MT of Pellet	0.003 MT/ MT of Pellet
Breeze Coke			0.012 MT/ MT of Pellet
Iron Ore Fines	Sinter	0.662MT/ MT of Sinter	0.593 MT/ MT of Sinter
Coke Fines		0.059 MT/ MT of Sinter	0.059 MT/ MT of Sinter
Lime Stone		0.064MT/ MT of Sinter	0.170 MT/ MT of Sinter
Dolomite		0.064MT/ MT of Sinter	0.059 MT/ MT of Sinter
Non –Cooking Coal	Power	0.760 MT/ MW of Power	0.808 MT/ MW of Power
Cooking Coal	Coke	1.342 MT/ MT of Coke	1.372 MT/ MT of Coke
PCI Coal		0.029 MT/ MT of Coke	0.108 MT/ MT of Coke
Lime Stone	Lime	1.26 MT/ MT of Lime	2.453 MT/ MT of Lime
Scrap	Billet/Bloom + HR Coil	0.049MT/MT of Billet/Bloom	0.003 MT/MT of Billet/Bloom
Hot Metal		0.60MT/MT of Billet/Bloom	0.626 MT/MT of Billet/Bloom
Pig Iron		0.009MT/MT of Billet/Bloom	0.0035MT/MT of Billet/Bloom
Sponge Iron		0.607 MT/MT of Billet/Bloom	0.539 MT/MT of Billet/Bloom

PART-C

POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT

A- WATER:

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

Parameter	Concentration of pollutants discharge(mg/l)
pH	7.24
TSS	24.20
Oil & Grease	2.78
COD	63.19
BOD	13.98

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	7.20	19.17	2.38	40.28	21.55
WWTP-2	7.25	18.08	2.55	38.92	9.33
WWTP-3	7.06	17.67	2.04	34.09	8.62
ETP	7.35	19.17	2.50	60.17	10.84
BETP	7.32	46.92	4.43	142.49	19.57

B - 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 2021-22

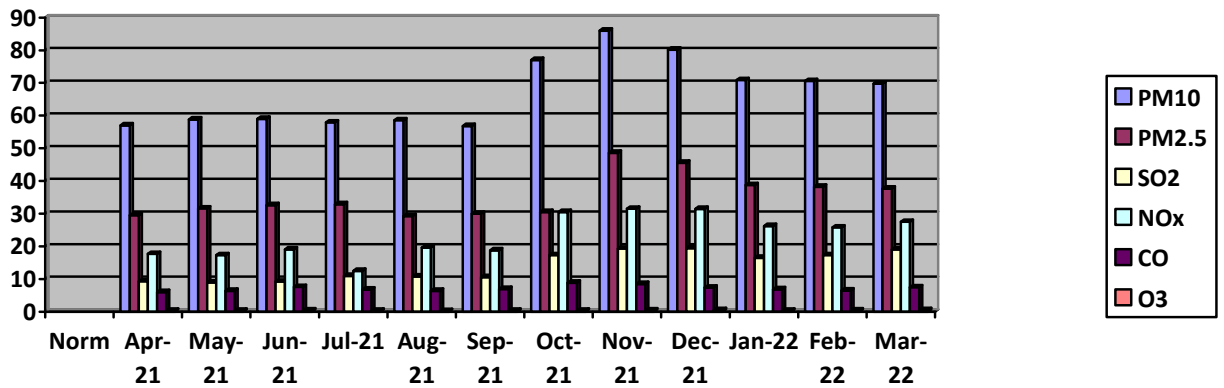
1. Near Township
2. Near railway gate
3. Behind CRM

Ambient Air Quality Report Near Town Ship-2021-22

Parameter	Norm	April21	May21	June21	July21	Aug21	Sept21	Oct21	Nov21	Dec21	Jan22	Feb22	Mar22
PM10	100µg/m3	57	58.8	59	57.9	58.6	56.8	77	86	80.14	70.87	70.6	69.8

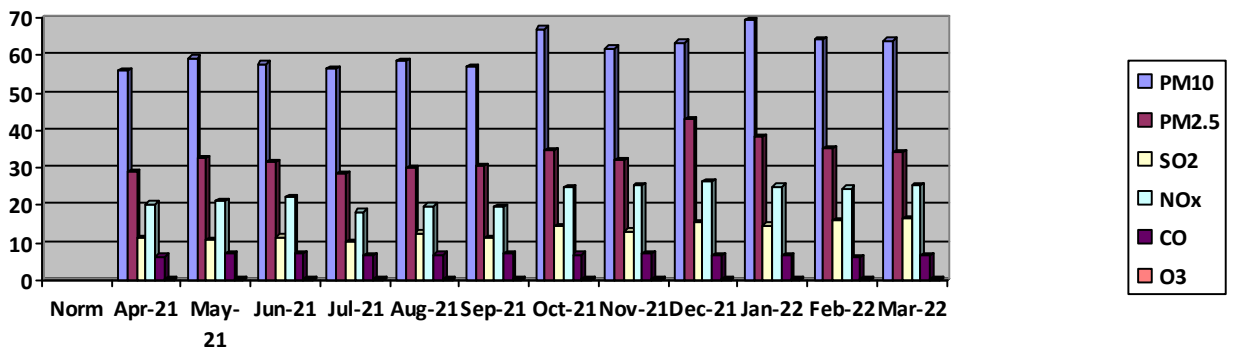
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PM2.5	60 µg/m3	29.5	31.6	32.6	32.9	29.3	30	30.5	48.6	45.6	38.77	38.25	37.64
SO2	80 µg/m3	9.3	9	9.2	11	10.8	10.6	17.3	19.3	19.42	16.51	17.3	19.1
NOx	80 µg/m3	17.7	17.3	19.1	12.5	19.6	18.8	30.5	31.5	31.46	26.22	25.8	27.5
CO	4000 µg/m3	6	6.4	7.6	6.8	6.4	7	8.9	8.5	7.4	6.9	6.5	7.5
O3	100 µg/m3	.28	.32	.38	.32	.25	.28	0.32	0.45	0.48	0.36	0.42	0.5



Ambient Air Quality Report-Near Railway Gate-2021-22

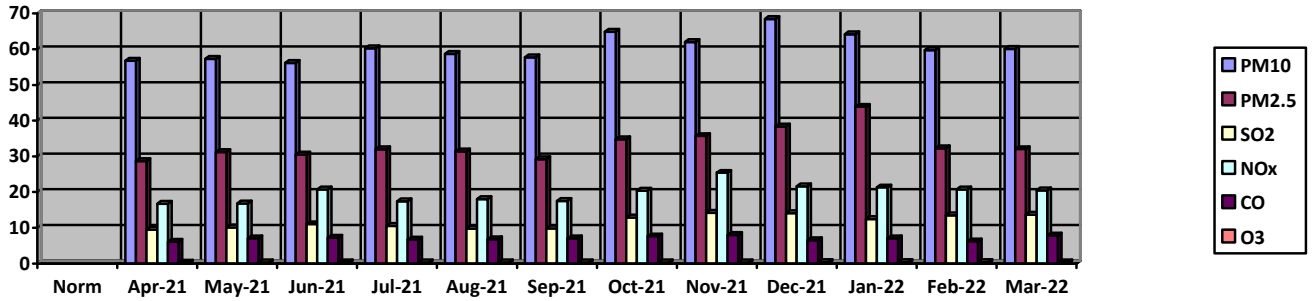
Parameter	Norm	April21	May 21	June21	July21	Aug.21	Sept21	Oct21	Nov.21	Dec21	Jan22	Feb22	Mar22
PM10	100µg/m3	56.1	59.4	57.8	56.7	58.5	57.26	67.2	62	63.54	69.36	64.51	64.08
PM2.5	60 µg/m3	29.2	32.8	31.7	28.32	29.9	30.5	34.7	32	43.03	38.2	35.45	34.4
SO2	80 µg/m3	11.5	11	11.6	10.5	12.7	11.5	14.3	13.2	15.66	14.74	15.93	16.5
NOx	80 µg/m3	20.4	21.3	22.2	18.4	19.9	19.8	24.8	25.5	26.31	25.16	24.61	25.48
CO	4000 µg/m3	6.4	7.2	7.1	6.7	7	7.1	6.9	7.4	6.8	6.5	6.3	6.8
O3	100 µg/m3	0.28	0.34	0.35	0.28	0.3	0.32	0.38	0.4	0.46	0.43	0.42	0.4



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Ambient Air Quality Report-Behind CRM-2021-22

Parameter	Norm	Apr21	May21	Jun21	Jul21	Aug21	Sept.21	Oct21	Nov21	Dec21	Jan22	Feb22	Mar22
PM10	100µg/m3	56.8	57.3	56.2	60.3	58.7	57.7	64.9	62	68.5	64.2	59.71	60.08
PM2.5	60 µg/m3	28.7	31.2	30.5	32	31.4	29.2	34.8	35.7	38.37	43.9	32.25	32.03
SO2	80 µg/m3	9.5	10.1	11	10.5	9.7	9.8	12.9	14.2	14.07	12.46	13.51	13.64
NOx	80 µg/m3	16.7	16.8	20.7	17.4	18	17.5	20.4	25.4	21.62	21.3	20.71	20.48
CO	4000 µg/m3	6.1	7	7.2	6.7	6.8	7	7.6	8	6.5	7	6.2	7.8
O3	100 µg/m3	0.27	0.31	0.35	0.32	0.29	0.28	0.34	0.31	0.39	0.4	0.39	0.36



PART-D

HAZARDOUS WASTE

Hazardous Waste

Hazardous Waste	Total quantity(MT)		
		During the Financial Year 2020-21	During the Current Financial Year 2021-22
a) From Process	Used Oil	49.73 MT	170.82 MT
	Waste /residue containing Oil	84.14 MT	282.15 MT
	Oil & Grease Skimming Residue	15.0 MT	30.25 MT
	Zinc Dross/Flux/Ash/Skimming	1155.57	762.704 MT
	Discarded Containers/Barrels	5496 nos.	4636 Nos
	Spent ion exchange resin SAC& SBA	14.75 MT	-
(b) From Pollution Control Facilities	ETP Sludge	121.65 MT	408.37 MT

B. Method of Disposal of Hazardous Wastes:

Hazardous waste			Method of handling
From Process	Waste category	Waste generated	
Used oil/ Spent Oil	5.1	170.82 MT	Stored in MS drum over concrete floor under shed and sale to authorized recycler / reprocessor having valid authorization from SPCB, Odisha.
Wastes/Residues Containing Oil	5.2	282.15 MT	Stored in the Hazardous waste container under shed and sale to authorized recycler, reprocessor or

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			disposed through authorized Hazardous waste incinerator /CHWTSDF authorised by SPCB, Odisha.
Oil and Grease Skimming Residue from ETP	5.1	30.25 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	762.704 MT	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	4636 Nos	Bye back through Supplier/Actual user or disposed through authorized recycler.
Spent Ion exchange resin containing toxic metals	35.2	-	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	408.37 MT	Disposed through Authorized Hazardous waste incinerator/Common Hazardous Waste Treatment Storage Disposal facility (CHWTSDF) authorized by SPCB, Odisha.

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PART-E

SOLID WASTE

Generation and Utilization of Solid Waste

Types of Solid Waste		Total quantity (MT)		Mode of Utilization
		During the Previous Financial Year 2020-21	During the Current Financial Year 2021-22	
(a) From Process	Kiln Accretion	7631MT	17063 MT	Land filling
	Char	201916 MT	256156 MT	Used in CPP
	Fly Ash	947576 MT	1010516 MT	Utilized in Bricks plant, Quarry filling, Embankment raising, Land filling and road making
	Bottom ash	251812 MT	268885MT	
	SMS Slag	489525 MT	770943 MT	SMS slag metallic part reuse in sinter plant and SMS and residue used in land filling
	Sinter plant ESP dust	8773 MT	14243 MT	Recycled in Sinter / Pellet plant
	Granulated Slag of BF	494271 MT	900000 MT	Sold to cement Plant
	Granulated iron oxide ARP	5788 MT	6666 MT	Reused in sinter plant
(b) From Pollution Control Facilities	Sludge From STP	14.95 MT	25 MT	Mixed with soil & used as manure in Horticulture application inside plant premises.
	FES Dust from EAF/LAF	10800 MT	38038 MT	Recycle through pellet/sinter plant
(c) Quantity recycled or reutilized within the Unit	Char	201916 MT	257499 MT	Used in CPP
	Granulated Iron Oxide from ARP	5788 MT	6666 MT	Recycled in sinter plant
	Fly Ash	947576 MT	1010516 MT	Utilized in Bricks plant, Quarry filling, Embankment raising, Land filling and road making
	Bottom Ash	251812 MT	268885MT	

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	Sludge from STP	14.95 MT	25 MT	Mixed with soil & used as manure in Horticulture application inside plant premises.
	FES Dust from EAF/LRF	10800 MT	38038 M	Recycled in Sinter / Pellet plant
	Sinter plant ESP Dust	8773 MT	14243 MT	Recycled in Sinter / Pellet Plant
	Granulated slag of Blast Furnace	494271 MT	842099 MT	Sold to cement 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	
SiO ₂	47.21	49.96	40.15	37.35	35.18	14.10	2.68	1.36	2.06
Al ₂ O ₃	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
TiO ₂	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		
SiO ₂	55.30	49.67		4.72	5.01	6.09	3.44	11.3	6.33
Al ₂ O ₃	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
TiO ₂	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:

- BPSL receives water from Back water of Hirakud reservoir and stored in two nos of reservoir inside the plant.
- BPSL has installed 03 number of Wastewater 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 wastewater treatment plants, the water is used for makeup water for DRI, Pellet plant, CPP ash quenching, SMS slag quenching, firefighting, sprinkling on haul roads to control fugitive emissions and for plantation purpose.
- BPSL has installed one ETP for CRM effluent one BETP for Coke Oven -2 and 03nos. of STP for Sewage of township.
- Installation of RO system of Capacity 510 m³/hr. The permeate water generated of 350m³/hr are being utilized as DM water plant feed and cooling tower make up water.
- Following action taken for reduction in Raw water consumption.
 - a) Running of Cooling towers on High cycle of concentration (COC 5.0 to 6.0) and reducing of water losses through blow down.
 - b) Acidic/Alkaline wastewater generated from DM plant is neutralized in neutralization pit and reused for ash conditioning.
 - c) Cooling tower blow down water of CPP 3x 130 MW is completely reused for ash quenching in silos.
 - d) Using treated effluent of ETP for dust suppression inside plant premises.
 - e) Recycling backwash water from Sand filters to Wastewater Treatment plant.
 - f) Increase OBR of Ion-exchangers beds in DM plant to reduce effluent generation by modifying flow-measuring instruments and RO water feed.
 - g) RO plant productivity increased and maintained.
 - h) Reduce the blowdown of cooling tower for reduce the consumption of water.

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Air Environment:

- Reduction of greenhouse 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).
 - c) Commissioning of PCI in BF -2 to reduce carbon footprint.
 - d) Reduce CO₂ emission pneumatic air leakage prevented, and 4 nos of running compressor stopped.
- To reduce fuel consumption KTLANCE replace with KOJET LANCE in SMS-1
- 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.
- Concreting of all internal roads work under progress to reduce the fugitive dust emissions inside plant premises.
- Mobile water sprinkling tankers are being engaged for regular water sprinkling on haul roads and in construction areas for control of fugitive dust emissions.
- Six numbers of truck mounted vacuum road sweepers are being engaged for continuous cleaning of concrete roads inside the plant premises to control fugitive dust.
- Fixed water sprinklers have been installed the potential areas of DRI units, Raw material handling and stacking areas for suppression of fugitive dust emissions.
- Installation of two nos. of wheel washing system to clean the wheel of heavy vehicle and control fugitive dust carrying outside.
- Four nos. of Wheel washing system procured and the material received at site.
- Installation of Mercury (Hg) analyzer has been completed in all the stacks of CPP and connected to OSPCB /CPCB server
- For compliance and effective monitoring by installation of CEMS, CAAQMS and CEEQMS.
- For proper maintenance of all the online monitoring system a dedicated AMC team engaged and for transmission of data to OSPCB /CPCB server a dedicated AMC team has been engage

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.
- Up gradation of CRM Effluent Treatment plant work is under progress
- Coke ove ZLD proposal is in ordering phase
- AP CAP water recycle is under implementation.
- WWTP-3 water feeding into the RO plant ensure 100% productivity of the RO 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.
- 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.
- CPP 40 MW & 60 MW ESP revamping work completed
- Conveyor junction house inspection and modification to reduce the fugitive dust
- Charging emission also reduce by strengthening the operation performance of SOPRECO technology.
- Bags replace in baghouse of BF-1&2 Cast house ,LCP and DRI dedusting bag filter.

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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 Medi aid marketing services at common facility at Sundargarh.
- Installation of organic waste converter of capacity 500 kg /day (composting facility).
- The total quantity of BF granulated slag sold to Cement Manufacture.
- LF slag sold to cement plant .
- Iron bearing EAF slag is being feed to Blast furnace
- All the hazardous waste stored under Covered Hazardous storage Shed.

Others:

- Continuous development of flora by tree plantation and green belt development. In the year 2021-22, 54711 numbers of saplings planted in and around the plant.
- 07 nos. of IP camera procured and total 04 nos. of camera installed and connected to OSPCB server
- 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 and implementation status for the year 2021-22

S N	Project planned	Particular	Budget In Cr	Status
1	Environment Management Department building expansion	Expansion of building - civil	0.50	Work is in progress
2	Lab establishment	Civil work for lab and Modular lab	0.75	Procurement of modular lab and interior of office done
		Interiors for office and Lab	0.25	
3	Lab Instruments	Instruments, glass wares	2.0	Procurement done

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	procurement	and chemicals		
4	One CAAQMS	One instruments system with station	1.25	Installed and commissioned near ETP
5	One EQMS	For BETP with cyanide etc	0.65	Under procurement
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	Connectivity to SPCB/CPCB done
07	IP Cameras	IP Cameras installation for compliance	1.2	4 nos. of IP camera installed
08	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	
09	Procuring 4 mobile tanker based sprinklers for dusty areas	Mobile tankers having provision of - <ul style="list-style-type: none"> • Water sprinkling for road dust • Road washer • Tree washer 	1.60	Two nos. of multiutility vehicle procured and in operation
10	Installation of additional Tyre washing systems	4 Nos	0.50	Four nos. of tyre washing system procured and under implementation
11	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	LLCs is under implementation

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12	Implementation of 5 S	If any department needs any help on 5S implementation or old wastes to be disposed etc.	1.0	Implementation is in progress
13	Rainwater Harvesting	For ground water recharge and compliance to EC condition.	1.25	Study by KRG rain water foundation ,Chennai completed and recommendation is under implementation

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:

A-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 parameters provide guide for overall improvements. We are monitoring the below mention parameter on monthly basis.

SI No	Key performance indicator
01	Sp.CO2 Emission(tCO2/tcs)
02	Sp.Energy Consumption (Gcal/tcs)
03	Sp. water consumption (M3/tcs)
04	PM Emission(kg/tcs)
05	SO ₂ Emission (kg/tcs)
06	NOx Emission(kg/tcs)
07	Sp. Solid waste generation
08	% Solid waste utilization

B-Implementation of ISO System:

- Accredited ISO-14001:2015 [Environmental Management System] and ISO 9001:2015 [Quality Management System for operations of Integrated Steel Plant.
- Accredited OHSAS 18001:2007(Occupational Health and Safety Management System) for operation of Integrated Steel Plant.

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

D- World Environment Day 2021 Observed on 5th June 2021 with drive of mass plantation through out the plant

E- Regular inspection carried out through out the plant to address the non-compliances.

F-Awareness and training imparted through out the plant on Environment training modules like ,Legal compliance, Air pollution ,Water pollution and conservation, Solid waste management, Hazardous waste management.

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G- Weekly Environment awareness series also circulated among all mail recipient of the plant to develop on awareness on Environment

Photographs of Few Activity for the year 2021-22



Mechanized road sweeper



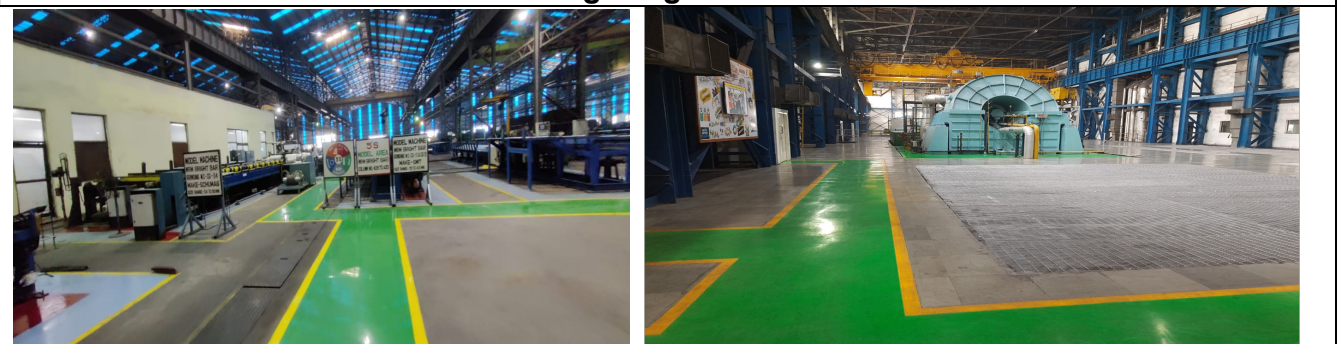
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Multiutility Vehicle



Awareness Training Programme on Environment



Implementation of 5S

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Plantation & Greenbelt Development Within Plant



Plantation at Solid waste Disposal Site (Derba)

