# स्टील अथॉरिटी ऑफ इण्डिया लिमिटेड

(भारत सरकार का उपक्रम)

# इस्को स्टील प्लांट

बर्नपुर - 713 325 पश्चिम बंगाल टेलिफोन नं० : 0341-2240441

फैक्स नं०

: 0341-2240018, 2240032

: 0341-2240704 (Works)

संदंभ संo/Ref. No.: EMD/MoEF/2024/11

ओ एवं एम/सा०/33 O & M /Genl/33

# STEEL AUTHORITY OF INDIA LIMITED

(A Govt. of India Enterprise)

## IISCO STEEL PLANT

BURNPUR - 713 325, WEST BENGAL

Phone No.: 0341-2240441

FAX No. : 0341-2240018, 2240032

: 0341-2240704 (Works)

दिनांक / Date: June 01, 2024

The IGF & Incharge,
GOI, MOEF&CC
Integrated Regional Office, Kolkata
1B-198, Salt Lake City, Sector III
Kolkata-700106

Sub: Expansion of IISCO Steel Plant (ISP) (0.55 MTPA to 2.50 MTPA, Rebuilding Battery No. 10 of Coke Oven and setting up of captive Power Plant (87.5 MW) and other Facilities at Burnpur, Asansol, Burdwan, West Bengal by M/s Steel Authority of India Limited (SAIL) – Environment Clearance

Ref.: F. No. J-11011/348/2005-IAII (I), dated 7<sup>th</sup> August, 2007 & F. No. J-11011/348/2006-IAII (I) dated 22<sup>nd</sup> November, 2007 Ministry of Environment & Forests, Govt. of India, Paryavaran Bhawan, CGO Complex, Lodi Road, New Delhi-110003 & F. No. J-11011/348/2005-IAII (I) dated 14<sup>th</sup> November, 2013

Sir,

We are enclosing herewith a status report of Compliance to the conditions stipulated in the above mentioned environmental clearance for the period October 2023 to March 2024.

Thanking you,

Yours faithfully,

(Sunil Singal)

CGM (Safety, Fire Services & Environment)

Encl

as stated

# Steel Authority of India Limited IISCO Steel Plant

Sub: Expansion of IISCO Steel Plant (ISP) (0.55 MTPA to 2.50 MTPA), Rebuilding of Coke Oven Battery No. 10 and setting up of a Captive Power Plant (87.5 MW) and other facilities at Burnpur, Asansol, Burdwan, West Bengal by M/s Steel Authority of India Limited (SAIL) – Environmental Clearance

Ref: F. No. J-11011/348/2005 – IA II (I), dated 7<sup>th</sup> August, 2007 & F. No. J-11011/348/2006 – IA II (I) dated 22<sup>nd</sup> November, 2007 & F. No. J-11011/348/2005-IA II (I) dated 14<sup>th</sup> November, 2013 of Ministry of Environment & Forests, Government of India, Paryavaran Bhawan, C.G.O. Complex, Lodi Road, New Delhi – 110003

Status report of the compliance to the conditions: October 2023 to March 2024

	Condition of MoEFCC	Status / Compliance
A.	Specific Conditions :	
i)	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19 <sup>th</sup> May, 1993 and standards prescribed from time to time. The West Bengal Pollution Control Board (WBPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	These features are taken care of in Design & Engineering Efforts are made considering necessary factor of safet that at no time, the emission level shall go beyond the prescribed standards. However, due to technological limitation and safety & hazards requirements of different units of the plant interlock facilities cannot be provided for automatically stopping. Test Reports of monitoring and analysis carried out by WBPCB and other recognized laboratories during October 2023 to March 2024 are placed at Annexure 1.
ii)	Low NO <sub>X</sub> burners shall be provided in re-heating furnace and boilers to control NO <sub>X</sub> emissions. Continuous stack monitoring facilities for all the major stacks and adequate air pollution control systems shall be provided to control air emissions within 50 mg/Nm <sup>3</sup> and reports submitted to the WBPCB & CPCB.	These features are taken care of in Design & Engineering Emission is maintained within norm. Stack, Ambient Air Work Environment, Ambient Noise and Coke over Fugitive Emissions monitoring report from October 2023 to March 2024 is placed at Annexure 2.
ii)	Ambient air quality monitoring stations shall be set up per statutory requirement in consultation with the WBPCB. Ambient air quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the State authorities. Monitoring of ambient air quality and shall be carried out regularly in consultation with WBPCB and data submitted to the CPCB and WBPCB regularly. The instruments used for ambient air quality monitoring shall be calibrated time to time.	Monitoring stations already exist. Calibration being done regularly. Five (5) Nos. of Continuous Ambient Air Quality Stations (CAAQMS) are set up at Township (1 No.) & Plant (4 Nos.).
V)	In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. ESP to the new sinter plant, ventury scrubber to BOF shop, pulse jet type bag filter to lime and dolomite plant and bag filters in material handling areas and material transfer points shall be provided. A fume extraction system comprising suction hood, associated duct, cyclone/scrubber shall be provided to control dust generated during secondary refining. Dedusting system shall be provided at different material transfer points. Tar, NH <sub>3</sub> shall be cleaned in the process and H <sub>2</sub> S recovery from the coke oven shall be ensured. By-product fuel gases shall be used for steam and power generation.	The stipulated control measures have been considered in Design & Engineering and installed. List of Pollution Control equipment installed in various units are provided in Annexure 3. Tar, NH <sub>3</sub> is being cleaned and H <sub>2</sub> S recovery from Coke Oven is being done.
		AGM (Environment)

4	Condition of MoEFCC	Status / Compliance
/)	Dry fog dust suppression system shall be provided to control fugitive emissions. Further, specific measures like water sprinkling around the coal stockpiles and asphalting or concreting of the roads shall be done to control fugitive emissions. Secondary fugitive emissions shall be controlled within the prescribed limits, regularly monitored and records maintained. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed.	Dry fog dust suppression system and water sprinkling systems installed. Secondary fugitive emissions are being controlled by deploying sprinklers and mist canons.
vi)	Total requirement of the water from River Damodar shall not exceed 23 MGD and prior 'permission' – for the total water requirement shall be obtained from the concerned Department before commissioning the project. Effluent Treatment Plant (ETP) shall be installed for the treatment of process water. During the rebuilding of coke oven battery, BOD plant shall be provided for the disposal of liquid effluent. The wastewater generated from blast furnace (BF) shall be treated in clarifier and reused in the system. Blow down from BF re-circulation system shall be reused in SGP as make up water. Blow down from BOF recirculation system shall be installed. All the wastewater generated shall be treated, recycled and reused either in the process or for dust suppression or green belt development. No wastewater shall be discharged outside the factory premises and 'Zero' discharge shall be adopted. Domestic effluent shall be treated in sewage treatment plant (STP).	These features are taken care of in Design & Engineering. Process water is recycled. Septic Tank has been made for domestic effluent ZLD plants are commissioned.
vii)	All the BF slag shall be either sold or used for road construction. BF sludge and BOF sludge shall be partly used in sinter plant and partly dumped. BOF slag shall be reused in BF, sinter plant as well as ballast. All the BF fume dust, BOF scale, Mill scales, Lime dust, Dolo dust, Burnt lime, Pig casting machine sludge etc. shall be reused in sinter plant. All the mill scrap and skull/scrap shall be reused in BOF plant. Blast furnace gas, Coke oven gas, BOF gas, Liquid Oxygen, LPG, shall be used in the power plant, Tar sludge, BOD plant sludge and waste oil shall be generated during the rebuilding of coke oven battery shall be properly disposed of as per the Hazardous Waste (Management & Handling) Rules, 1989 and subsequent amendments.	BF slags are being sold regularly and Hazardous wastes are being disposed as per Hazardous & Other Wastes (Management And Trans-boundary Movement) Rules 2016.
/iii)	The prescribed emission standards for coke oven plants as notified vide notification no. GSR 46 (E) dated 3 <sup>rd</sup> February, 2006 shall be complied with.	Complied
ix)	All the environment management measures given in the EIA/EMP shall be implemented and complied with.	Complied
x)	Out of total 1,165.58 ha.green belt shall be developed in 260 ha. area in addition to existing 43 ha within and around the plant premises as per the CPCB guidelines in consultation with DFO.	Development of green belt is done in and around the plant premises as per the CPCB guidelines and total planted area is more than 305 Ha.
B.	General Conditions:	Complied
)	The project authority shall adhere to the stipulation made by West Bengal Pollution Control Board (WBPCB) and State Government.	Complied
i)	No further expansion of modification of the plant shall be carried out without prior approval of this Ministry.	Agreed

24.5	Condition of MoEFCC	Status / Compliance
iii)	The overall noise levels in and around the plant area shall be kept well within the standards (85 dB (A)) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dB(A) (day time) and 70 dB(A) (night time).	
iv)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Complied.
V)	All the recommendations mentioned in the Corporate Responsibility for Environmental Protection (CREP) of CPCB issued for the steel plants shall be implemented.	Implemented
vi)	The company shall undertake eco-development measures including community welfare measures in the project area.	Being done on regular basis under Corporate Social Responsibility (CSR). List of CSR activities carried out during April 2023 to March 2024 is placed at Annexure 4.
vii)	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	WBPCB in its Consent to Establish for expansion of ISP directed SAIL-ISP not to discharge rain water into the ground. Roof top rainwater harvesting system is installed and commissioned at Refractory storage shed area.
viii)	Proper housekeeping and adequate occupational health programmes shall be taken up.	Being done on regular basis
ix)	A separate environmental management cell to carry out various management and monitoring functions shall be set up under the control of Senior Executive.	Already exists with CGM (Safety, Fire Services & Environment), GM (Safety & Environment), 3 officers & 5 non-executives.
x)	As mentioned in the EIA/EMP, Rs. 480.00 Crores and Rs. 36.60 Crores allocated towards the capital cost and recurring cost/annum environmental pollution control measures shall be judiciously used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.	Allocated amount being utilized for environmental measures.
xi)	The Regional Office of this Ministry at Bhubaneswar/CPCB/WBPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Monitoring Reports along with statistical interpretation are being submitted regularly to MoEFCC.
xii)	The Project Authorities shall inform the Regional Office as well as Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Land development work is done since November, 2007. Status report submitted on six monthly basis.
xiii)	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the W.B. Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in. This should be advertised within seven days from the date of issue of the clearance letter at least in two local newspaper that are widely circulated in the region of which one shall be in the vernacular language of the locally concerned and a copy of the same shall be forwarded to the Regional Office at Bhubaneswar.	Complied.



# Annexure 1 Test Reports

महायक महाप्रवेधक (पंचावरण प्रवेधन AGM (Environ. Mgmt.) सेल-आई. एस. पी., बर्नपुर SAIL-ISP, BURNPUR

## WEST BENGAL POLLUTION CONTROL BOARD



Durgapur Regional Laboratory, Paribesh Bhawan, City Centre, Durgapur- 713 216

Mr. A. Barman, AEE

NA.				
Analysis done at:		M/s, SAIL-ISP		
1.Name of Industry		Burnpur, Paschim Bardhaman,	713325	
2.Address		Red & Steel Paint	12020	
3. Category & Type				
4.Sampling Date		28.11.2023		
5.Duration of Sampling		38 min		
6.Name of Laboratory		M/s. Indicative Consultant India	1	
7.Height of Stack from ground (m)		65.0		
8. Cross section of Stack at sampling point (r	$n^2$ )	8.045		
Stack connected to		WRM		
10. Emission due to (Furnace / Boiler)		Burning of Mixed Gas		
11. Average operational hours of boiler/furna	ace (per month)	720 hrs/month		
12.APC System (if any)				
13. Working load of source (MT/hr)		150 MT/hr.		
14. Fuel used		Mixed Gas - 7,10,588 m <sup>3</sup> /hr. WRM		
15.Rated Fuel consumption (Kg or I /hr)				
16. Working Fuel consumption (Kg or I/hr)				
17. Nature of furnace/boiler				
18.Flue Gas Temp ("C)		195.0		
19.Flue gas velocity (m/s)	12.20	20. Volume of Flue gas drawn in	lit (m3)	1.33
21.Corrected flue gas volume (Nm³)	1.235	22.Percentage of CO <sub>2</sub> & O <sub>2</sub>		CO <sub>2</sub> =4.6% O <sub>2</sub> =14.8%
23.To be compensated at (% if required)		*		
24.Initial wt of thimble (gm)	1.4819	25. Final wt of thimble (gm)	1.4901	
26.Wt. of PM (mg)	8.20	27 Particulate matter (mg/Nm3)	6.64	
28.Barometric Pressure Head (mm of Hg)	752	29.Diameter of the nozzle		
3. Others -	10 Park	31, Thimble Number	5019	

08.12.2023

32. Sampled by

Date of Reporting

Junior Scientist, DRL

Alm. 08/12/2023

Scientist, DRL

Copy to:

Chief Engineer - Operation & Execution, WBPCB 1.

Chief Scientist, WBPCB 2.

3. Env. Engineer (DRO) / Env. Engineer (ARO), WBPCB

Industry

महायक महाप्रवधक (पर्यावरण प्रवधन

AGM (Environ, Mgmt.) सेल-आई. एस. पी., बर्नपुर SAIL-ISP, BURNPUR

Identification Code: 2 8 1 1 2 0 2 3 9 5 4 4



# WEST BENGAL POLLUTION CONTROL BOARD

Durgapur Regional Laboratory, Paribesh Bhawan, City Centre, Durgapur-713 216

Analysis done at:

Analysis done at:				
1.Name of Industry	M/s. SAIL-ISP			
2.Address	Burnpur, Paschim Bardhaman, 713325			
3. Category & Type		Red & Steel Paint	. , , , , , , , ,	
4. Sampling Date		28.11.2023		
5. Duration of Sampling		40 min		
6.Name of Laboratory		M/s. Indicative Consultant Ind	fa.	
7. Height of Stack from ground (m)		79.1	ia	
8. Cross section of Stack at sampling point	(m <sup>2</sup> )	15.91		
tack connected to	Charles Control	BOF (Basic Oxygen Furnace)	v =	
10.Emission due to (Furnace / Boiler)		Process Activity		
11. Average operational hours of boiler/furn	ace (per month)	720 hrs/month		
12.APC System (if any)	(per monen)	ESP ESP		
13. Working load of source (MT/hr)		150 MT/hr.		
14. Fuel used				
15.Rated Fuel consumption (Kg or 1/hr)				
16. Working Fuel consumption (Kg or 1/hr)				
17. Nature of furnace/boiler		n o		
18.Flue Gas Temp (°C)		Basic Oxygen Furnace 41.0		
19.Flue gas velocity (m/s)	12.90		-	
21.Corrected flue gas volume (Nm³)	0.9123	20. Volume of Flue gas drawn in	lit (m²)	1.0
	0.9123	22.Percentage of CO <sub>2</sub> & O <sub>2</sub>		CO2=2.89
23. To be compensated at (% if required)	-			O2=17.2%
24.Initial wt of thimble (gm)	1.6517	05 Pt-1 . P.F		
26.Wt. of PM (mg)	12.40	25. Final wt of thimble (gm)	1.6641	
28.Barometric Pressure Head (mm of Hg)	752	27. Particulate matter (mg/Nm <sup>3</sup> )	13.59	
Others -	1.604	29. Diameter of the nozzle	· 6.35 mi	n
32. Sampled by		31. Thimble Number	5003	
		Mr. A. Barman, AEE		

08.12. 2023. Date of Reporting Junior Scientist, DRL

08/12/2023 Scientist, DRL

Copy to:

1. Chief Engineer - Operation & Execution, WBPCB

2. Chief Scientist, WBPCB

3. Env. Engineer (DRO) / Env. Engineer (ARO), WBPCB

4. Industry

Broy

महायक महाप्रवंधक (पर्यावरणं प्रवेचने AGM (Environ, Mgmt.) सेल-आई. एस. पी., बर्नपुर SAIL-ISP, BURNPUR Identification Code: 2 8 1 1 2 0 2 3 9 5 4 3

# WEST BENGAL POLLUTION CONTROL BOARD

Durgapur Regional Laboratory, Paribesh Bhawan, City Centre, Durgapur- 713 216

Mr. A. Barman, AEE

N. P.				
Analysis done at:		M/s. SAIL-ISP		
1.Name of Industry		Burnpur, Paschim Bardhaman, 7	13325	
2.Address	-	Red & Steel Paint	( (a), (v) (v), (3)	
3.Category & Type				
4.Sampling Date		28.11.2023		
5. Duration of Sampling		38 min		
6. Name of Laboratory		M/s. Indicative Consultant India		
7. Height of Stack from ground (m)		120.0		
8 Cross section of Stack at sampling point (n	12)	26.431		
_stack connected to		Coke Oven Battery (No11)	2 0 0	
10 Emission due to (Furnace / Boiler)		Combustion of CO Gas & Conve	ersion of Coal	
11. Average operational hours of boiler/furna	ce (per month)	720 hrs/month		
12.APC System (if any)				
13. Working load of source (MT/hr)		V		
14. Fuel used		CO Gas		
15.Rated Fuel consumption (Kg or 1/hr)				
16. Working Fuel consumption (Kg or 1/hr)		21,62,600 m <sup>3</sup> /Day		
17. Nature of furnace/boiler		Coke Oven		
18.Flue Gas Temp ( <sup>0</sup> C)		208.0		
19.Flue gas velocity (m/s).	6.87	20. Volume of Flue gas drawn in	lit (m²) 1.292	
21. Corrected flue gas volume (Nm³)	1.187	22. Percentage of CO2 & O2	CO <sub>2</sub> =5.2%	
21. Corrected fide gas volume (ivin )		7	$O_2 = 13.0\%$	
23.To be compensated at (% if required)		1.		
24.Initial wt of thimble (gm)	1,4145	25. Final wt of thimble (gm)	1.4223	
26.Wt. of PM (mg)	7.80 -	27.Particulate matter (mg/Nm3)	6.57	
28. Barometric Pressure Head (mm of Hg)	752	29.Diameter of the nozzle	12.7 mm.	
3. Others SO <sub>2</sub> & NO <sub>x</sub>	11 10 10 10 10 10 10 10 10 10 10 10 10 1	31. Thimble Number	4999	
SU. CAHCIS SUZ & INOX		Mr. A. Barman, AEE		

08 · 12 · 2023 Date of Reporting Junior Scientist, DRL

Scientist, DRL

Copy to:

32. Sampled by

Chief Engineer - Operation & Execution, WBPCB

2. Chief Scientist, WBPCB

Env. Engineer (DRO) / Env. Engineer (ARO), WBPCB

4. Industry

Dist.

महायक महाप्रवंधक (पर्यावरण प्रवधन AGM (Environ, Mgmt.) सेल-आई, एस. पी., वर्नपुर SAIL-ISP, BURNPUR

Identification Code: 2 9 1 1 2 0 2 3 9 5 2 9



# WEST BENGAL POLLUTION CONTROL BOARD

Durgapur Regional Laboratory, Paribesh Bhawan, City Centre, Durgapur-713 216

Analysis done at:

Analysis done at:					
1.Name of Industry	M/s. SAIL-ISP				
2.Address	Burnpur, Paschim Bardhaman, 713325				
3. Category & Type		Red & Steel Paint	, /13323		
4. Sampling Date		29.11.2023			
5. Duration of Sampling		38 min			
6. Name of Laboratory		M/s. Indicative Consultant Ind			
7. Height of Stack from ground (m)		85.0	ia		
8. Cross section of Stack at sampling point	$(m^2)$	25,5279			
tack connected to	(iii )	Sinter Plant-1			
T0.Emission due to (Furnace / Boiler)					
11. Average operational hours of boiler/furr	race (per mont)	Combustion of Coke Oven Gas .			
12.APC System (if any)	race (per monti	AND THE RESERVE OF THE PARTY OF	The state of the s		
13. Working load of source (MT/hr)		ESP			
14. Fuel used		5886 MT/hr. Coke Oven Gas			
15.Rated Fuel consumption (Kg or 1/hr)					
16. Working Fuel consumption (Kg or 1/hr)					
17. Nature of furnace/boiler		The state of the s	6000 m³/hr.		
18.Flue Gas Temp ( <sup>6</sup> C)		Sinter Plant			
19.Flue gas velocity (m/s)	8.57	127.0			
21. Corrected flue gas volume (Nm3)	1.038	20. Volume of Flue gas drawn in	lit (m <sup>3</sup> )	1.14	
sans gas reading (run )	1.038	22.Percentage of CO <sub>2</sub> & O <sub>2</sub>		CO2=7.29	
23. To be compensated at (% if required)				O2=12.0%	
24.Initial wt of thimble (gm)	1.5260	20 70			
6.Wt. of PM (mg)	48.30	25.Final wt of thimble (gm)	1.5743		
8.Barometric Pressure Head (mm of Hg)	751	27. Particulate matter (mg/Nm³)	46.53		
Others -	131	29. Diameter of the nozzle			
32. Sampled by		31. Thimble Number	5020		
AND AND ADDRESS OF THE PARTY OF		Mr. P. Mondal, JEE	51		

08.12.2023. Date of Reporting Junior Scientist, DRL

Apr. 08/12/2023 Scientist, DRL

Copy to:

Chief Engineer - Operation & Execution, WBPCB

Chief Scientist, WBPCB 2.

Env. Engineer (DRO) / Env. Engineer (ARO), WBPCB 3.

4. Industry

सहायक महाप्रवधक (प्रयायस्य प्रवधने AGM (Environ, Mgmt.) सेल-आई: एम. पी., बर्नपुर SAIL-ISP, BURNPUR

Identification Code: 0 6 0 3 2 0 2 4 9 7 0 8

### WEST BENGAL POLLUTION CONTROL BOARD

Durgapur Regional Laboratory, Paribesh Bhawan, City Centre, Durgapur-713 216

Analysis done at:		F	- William	
.Name of Industry	M/s. Sail-ISP (Burnpur)			
2.Address	Burnpur, Paschim Bardhaman, Pin- 713325			
3.Category & Type		Red		
4.Sampling Date		06.03.2024		
5.Duration of Sampling		37 min		
6.Name of Laboratory		S.M. Scientific Science		
7. Height of Stack from ground (m)	and the last	31.0		
8. Cross section of Stack at sampling point (r	n <sup>2</sup> )	11.6463		
9.Stack connected to		Cost House-1 of Blast Furnace-5	i .	
10.Emission due to (Furnace / Boiler)		Process Activity		
1 Average operational hours of boiler/furns	ice (per month)			
Tz.APC System (if any)		ESP		
13. Working load of source (MT/hr)		· Company of the second		
14. Fuel used				
15.Rated Fuel consumption (Kg or 1/hr)				
16. Working Fuel consumption (Kg or l/hr)				
17.Nature of furnace/boiler		•		
18.Flue Gas Temp (°C)	Y	48.0	1 1 2 2 2	
19.Flue gas velocity (m/s)	14,53	20. Volume of Flue gas drawn in	lit (m <sup>3</sup> )   1.020	
21.Corrected flue gas volume (Nm <sup>3</sup> )	0.907	22.Percentage of CO <sub>2</sub> & O <sub>2</sub>		
23. To be compensated at (% if required)	7			
24.Initial wt of thimble (gm)	1.7014	25.Final wt of thimble (gm)	1.7074	
26.Wt. of PM (mg)	6.00	27.Particulate matter (mg/Nm³)	6.62	
28.Barometric Pressure Head (mm of Hg)	755	29.Diameter of the nozzle	6.35 mm	
30. Others SO <sub>2</sub> & NO <sub>x</sub>		31. Thimble Number 5184		
32. Sampled by	N N	Mr. A. Barman, AEE		

04/4/2021 Date of Reporting

Prepared by

Checked by

Signature of In-Charge, DRL

Copy to:

Chief Engineer - Operation & Execution, WBPCB 1.

2. Chief Scientist, WBPCB

Env. Engineer (DRO) / Env. Engineer (ARO), WBPCB 3.

Industry

महायक महाप्रवधक (पवावरण प्रवधन AGM (Environ. Mgmt.)

सेल-आई. एस. पी., वर्नपूर



#### WEST BENGAL POLLUTION CONTROL BOARD

Durgapur Regional Laboratory, Paribesh Bhawan, City Centre, Durgapur-713 216

Analysis done at:

1. Name of Industry		M/s Sail ISD (Dynaman)			
	2. Address		M/sSail-ISP (Burnpur) Burnpur, Paschim Bardhaman, Pin- 713325		
3. Category & Type		Red Raschim Bardhaman,	Pin- /13	323	
4.Sampling Date		06.03.2024			
5. Duration of Sampling		38 min			
6.Name of Laboratory		S.M. Scientific Science			
7. Height of Stack from ground (m)		110.0			
8. Cross section of Stack at sampling point (1	$m^2$ )	9.625	-		
<sup>a</sup> Stack connected to		Coke Oven Battery No10		-	
10.Emission due to (Furnace / Boiler)		Combustion of CO Gas			
11. Average operational hours of boiler/furna	ace (per month)	=			
12.APC System (if any)		None			
13. Working load of source (MT/hr)		1653 MT/Day			
14. Fuel used		CO Gas			
15.Rated Fuel consumption (Kg or 1/hr)					
16. Working Fuel consumption (Kg or 1/hr)		11800 M <sup>3</sup> / hr			
17. Nature of furnace/boiler					
18.Flue Gas Temp (°C)		133.0			
19.Flue gas velocity (m/s)	7.82	20. Volume of Flue gas drawn in	lit (m <sup>3</sup> )	1.011	
21.Corrected flue gas volume (Nm³)	0.889	22.Percentage of CO <sub>2</sub> & O <sub>2</sub>		CO <sub>2</sub> =5.4 % O <sub>2</sub> =13.2 %	
23. To be compensated at (% if required)					
24.Initial wt of thimble (gm)	1.7283	25. Final wt of thimble (gm)	1.7435		
26.Wt, of PM (mg)	15.20	27.Particulate matter (mg/Nm³)	17.10		
28 Barometric Pressure Head (mm of Hg)	755	29.Diameter of the nozzle	9.523 mm		
Others SO <sub>2</sub> & NO <sub>x</sub>		31. Thimble Number 5183			
32. Sampled by		Mr. A. Barman, AEE			

04/04/Evet

Date of Reporting

Prepared by

Checked by

oyloghory

Signature of In-Charge, DRL

Copy to:

- 1. Chief Engineer - Operation & Execution, WBPCB
- 2. Chief Scientist, WBPCB
- 3. Env. Engineer (DRO) / Env. Engineer (ARO), WBPCB
- 4. Industry

HELIANDER CONTROL HAVE AGM (Environ, Mgmt.)

Identification Code: 0 7 0 3 2 0 2 4 9 7 1 2

# WEST BENGAL POLLUTION CONTROL BOARD

Durgapur Regional Laboratory, Paribesh Bhawan, City Centre, Durgapur- 713 216

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Chillie	14.919 M	UIIC	48.6.4

Analysis done at:		TO DIV. THE SECOND SHIP SHIP SHIP SHIP SHIP SHIP SHIP SHIP	-		
1.Name of Industry	M/s, Sail-ISP (Burnpur)				
2.Address	Burnpur, Paschim Bardhaman				
3.Category & Type		Red			
4.Sampling Date		07.03.2024			
5.Duration of Sampling		45 min			
6.Name of Laboratory		S.M. Scientific Science			
7. Height of Stack from ground (m)		65.0			
8. Cross section of Stack at sampling point (n	$n^2$ )	8.0457			
Stack connected to		WRM			
10.Emission due to (Furnace / Boiler)		Burning of Mixed Gas			
11. Average operational hours of boiler/furna	ice (per month)	720 Hrs/Month			
12.APC System (if any)		None			
13. Working load of source (MT/hr)		150 MT/hr			
14. Fuel used		Mixed Gas			
15.Rated Fuel consumption (Kg or 1/hr)		7,10,588 m <sup>3</sup> / Day.			
16. Working Fuel consumption (Kg or 1/hr)					
17.Nature of furnace/boiler					
18.Flue Gas Temp (°C)		125.0		T =	
19.Flue gas velocity (m/s)	14.36	20. Volume of Flue gas drawn in	lit (m <sup>3</sup> )	1.019	
21.Corrected flue gas volume (Nm³)	0.878			CO <sub>2</sub> =5.8 % O <sub>2</sub> =14.0 %	
23. To be compensated at (% if required)					
24.Initial wt of thimble (gm)	1.6140	25.Final wt of thimble (gm)	1.6254		
26.Wt. of PM (mg)	11.40	27.Particulate matter (mg/Nm <sup>3</sup> )		12.98	
28.Barometric Pressure Head (mm of Hg)	754	29.Diameter of the nozzle	6.35 m	m.	
0. Others -		31. Thimble Number 5188			
32. Sampled by		Mr. S. Bhattacharya, EE & Mr.	R. Chak	trabarty, AE	

01/01/2021 Date of Reporting

Prepared by

Checked by

Signature of In-Charge, DRL

Copy to:

Chief Engineer - Operation & Execution, WBPCB

Chief Scientist, WBPCB 2.

Env. Engineer (DRO) / Env. Engineer (ARO), WBPCB 3.

Industry

महायक महाप्रविधक (प्रयावरण प्रविधन AGM (Environ, Mgmt.) सेल-आई. एस. पी., बर्नपुर SAIL-ISP, BURNPUR

Identification Code: 0 7 0 3 2 0 2 4 9 7 1 4

## WEST BENGAL POLLUTION CONTROL BOARD

Durgapur Regional Laboratory, Paribesh Bhawan, City Centre, Durgapur-713 216

VANCE OF SHIP	Acres were	· Constitution of the	
Ang	Veis	done	211

1.Name of Industry		M/s. Sail-ISP (Burnpur)							
2.Address		Burnpur, Paschim Bardhaman, 713325							
3.Category & Type		Red	On the State of th						
4.Sampling Date		07.03.2024							
5.Duration of Sampling		41 min							
6.Name of Laboratory		M/s. S.M. Scientific Science							
7. Height of Stack from ground (m)		70.0							
8. Cross section of Stack at sampling point (n	$n^2$ )	12.5714							
'tack connected to		Blast Furnace-5 (Stove)							
10.Emission due to (Furnace / Boiler)		Burning of Mixed Gas							
11. Average operational hours of boiler/furna	ce (per month)								
12.APC System (if any)		Dust Catcher & Venturi Scrubber							
13. Working load of source (MT/hr)		7700 MT/Day							
14. Fuel used 15.Rated Fuel consumption (Kg or 1 /hr) 16. Working Fuel consumption (Kg or 1 /hr)		Mixed Gas - 33,14,800 m <sup>3</sup> /Day.							
					17. Nature of furnace/boiler				
					18.Flue Gas Temp (°C)		83.0		
19.Flue gas velocity (m/s)	13.64	20. Volume of Flue gas drawn in	lit (m <sup>3</sup> )	1.009					
21.Corrected flue gas volume (Nm³)	0.854	22.Percentage of CO <sub>2</sub> & O <sub>2</sub>		$CO_2 = 4.2 \%$ $O_2 = 15.2 \%$					
23. To be compensated at (% if required)		¥							
24.Initial wt of thimble (gm)	1.7790	25.Final wt of thimble (gm)	1.7878						
26.Wt. of PM (mg)	8.80	27.Particulate matter (mg/Nm³)	10.28						
28.Barometric Pressure Head (mm of Hg)	754	29.Diameter of the nozzle	6.35 mi	m.					
Others SO <sub>2</sub> & NO <sub>x</sub>		31. Thimble Number	5190						
32. Sampled by		Mr. S. Bhattacharya, EE & Mr.	R. Chak	rabarty, AEF					

04/04/2024

Date of Reporting

Prepared by

Checked by

Signature of In-Charge, DRL

Copy to:

Chief Engineer - Operation & Execution, WBPCB 1.

Chief Scientist, WBPCB 2.

Env. Engineer (DRO) / Env. Engineer (ARO), WBPCB 3.

4.

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Analysis done at:

16. Working Fuel consumption (Kg or 1/hr)

17. Nature of furnace/boiler

19.Flue gas velocity (m/s)

18.Flue Gas Temp (°C)

Identification Code: 0 7 0 3 2 0 2 4 9 7 1 3

# WEST BENGAL POLLUTION CONTROL BOARD

Durgapur Regional Laboratory, Paribesh Bhawan, City Centre, Durgapur- 713 216

M/s. Sail-ISP (Burnpur)

11,72,000 m<sup>3</sup>/Day.

20. Volume of Flue gas drawn in lit (m<sup>3</sup>)

139.0

1.Name of Industry	M/s. Sail-ISP (Burnpur)
2. Address	Burnpur, Paschim Bardhaman, Pin-713325
3.Category & Type	Red
4.Sampling Date	07.03.2024
5.Duration of Sampling	30 min
6. Name of Laboratory	M/s. S.M. Scientific Science
7. Height of Stack from ground (m)	70.0
8. Cross section of Stack at sampling point (m <sup>2</sup> )	6.25
tack connected to	PBS-2 (Boiler No-2)
10.Emission due to (Furnace / Boiler)	Combustion of Mixed Gas
11.Average operational hours of boiler/furnace (per month)	720 hrs/month.
12.APC System (if any)	*
13. Working load of source (MT/hr)	150 MT/hr
14. Fuel used	Mixed Gas
15.Rated Fuel consumption (Kg or 1/hr)	
	11 22 000 3/12

22.Percentage of CO<sub>2</sub> & O<sub>2</sub> 21. Corrected flue gas volume (Nm3) 0.901 O2 = 13.0 % 23.To be compensated at (% if required) 1.7330 25. Final wt of thimble (gm) 1.7231 24.Initial wt of thimble (gm) 10.99 27.Particulate matter (mg/Nm3) 9.90 26. Wt. of PM (mg) 29. Diameter of the nozzle 6.35 mm. 754 28. Barometric Pressure Head (mm of Hg) 5189 31. Thimble Number Others -Mr. S. Bhattacharya, EE & Mr. R. Chakrabarty, AEE 32. Sampled by

22.96

Date of Reporting

Prepared by

Checked by

1.007

CO<sub>2</sub> =7.2 %

Signature of In-Charge, DRL

Copy to:

Chief Engineer - Operation & Execution, WBPCB

Chief Scientist, WBPCB

Env. Engineer (DRO) / Env. Engineer (ARO), WBPCB

Industry

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Dist. Paschim Bardhaman (W.B.)

Specialised House on Environmental Monitoring, Analysis, Assessment & Management ISO 9001:2015 Certified, OHSAS 45001:2018 Certified

ULR NO - TC510923000001706F

#### TEST REPORT

Report Release Date	: 26.12.2023	Sample Ref. No.(ARF)	: EC/ARF/29/2312106
Test Report No	: EC/TR/42/12361	Source of Sample	: Integrated Steel Plant
Type of Sample	: Dust & Gaseous Emission	Sampling Date	: 20.12.2023
Sample Collected by	: Mr. Sisir Kr. Roy & Team	Period of Analysis	: 22.12.2023
Sample Details	: Stack Emission	Sampling Location	: E.S.P Stack
Name & Address	: SAIL - IISCO Steel Plant	Sample Condition	: Sealed & Preserved
	P.O Burnpur	Sample Stamped as	: TH - 177
	Dist - Paschim Barddhaman	Sample Drawn By	: ECO CARE
	West Bengal	Sampling Plan &	
		Procedure	: EC/SOP/03/01
		Remarks	\$ <del></del>
		Deviation if any	: None

GENERAL INFORMATION
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1	Particular of the Plant	: Integrated Steel Plant		
2	Emission Due to	: Combustion of BF Gas		
3	Stack Connected to	: Boiler # 02		
4	Material of Construction	: M.S		
5	Stack Height from G.L.	: 0.9144 m	22	
6	Height of Sampling Port from G.L.	: 2.4384 m		
7	Height of Sampling Port from L.D.Z.	1		
8	Dimension of Stack at Sampling Port	: 2.5m x 2.5m		
9	Shape of the Stack	: Rectangle		
10	Working Load	i energy and a second		

#### FUEL CHARACTERISTIC REPORT

Concentration of SO<sub>2</sub>

Concentration of NOx

1	Source of Energy	: Coal, CO Gas
2	Energy Consumption	: 4 MT/hr
3	Calorific Value (K-Cal/Kg)	·

ANA	DODLE OF DIMINI DILLO GILDEGE		
1	Flue Gas Temperature	141°C	IS 11255 : Part 3
2	Barometric Pressure	754 mm Hg	IS 11255: Part 3
3	Velocity of Flue Gas	12.37 m/sec	IS 11255 ; Part 3
4	Flue Gas Quantity	198894 NM <sup>3</sup> / hr	IS 11255 : Part 3
5	Concentration of Particulate Matter	14.32 mg/NM <sup>3</sup>	IS 11255 : Part 1
6	Concentration of Carbon Dioxide		IS 13270

1. Test values are reported based on the samples received.

RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

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

**Authorised Signatory** 

Dr. Mousumi Pal Ph.D.(Env.), Scientification Authorised Sig

Method

IS 11255: Part 2

IS 11255: Part 7





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Specialised House on Environmental Monitoring, Analysis, Assessment & Management ISO 9001:2015 Certified, OHSAS 45001:2018 Certified

#### ULR NO - TC510923000001707F

#### **TEST REPORT**

Report Release Date Test Report No Type of Sample Sample Collected by Sample Details Name & Address  SAIL - IISCO Steel Plant P.O Burnpur Dist - Paschim Barddhaman West Bengal	Sample Ref. No.(ARF) Source of Sample Sampling Date Period of Analysis Sampling Location Sample Condition Sample Stamped as Sample Drawn By Sampling Plan & Procedure Remarks Deviation if any	: EC/ARF/29/2312106 : Integrated Steel Plant : 20.12.2023 : 22.12.2023 : ESP Stack : Sealed : TH – 178 : ECO CARE : EC/SOP/03/01 : : None
---	--	---

GENERAL INFORMATION	CEN	ERAL	INFO	RMATION
---------------------	-----	------	------	---------

GE	NERAL INFURINATION		
1 2 3 4 5 6 7 8	Particular of the Plant Emission Due to Stack Connected to Material of Construction Stack Height from G.L. Height of Sampling Port from G.L. Height of Sampling Port from L.D.Z. Dimension of Stack at Sampling Port	: Integrated Steel Plant : Combustion of BF Gas : BF # 5 (Stove) : M.S : 70.0 m : : : 5.7 m : Circular Ø	
9	Shape of the Stack Working Load	2	

# FUEL CHARACTERISTIC REPORT

rt	EL CHARACTERO		
1 2	Source of Energy Energy Consumption	: BF Gas : 200000 M <sup>3</sup> /hr	
3	Calorific Value (K-Cal/Kg)		

RESULTS OF SAMPLING GASEOUS I	EMISSION ANALYSIS	Method
Plue Gas Temperature Barometric Pressure Velocity of Flue Gas Flue Gas Quantity Concentration of Particulate Matter Concentration of Carbon Dioxide Concentration of SO <sub>2</sub> Concentration of NO <sub>x</sub>	150 °C 754 mm Hg 13.43 m/sec 863244 NM³/ hr 10.71 mg/NM³  146.56 mg/NM³ 89.32 mg/NM³	IS 11255: Part 3 IS 11255: Part 3 IS 11255: Part 3 IS 11255: Part 3 IS 11255: Part 1 IS 13270 IS 11255: Part 2 IS 11255: Part 7

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.

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**Authorised Signatory** 

Dr. Mousumi Pal Ph.D.(Env.), Scientist **Authorised Signatory** 

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SAIL-ISP, BURNPUR



# Seo Care



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#### ULR NO - TC510923000001708F

#### **TEST REPORT**

Report Release Date	: 26.12.2023	Sample Ref, No.(ARF)	: EC/ARF/29/2312106
Test Report No	: EC/TR/42/12363	Source of Sample	: Integrated Steel Plant
Type of Sample	: Dust & Gaseous Emission	Sampling Date	: 20.12.2023
Sample Collected by	: Mr. Sisir Kr. Roy & Team	Period of Analysis	: 22.12.2023
Sample Details	: Stack Emission	Sampling Location	: E.S.P Stack
Name & Address	: SAIL - IISCO Steel Plant	Sample Condition	: Sealed
	P.O Burnpur	Sample Stamped as	: TH - 179
	Dist - Paschim Barddhaman	Sample Drawn By	: ECO CARE
	West Bengal	Sampling Plan &	
		Procedure	: EC/SOP/03/01
		Remarks	·
		Deviation if any	: None

GE	NERAL INFORMATION		
1	Particular of the Plant	: Integrated Steel Plant	
2	Emission Due to	: Combustion of BF Gas	
3	Stack Connected to	: Boiler # 1	
4	Material of Construction	: M.S	
5	Stack Height from G.L.	: 0.9144 m	
6	Height of Sampling Port from G.L.	: 2.4384 m	
7	Height of Sampling Port from L.D.Z.	;	8
8	Dimension of Stack at Sampling Port	: 2.5m X 2.0m	
9	Shape of the Stack	: Rectangle	
10	Working Load	* ****	

#### FUEL CHARACTERISTIC REPORT

1	Source of Energy	: Coal, CO Gas	
2	Energy Consumption	: 4 MT/hr	
3	Calorific Value (K-Cal/Kg)	Carrie Carrie	

RE	SULTS OF SAMPLING GASEOUS I	Method	
1	Flue Gas Temperature	145°C	IS 11255 : Part 3
2	Barometric Pressure	754 mm Hg	IS 11255: Part 3
3	Velocity of Flue Gas	11.78 m/sec	IS 11255: Part 3
4	Flue Gas Quantity	152163 NM <sup>3</sup> / hr	IS 11255: Part 3
5	Concentration of Particulate Matter	12.80 mg/NM <sup>3</sup>	IS 11255 : Part 1
6	Concentration of Carbon Dioxide		IS 13270
7	Concentration of SO <sub>2</sub>	***	IS 11255: Part 2
8	Concentration of NO <sub>x</sub>		IS 11255: Part 7

1. Test values are reported based on the samples received.

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.

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Authorised Signatory

Dr. Mousumi Pal Ph.D.(Env.), Scientist Authorised Signatory



H5144, 6000

AGM (Environ, Mgmt.) सेल-आई. एस. पी., बर्नपुर SAIL-ISP, BURNPUP







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Dist. Paschim Bardhaman (W.B.)

## Specialised House on Environmental Monitoring, Analysis, Assessment & Management ISO 9001:2015 Certified, OHSAS 45001:2018 Certified

ULR NO - TC510923000001710F

#### **TEST REPORT**

Report Release Date	: 26.12.2023	Sample Ref. No.(ARF)	: EC/ARF/29/2312106
Test Report No	: EC/TR/42/12365	Source of Sample	: Integrated Steel Plant
Type of Sample	: Dust & Gaseous Emission	Sampling Date	: 20.12.2023
Sample Collected by	: Mr. Sisir Kr. Roy & Team	Period of Analysis	: 22.12.2023
Sample Details	: Stack Emission	Sampling Location	: Bag Filter Stack
Name & Address	: SAIL - IISCO Steel Plant	Sample Condition	: Sealed
	P.O Burnpur	Sample Stamped as	: TH – 181
	Dist - Paschim Barddhaman	Sample Drawn By	: ECO CARE
	West Bengal	Sampling Plan &	
	THE CONTRACTOR OF THE CONTRACT	Procedure	: EC/SOP/03/01
		Remarks	:
		Deviation if any	: None

GE	NE	RA	\L	INFORMATION
172	200	7772	_	- A V - AV

1	Particular of the Plant	: Integrated Steel Plant	
2	Emission Due to	: Process Activity	
3	Stack Connected to	: Bag Filter at CDU	
4	Material of Construction	: M.S	
5	Stack Height from G.L.	: 40.0 m	
6	Height of Sampling Port from G.L.	: 27.0 m	
7	Height of Sampling Port from L.D.Z.	(	
8	Dimension of Stack at Sampling Port	: 1.6 m	
9	Shape of the Stack	: Circular Ø	
10	Working Load	:	

#### FUEL CHARACTERISTIC REPORT

1	Source of Energy	* 10 M M M M
2	Energy Consumption	
3	Calorific Value (K-Cal/Kg)	;

RF	SULTS OF SAMPLING GASEOUS I	EMISSION ANALYSIS	Method
1	Flue Gas Temperature	57°C	IS 11255 : Part 3
2	Barometric Pressure	754 mm Hg	IS 11255: Part 3
3	Velocity of Flue Gas	6.51 m/sec	IS 11255: Part 3
4	Flue Gas Quantity	42229 NM <sup>3</sup> / hr	IS 11255: Part 3
5	Concentration of Particulate Matter	23.18 mg/NM <sup>3</sup>	IS 11255 : Part 1
6	Concentration of Carbon Dioxide		IS 13270
7	Concentration of SO <sub>2</sub>		IS 11255: Part 2
8	Concentration of NO <sub>x</sub>		IS 11255: Part 7

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

**Authorised Signatory** 

Dr. Mousumi Pal Ph.D.(Env.), Scientist **Authorised Signatory** 

महायक महाप्रवधक (प्रयावरण प्रवधन AGM (Environ, Mgmt.) सेल-आई. एस. पी., बर्नपुर SAIL-ISP, BURNPUR





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#### ULR NO - TC510923000001711F

CONTROL INTEGRALATION

#### **TEST REPORT**

Report Release Date  Sest Report No  Supple of Sample Sample Collected by Sample Details Name & Address  SalL - IISCO Steel Plant P.O. – Burnpur Dist – Paschim Barddhaman West Bengal	Sample Ref. No.(ARF) Source of Sample Sampling Date Period of Analysis Sampling Location Sample Condition Sample Stamped as Sample Drawn By Sampling Plan & Procedure Remarks Deviation if any	: EC/ARF/29/2312106 : Integrated Steel Plant : 21.12.2023 : 22.12.2023 : Furnace Stack : Sealed & Preserved : TH – 182 : ECO CARE : EC/SOP/03/01 : : None
--	--	---

1 2	Particular of the Plant Emission Due to	: Integrated Steel Plant : Burning of Mixed Gas
3	Stack Connected to	: Reheating Furnace (Bar Mill)
4	Material of Construction	: M.S : 65.00 m
6	Stack Height from G.L. Height of Sampling Port from G.L.	:
7	Height of Sampling Port from L.D.Z.	* ****

: 3.02 m Dimension of Stack at Sampling Port : Circular Ø Shape of the Stack : 88.84 MT/hr 10 Working Load

#### FUEL CHARACTERISTIC REPORT

Concentration of NO

		: CBM & BF Gas	
1	Source of Energy		
2	Energy Consumption	: 10.754 M <sup>3</sup> /hr	
3	Calorific Value (K-Cal/Kg)		

RE	SULTS OF SAMPLING GASEOUS I	EMISSION ANALYSIS	Method
1	Flue Gas Temperature	340°C	IS 11255 : Part 3 IS 11255 : Part 3
2	Barometric Pressure	754 mm Hg	
3	Velocity of Flue Gas	14.11 m/sec	IS 11255 : Part 3
4	Flue Gas Quantity	175679 NM³/ hr	IS 11255 : Part 3
5	Concentration of Particulate Matter	19.59 mg/NM <sup>3</sup>	IS 11255 : Part 1
6	Concentration of Carbon Dioxide		IS 13270
7	Concentration of SO <sub>2</sub>		IS 11255 : Part 2
Q	Concentration of NO.		IS 11255: Part 7

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.

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Authorised Signatory

Dr. Mousumi Pal Ph.D.(Env.), Scientist Authorised Signatory

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#### ULR NO - TC510923000001712F

#### **TEST REPORT**

Report Release Date	: 26.12.2023	Sample Ref. No.(ARF)	: EC/ARF/29/2312106
Test Report No	: EC/TR/42/12367	Source of Sample	: Integrated Steel Plant
Type of Sample	: Dust & Gaseous Emission	Sampling Date	: 21.12.2023
Sample Collected by	: Mr. Sisir Kr. Roy & Team	Period of Analysis	: 22.12.2023
Sample Details	: Stack Emission	Sampling Location	: Furnace Stack
Name & Address	: SAIL - IISCO Steel Plant	Sample Condition	: Sealed & Preserved
	P.O Burnpur	Sample Stamped as	: TH - 183
	Dist - Paschim Barddhaman	Sample Drawn By	: ECO CARE
	West Bengal	Sampling Plan &	
		Procedure	: EC/SOP/03/01
		Remarks	·
		Deviation if any	: None

GE	NERAL INFORMATION	
1	Particular of the Plant	: Integrated Steel Plant
2	Emission Due to	: Burning of Mixed Gas
3	Stack Connected to	: Reheating Furnace (W.R.M)
4	Material of Construction	: M.S
5	Stack Height from G.L.	: 65.00 m
6	Height of Sampling Port from G.L.	
7	Height of Sampling Port from L.D.Z.	
8	Dimension of Stack at Sampling Port	: 3.02 m
9	Shape of the Stack	: Circular Ø
10	Working Load	: 49.53 MT/hr

#### FUEL CHARACTERISTIC REPORT

1	Source of Energy		: CBM & BF Gas
2	Energy Consumption	100	: 10.754 M <sup>3</sup> /hr
3	Calorific Value (K-Cal/Kg)		£

#### RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

K	ESULTS OF SAMPLING GASEOUS I	EMISSION ANALYSIS	Method	
1	Flue Gas Temperature	240°C	IS 11255 : Part 3	
2	Barometric Pressure	754 mm Hg	IS 11255 : Part 3	
3	Velocity of Flue Gas	12.74 m/sec	IS 11255 : Part 3	
4	Flue Gas Quantity	189594 NM <sup>3</sup> / hr	IS 11255 : Part 3	
5	Concentration of Particulate Matter	15.64 mg/NM <sup>3</sup>	IS 11255 : Part 1	
6	Concentration of Carbon Dioxide		IS 13270	
7	Concentration of SO <sub>2</sub>		IS 11255 : Part 2	
8	Concentration of NO <sub>x</sub>		IS 11255: Part 7	

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Authorised Signatory

Dr. Mousumi Pal Ph.D.(Env.), Scientist Authorised Signatory





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1/4 DE/20/2212106

Method

Specialised House on Environmental Monitoring, Analysis, Assessment & Management ISO 9001:2015 Certified, OHSAS 45001:2018 Certified

ULR NO - TC510923000001713F

#### **TEST REPORT**

Report Release Date : 26.12.2023 Test Report No : EC/TR/42/12368 Type of Sample : Dust & Gaseous Emission Sample Details : Mr. Sisir Kr. Roy & Team Stack Emission SAIL - IISCO Steel Plant P.O. – Burnpur Dist – Paschim Barddhaman West Bengal	Sample Ref. No.(ARF) Source of Sample Sampling Date Period of Analysis Sampling Location Sample Condition Sample Stamped as Sample Drawn By Sampling Plan & Procedure Remarks Deviation if any	: EC/ARF/29/2312106 : Integrated Steel Plant : 12.12.2023 : 22.12.2023 : Furnace Stack : Sealed & Preserved : TH – 184 : ECO CARE  : EC/SOP/03/01 : : None
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GENERAL	INFORMATION	
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-		T. A	
1	Particular of the Plant	: Integrated Steel Plant	
2	Emission Due to	: Burning of Mixed Gas	
3	Stack Connected to	: Re-Heating Furnace (USM)	
4	Material of Construction	: M.S	
5	Stack Height from G.L.	: 65.00 m	
6	Height of Sampling Port from G.L.	·	
7	Height of Sampling Port from L.D.Z.	:	
8	Dimension of Stack at Sampling Port	: 3.02 m	
9	Shape of the Stack	: Circular Ø	
10	Working Load	: 23.79 MT/hr	

#### FUEL CHARACTERISTIC REPORT

	EL CIMILE			
1	Source of Energy	: CBM & BF Gas : 10.754 M <sup>3</sup> /hr		
2	Energy Consumption	320		
1 2	Calorific Value (K-Cal/Kg)	i anni		

#### E SAMPLING GASFOUS EMISSION ANALYSIS

PESTI	TS OF SAMPLING GASLOUS D	MIIODION ANALISIS	THE OWNER WHEN THE PARTY OF THE
1 Flu 2 Bar 3 Ve 4 Flu	e Gas Temperature rometric Pressure locity of Flue Gas le Gas Quantity	172°C 754 mm Hg 14.05 m/sec 241120 NM³/ hr 10.54 mg/NM³	IS 11255: Part 3 IS 11255: Part 3 IS 11255: Part 3 IS 11255: Part 3 IS 11255: Part 1
5 Co	ncentration of Particulate Matter	10.54 mg/NM	IS 13270
	ncentration of Carbon Dioxide ncentration of SO <sub>2</sub>		IS 11255 : Part 2
	ncentration of NO <sub>x</sub>		IS 11255: Part 7

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Specialised House on Environmental Monitoring, Analysis, Assessment & Management ISO 9001:2015 Certified, OHSAS 45001:2018 Certified URL NO – TC510923000001714F

# TEST REPORT

Report Release Date	: 26.12.2023	Sample Ref. No.(ARF)	: EC/ARF/29/2312106
Test Report No	: EC/TR/42/12369	Source of Sample	: Integrated Steel Plant
Type of Sample	: Dust & Gaseous Emission	Sampling Date	: 21.12.2023
Sample Collected by	: Mr. Sisir Kr. Roy & Team	Period of Analysis	: 22.12.2023
Sample Details	: Stack Emission	Sampling Location	: Bag Filter Stack
Name & Address	: SAIL - IISCO Steel Plant	Sample Condition	: Sealed & Preserved
	P.O. – Burnpur	Sample Stamped as	: TH - 185
	Dist- Paschim Barddhaman	Sample Drawn By	: ECO CARE
	West Bengal	Sampling Plan &	
	TO A BOOK SHOWING CONTRACT	Procedure	: EC/SOP/03/01
		Remarks	•
		Deviation if any	: None

GE	NERAL INFORMATION	
1	Particular of the Plant	: Integrated Steel Plant
2	Emission Due to	: Process Activity
3	Stack Connected to	: Bag Filter at CDCP Outlet
4	Material of Construction	: M.S
5	Stack Height from G.L.	: 50.0 m
6	Height of Sampling Port from G.L.	: 20.0 m
7	Height of Sampling Port from L.D.Z.	!
8	Dimension of Duct at Sampling Port	: 1.6 m
9	Shape of the Duct	: Circular Ó
10	Working Load	T

#### FUEL CHARACTERISTIC REPORT

1	Source of Energy	ţ	
2	Energy Consumption		- 4
3	Calorific Value (K-Cal/Kg)	:	

#### RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS Method 65°C Flue Gas Temperature IS 11255: Part 3 2 Barometric Pressure 754 mm Hg IS 11255: Part 3 Velocity of Flue Gas 12.25 m/sec IS 11255: Part 3 4 Flue Gas Quantity 77657 NM<sup>3</sup>/hr IS 11255: Part 3 5 Concentration of Particulate Matter 27.42 mg/NM<sup>3</sup> IS 11255 : Part 1 Concentration of Carbon Dioxide IS 13270 Concentration of SO2 IS 11255: Part 2 Concentration of NOx IS 11255: Part 7

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ULR NO - TC510923000001715F

#### **TEST REPORT**

Report Release Date	: 26.12.2023	Sample Ref. No.(ARF)	: EC/ARF/29/2312106
Test Report No	: EC/TR/42/12370	Source of Sample	: Integrated Steel Plant
Type of Sample	: Dust & Gaseous Emission	Sampling Date	: 21.12.2023
Sample Collected by	: Mr. Sisir Kr. Roy & Team	Period of Analysis	: 22.12.2023
Sample Details	: Stack Emission	Sampling Location	: Coke Oven Stack
Name & Address	: SAIL - IISCO Steel Plant	Sample Condition	: Sealed & Preserved
	P.O. – Burnpur	Sample Stamped as	: TH - 186
	Dist - Paschim Barddhaman	Sample Drawn By	: ECO CARE
	West Bengal	Sampling Plan &	
		Procedure	: EC/SOP/03/01
		Remarks	:
		Deviation if any	: None

GENERAL INFOR
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1	Particular of the Plant	: Integrated Steel Plant	1
2	Emission Due to	: Process Activity	
3	Stack Connected to	: Coke Oven Battery No. # 11 (PEC)	
4	Material of Construction	: M.S	1
5	Stack Height from G.L.	: 30.00 m	
6	Height of Sampling Port from G.L.	A CONTRACTOR OF THE CONTRACTOR	
7	Height of Sampling Port from L.D.Z.		
8	Dimension of Stack at Sampling Port	: 2.1 m	
9	Shape of the Stack	: Circular Ø	1
10	Working Load		1

#### FUEL CHARACTERISTIC REPORT

1	Source of Energy	
2	Energy Consumption	i
3	Calorific Value (K-Cal/Kg)	(

#### RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

		GITTE OF THE PARTY	Michiga
1	Flue Gas Temperature	57°C	IS 11255 : Part 3
2	Barometric Pressure	754 mm Hg	IS 11255: Part 3
3	Velocity of Flue Gas	4.94 m/sec	IS 11255 : Part 3
4	Flue Gas Quantity	55248 NM <sup>3</sup> / hr	IS 11255 : Part 3
5	Concentration of Particulate Matter	10.15 mg/NM <sup>3</sup>	IS 11255 : Part 1
6	Concentration of Carbon Dioxide		IS 13270
7	Concentration of SO <sub>2</sub>		IS 11255 : Part 2
8	Concentration of NO <sub>x</sub>	10000	IS 11255: Part 7

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#### ULR NO - TC510924000000200F

#### **TEST REPORT**

Report Release Date	: 17.02.2024	Sample Ref. No.(ARF)	: EC/ARF/29/240209
Test Report No	: EC/TR/42/02022	Source of Sample	: Integrated Steel Plant
Type of Sample	: Dust & Gaseous Emission	Sampling Date	: 09.02.2024
Sample Collected by	: Mr. Sisir Kr. Roy & Team	Period of Analysis	: 10.02.2024
Sample Details	: Stack Emission	Sampling Location	: ESP Stack
Name & Address	: SAIL - IISCO Steel Plant	Sample Condition	: Sealed & Preserved
	P.O Burnpur	Sample Stamped as	: TH - 84
	Dist - Paschim Barddhaman	Sample Drawn By	: ECO CARE
	West Bengal	Sampling Plan &	
		Procedure	: EC/SOP/03/01
		Remarks	1
		Deviation if any	: None

1	Particular of the Plant	: Integrated Steel Plant
2	Emission Due to	: Process Activity
3	Stack Connected to	: BF # 05 (Stove)
4	Material of Construction	: M.S
5	Stack Height from G.L.	: 70.00 m
6	Height of Sampling Port from G.L.	t
7	Height of Sampling Port from L.D.Z.	t
8	Dimension of Stack at Sampling Port	: 5.7 m
9	Shape of the Stack	: Circular Ø
10	Working Load	2 man

#### FUEL CHARACTERISTIC REPORT

1	Source of Energy	: BF Gas	.5
2	Energy Consumption	: 200000 M <sup>3</sup> /hr	
3	Calorific Value (K-Cal/Kg)	:	

#### RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

RI	SULIS OF SAMPLING GASEOUS I	ENHISSION ANALYSIS	Method
1	Flue Gas Temperature	156 °C	IS 11255 : Part 3
2	Barometric Pressure	755 mm Hg	IS 11255: Part 3
3	Velocity of Flue Gas	13.47 m/sec	IS 11255 : Part 3
4	Flue Gas Quantity	849284 NM <sup>3</sup> / hr	IS 11255 : Part 3
5	Concentration of Particulate Matter	16.51 mg/NM <sup>3</sup>	IS 11255: Part 1
6	Concentration of Carbon Dioxide		IS 13270
7	Concentration of SO <sub>2</sub>	127.19 mg/NM <sup>3</sup>	IS 11255 : Part 2
8	Concentration of NO <sub>x</sub>	67.77 mg/NM <sup>3</sup>	IS 11255: Part 7

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ULR NO - TC510924000000201F

#### **TEST REPORT**

Report Release Date	: 17.02.2024	Sample Ref. No.(ARF)	: EC/ARF/29/240209
Test Report No	: EC/TR/42/02023	Source of Sample	: Integrated Steel Plant
Type of Sample	: Dust & Gaseous Emission	Sampling Date	: 09.02.2024
Sample Collected by	: Mr. Sisir Kr. Roy & Team	Period of Analysis	: 10.02.2024
Sample Details	: Stack Emission	Sampling Location	: ESP Stack
Name & Address	: SAIL - IISCO Steel Plant	Sample Condition	: Sealed & Preserved
	P.O Burnpur	Sample Stamped as	: TH - 85
	Dist - Paschim Barddhaman	Sample Drawn By	: ECO CARE
	West Bengal	Sampling Plan &	
	Min. Temperate Company	Procedure	: EC/SOP/03/01
		Remarks	‡
		Deviation if any	: None

GENERAL INFORMATION			
1	Particular of the Plant	: Integrated Steel Plant	
2	Emission Due to	: Process Activity	
3	Stack Connected to	: BF # 05 (Cast House No. 01)	
4	Material of Construction	: M.S	
5	Stack Height from G.L.	: 31.00 m	
6	Height of Sampling Port from G.L.	: 20.00 m	
7	Height of Sampling Port from L.D.Z.	:	
8	Dimension of Stack at Sampling Port	: 3.85 m	
9	Shape of the Stack	: Circular Ó	

#### FUEL CHARACTERISTIC REPORT

Working Load

1	Source of Energy	· ····	
2	Energy Consumption	[	
3	Calorific Value (K-Cal/Kg)		

₹ŀ	SULTS OF SAMPLING GASEOUS I	EMISSION ANALYSIS	Method
1	Flue Gas Temperature	69 °C	IS 11255 : Part 3
2	Barometric Pressure	755 mm Hg	IS 11255 : Part 3
3	Velocity of Flue Gas	13.71 m/sec	IS 11255 : Part 3
4	Flue Gas Quantity	497871 NM <sup>3</sup> / hr	IS 11255 : Part 3
5	Concentration of Particulate Matter	42.43 mg/NM <sup>3</sup>	IS 11255: Part 1
	1 5/4		

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: None

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ULR NO - TC510924000000202F

#### **TEST REPORT**

Report Release Date : 17.02.2024 Sample Ref. No.(ARF) : EC/ARF/29/240209 Test Report No : EC/TR/42/02024 Source of Sample : Integrated Steel Plant Type of Sample : Dust & Gaseous Emission Sampling Date : 09.02.2024 Sample Collected by : Mr. Sisir Kr. Roy & Team Period of Analysis : 10.02.2024 Sample Details : Stack Emission Sampling Location : ESP Stack Name & Address : SAIL - IISCO Steel Plant Sample Condition : Sealed & Preserved P.O. - Burnpur Sample Stamped as : TH - 86 Dist - Paschim Barddhaman Sample Drawn By : ECO CARE West Bengal Sampling Plan & Procedure : EC/SOP/03/01 Remarks . ----

Deviation if any

GENERAL INFORMATION		
1	Particular of the Plant	: Integrated Steel Plant
2	Emission Due to	: Process Activity
3	Stack Connected to	: BF # 05 (Cast House No. 02)
4	Material of Construction	: M.S
5	Stack Height from G.L.	: 31.00 m
6	Height of Sampling Port from G.L.	: 20.00 m
7	Height of Sampling Port from L.D.Z.	
8	Dimension of Stack at Sampling Port	· 3 85 m

#### FUEL CHARACTERISTIC REPORT

CENEDAL INFORMATION

Shape of the Stack

10 Working Load

1	Source of Energy	;	
2	Energy Consumption	:	
3	Calorific Value (K-Cal/Kg)	:	

: Circular Ø

.

#### RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

EDUCATION OF STRING BANK OASEOUS	LIMBSION ANALISIS	Method
1 Flue Gas Temperature 2 Barometric Pressure 3 Velocity of Flue Gas 4 Flue Gas Quantity 5 Concentration of Particulate Matter	72 °C 755 mm Hg 13.87 m/sec 499377 NM³/ hr 37.44 mg/NM³	IS 11255 : Part 3 IS 11255 : Part 3 IS 11255 : Part 3 IS 11255 : Part 3 IS 11255 : Part 1

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ULR NO - TC510924000000203F

#### **TEST REPORT**

Report Release Date	: 17.02.2024	Sample Ref. No.(ARF)	: EC/ARF/29/240210
Test Report No	: EC/TR/42/02025	Source of Sample	: Integrated Steel Plant
Type of Sample	: Dust & Gaseous Emission	Sampling Date	: 10.02.2024
Sample Collected by	: Mr. Sisir Kr. Roy & Team	Period of Analysis	: 12.02.2024
Sample Details	: Stack Emission	Sampling Location	: Coke Oven Stack
Name & Address	: SAIL - IISCO Steel Plant	Sample Condition	: Sealed & Preserved
Ivanic to riddress	P.O. – Burnpur	Sample Stamped as	: TH - 87
	Dist – Paschim Barddhaman	Sample Drawn By	: ECO CARE
	West Bengal	Sampling Plan &	
	West Deligar	Procedure	: EC/SOP/03/01
		Remarks	
		Deviation if any	: None

Gi	GENERAL INFORMATION		
1	Particular of the Plant	: Integrated Steel Plant	
2	Emission Due to	: Process Activity	
3	Stack Connected to	: Coke Oven Battery No. # 11	
4	Material of Construction	: R.C.C	
5	Stack Height from G.L.	: 120.0 m	
6	Height of Sampling Port from G.L.	: 36.0 m	
-	II : 1 · · · CO · · · · · · · · · · · · · · ·		

5 Stack Height from G.L. 120.0 m

5 Height of Sampling Port from G.L. 36.0 m

7 Height of Sampling Port from L.D.Z. 120.0 m

8 Dimension of Stack at Sampling Port 120.0 m

9 Shape of the Stack 120.0 m

Shape of the Stack : Circular ∅
Working Load : 2150 MT/hr

#### FUEL CHARACTERISTIC REPORT

1 2	Source of Energy Energy Consumption	: Coke Oven Gas : 2005000 M³/hr	
3	Calorific Value (K-Cal/Kg)	: asio	

#### DESILITS OF SAMPLING GASEOUS EMISSION ANALYSIS

K F	SULIS OF SAMPLING GASEOUS I	SIMILOSION ALVADIDED	4144
1	Flue Gas Temperature	152 °C	IS 11255 : Part 3
2	Barometric Pressure	745 mm Hg	IS 11255: Part 3
3	Velocity of Flue Gas	8.42 m/sec	IS 11255 : Part 3
4	Flue Gas Quantity	555079 NM <sup>3</sup> / hr	IS 11255: Part 3
5	Concentration of Particulate Matter	43.08 mg/NM <sup>3</sup>	IS 11255 : Part 1
6	Concentration of Carbon Dioxide		IS 13270
7	Concentration of SO <sub>2</sub>	111.65 mg/NM <sup>3</sup>	IS 11255 : Part 2
8	Concentration of NO <sub>x</sub>	151.99 mg/NM <sup>3</sup>	IS 11255: Part 7

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ULR NO - TC510924000000204F

#### **TEST REPORT**

Report Release Date	: 17.02.2024	Sample Ref. No.(ARF)	: EC/ARF/29/240210
Test Report No	: EC/TR/42/02026	Source of Sample	: Integrated Steel Plant
Type of Sample	: Dust & Gaseous Emission	Sampling Date	: 10.02.2024
Sample Collected by	: Mr. Sisir Kr. Roy & Team	Period of Analysis	: 12.02.2024
Sample Details	: Stack Emission	Sampling Location	: Coke Oven Stack
Name & Address	: SAIL - IISCO Steel Plant	Sample Condition	: Sealed & Preserved
	P.O. – Burnpur	Sample Stamped as	: TH - 88
	Dist - Paschim Barddhaman	Sample Drawn By	: ECO CARE
	West Bengal	Sampling Plan &	
		Procedure	: EC/SOP/03/01
		Remarks	and the second
		Deviation if any	: None

GE	GENERAL INFORMATION		
1	Particular of the Plant	: Integrated Steel Plant	
2	Emission Due to	: Process Activity	
3	Stack Connected to	: Coke Oven Battery No. # 11 (PEC)	
4	Material of Construction	: M.S	
5	Stack Height from G.L.	: 30.0 m	
6	Height of Sampling Port from G.L.	* ****	
7	Height of Sampling Port from L.D.Z.		
8	Dimension of Stack at Sampling Port	: 2.1 m	
9	Shape of the Stack	: Circular Ø	
10	Working Load		

#### FUEL CHARACTERISTIC REPORT

1	Source of Energy	- man	
2	Energy Consumption	men.	
3	Calorific Value (K-Cal/Kg)	- Para	10

KI	ESULTS OF SAMPLING GASEOUS	EMISSION ANALYSIS	Method
1 2 3 4 5	Flue Gas Temperature Barometric Pressure Velocity of Flue Gas Flue Gas Quantity Concentration of Particulate Matter	59 °C 755 mm Hg 4.79 m/sec 53263 NM³/ hr 10.23mg/NM³	IS 11255: Part 3 IS 11255: Part 3 IS 11255: Part 3 IS 11255: Part 3 IS 11255: Part 1

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: None

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Specialised House on Environmental Monitoring, Analysis, Assessment & Management ISO 9001:2015 Certified, OHSAS 45001:2018 Certified

#### ULR NO - TC510924000000205F

#### **TEST REPORT**

Test Report No Type of Sample Sample Collected by Sample Details Name & Address	17.02.2024 EC/TR/42/02027 Dust & Gaseous Emission Mr. Sisir Kr. Roy & Team Stack Emission SAIL - HSCO Steel Plant P.O. – Burnpur Dist – Paschim Barddhaman West Bengal	Sample Ref. No.(ARF) Source of Sample Sampling Date Period of Analysis Sampling Location Sample Condition Sample Stamped as Sample Drawn By Sampling Plan & Procedure	: EC/ARF/29/240210 : Integrated Steel Plant : 10.02.2024 : 12.02.2024 : Bag Filter Stack : Sealed & Preserved : TH – 89 : ECO CARE : EC/SOP/03/01
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GENERAL INFORMATION	
1 Particular of the Plant	: Integrated Steel Plant

Remarks Deviation if any

2 Emission Due to : Process Activity
3 Stack Connected to : Bag Filter at CDCP Outlet
4 Material of Construction : M.S
5 Stack Height from G.L. : 50.0 m
6 Height of Sampling Port from G.L. : 20.0 m
7 Height of Sampling Port from L.D.Z. :--8 Dimension of Stack at Sampling Port : 1.60 m

8 Dimension of Stack at Sampling Port : 1.60 m
9 Shape of the Stack : Circular Ø
10 Working Load :----

#### FUEL CHARACTERISTIC REPORT

1	Source of Energy	·
2	Energy Consumption	) <del></del>
3	Calorific Value (K-Cal/Kg)	_ ====

# RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

	Eles Can Tammanatura	68 °C	IS 11255 : Part 3
	Flue Gas Temperature Barometric Pressure	755 mm Hg	IS 11255 : Part 3
	Velocity of Flue Gas	12.54 m/sec	IS 11255 : Part 3
4	Flue Gas Quantity	78850 NM <sup>3</sup> / hr	IS 11255 : Part 3
	Concentration of Particulate Matter	46.58 mg/NM <sup>3</sup>	IS 11255 : Part 1
)	Concentration of Farticulate Marte.	9	

1. Test values are reported based on the samples received.

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

Authorised Signatory

Dr. Mousumi Pal Ph.D.(Env.), Scientist Authorised Signatory

Arti-

महायक महाप्रवयक (प्यावरण प्रवयन AGM (Environ, Mgmt.) सेल-आई. एस. पी., बर्नपुर SAIL-ISP, BURNPUR



# Sco Care



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Manoj Talkies Basement, Kumarpur

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Dist. Paschim Bardhaman (W.B.)

Specialised House on Environmental Monitoring, Analysis, Assessment & Management ISO 9001:2015 Certified, OHSAS 45001:2018 Certified

ULR NO - TC510924000000206F

#### **TEST REPORT**

Report Release Date	: 17.02.2024	Sample Ref. No.(ARF)	; EC/ARF/29/240210
Test Report No	: EC/TR/42/02028	Source of Sample	: Integrated Steel Plant
Type of Sample	: Dust & Gaseous Emission	Sampling Date	: 10.02.2024
Sample Collected by	: Mr. Sisir Kr. Roy & Team	Period of Analysis	: 12.02.2024
Sample Details	: Stack Emission	Sampling Location	: Bag Filter Stack
Name & Address	: SAIL - IISCO Steel Plant	Sample Condition	: Sealed & Preserved
	P.O. – Burnpur	Sample Stamped as	: TH - 90
	Dist - Paschim Barddhaman	Sample Drawn By	: ECO CARE
	West Bengal	Sampling Plan &	
		Procedure	: EC/SOP/03/01
		Remarks	
		Deviation if any	: None

GE	ENERAL INFORMATION		
1	Particular of the Plant	: Integrated Steel Plant	
2	Emission Due to	: Process Activity	
3	Stack Connected to	: Bag Filter at CDU	
4	Material of Construction	: M.S	
5	Stack Height from G.L.	: 40.0 m	
6	Height of Sampling Port from G.L.	: 27.0 m	
7	Height of Sampling Port from L.D.Z.	: news	
8	Dimension of Stack at Sampling Port	: 1.60 m	
9	Shape of the Stack	: Circular Ø	
10	Working Load	:	

#### FUEL CHARACTERISTIC REPORT

1	Source of Energy	. many	
2	Energy Consumption		
3	Calorific Value (K-Cal/Kg)	\$ need	

RESULTS OF SAMPLING GASEOUS I	EMISSION ANALYSIS	Method
1 Flue Gas Temperature 2 Barometric Pressure 3 Velocity of Flue Gas 4 Flue Gas Quantity 5 Concentration of Particulate Matter	51 °C 755 mm Hg 7.13 m/sec 47211 NM³/ hr 29.18 mg/NM³	IS 11255: Part 3 IS 11255: Part 3 IS 11255: Part 3 IS 11255: Part 3 IS 11255: Part 1

1. Test values are reported based on the samples received.

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

Authorised Signatory

Dr. Mousumi Pal Ph.D.(Env.), Scientist Authorised Signatory



महायक प्रकार AGM ( Environ, Nigmt.) , सेल-आई. एस. पी., बर्नपुर SAIL-ISD BURNBUR



#### Anacon Laboratories Pvt. Ltd. Nagpur Lab

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# Test Report

4-1 date	ed 30.10.2023	Pa	ge I of I
Sample Inward No.	ALPL/27102023/EW-1/5-1	Analysis Start	27.10.2023
Inward Date	27.10.2023	Analysis End	30.10.2023
Reference	3,50,500,000,000		
Reference Date			Waste Water
5	Sample Location 1 Damra Outlet		Quantity Received
Representative- Mohit Mand	al and Sanish Pov	20.40.00	ate
	Sample Inward No.  Inward Date  Reference  Reference Date  Solution Details  Representative Mobit Mand	Sample Inward No. ALPL/27102023/EW-1/5-1  Inward Date 27.10.2023  Reference W.O. 3000000580  Reference Date 21.05.2022  Sample Location 1 Damra Outlet  ple Collection Details  Representatives Mobit Mandal and Sanith Porce	Sample Inward No. ALPL/27102023/EW-1/5-1 Analysis Start  Inward Date 27.10.2023 Analysis End  Reference W.O. 3000000580  Reference Date 21.05.2022 Sample Category  Sample Location 1 Damra Outlet  Perspectively Mobil Model 1.00 (1) 10 10 10 10 10 10 10 10 10 10 10 10 10

#### TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH	- A	TC 2025 (D 11) 2025	
2	Cyanide (as CN*)	and the second second	IS 3025 (Part 11): 2022	7.23 at 34°C
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 27) : 1986	0.084
4	Pi-	mg/l	IS 3025 (Part 34): 1988	16.70
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 2022	0.16
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/I	IS 3025 (Part 44) :1993	108
7	Total Suspended solids (TSS)	ma/l	16 2024 (B. 18 442	
8	Oil & grease	mg/l	IS 3025 (Part 17): 2022	18.0
-	On & grease	mg/l	IS 3025 (Part 39) :2021	< 1.0

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Verified By

Snehal Raut Deputy Technical Manager Authorized Signatory

✓ Chinmay Garway Deputy Quality Manager

-----END OF REPORT-----

महायक महाप्रवधक (पयावरण प्रवधनः AGM (Environ. Mgmt.) सेल-आई. एस. पी., बर्नपुर SAIL-ISP, BURNPUR



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# Test Report

	Sample Inward No.	AT DI /27102022 7731 1 / 5		Page 1 of 1
Issued To:	omple invardito.	ALPL/27102023/EW-1/5-2	Analysis Start	27.10.2023
M/s IISCO Steel Plant -SAIL Environment Management Division Burnpur-713325 (West Bengal).	on, Inward Date	27.10.2023	Analysis End	30.10.2023
	Reference	W.O. 3000000580		
	Reference Date	21.05.2022	Sample Catego	ry Waste Water
Sample Name	S	ample Location 2		
Waste Water		Dihika Outlet		Quantity Received
Sample Collection By Anac	ample Collection Details con Representative- Mohit Manda	l and Sanjib Roy	Sampling	
Suspended solids, Oil & grease	nmoniacal Nitrogen (as N), Pheno	lic compounds, Chemical oxygen do	mand, Biochemical	oxygen demand, To

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH			
2	Cyanide (as CN <sup>-</sup> )	//	IS 3025 (Part 11): 2022	7.85 at 34°C
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 27): 1986	0.072
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 34): 1988	23.40
5	Chemical oxygen demand	mg/l	IS 3025 (Part 43): 2022	0.19
	Biochemical oxygen demand	mg/I	IS 3025 (Part 58) :2006	116
6	(at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :1993	16.00
7	Total Suspended solids (TSS)	mg/l	The state of the s	10.00
8	Oil & grease		IS 3025 (Part 17): 2022	23.0
0.000		mg/l	IS 3025 (Part 39) ; 2021	<1.0

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Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

✓ Chinmay Garway Deputy Quality Manager

END OF REPORT

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# Test Report

Test Report No.: ALPL/3010202	3,110	d 30.10.2023		Page 1 of 1
Issued To:	Sample Inward No.	ALPL/27102023/EW-1/5-3	Analysis Start	27,10,2023
M/s IISCO Steel Plant -SAIL Environment Management Division Burnpur-713325 (West Bengal).	on, Inward Date	27.10.2023	Analysis End	30.10.2023
	Reference	W.O. 3000000580		
	Reference Date	21.05.2022	Sample Category	Waste Water
Sample Name Waste Water	S	ample Location 3 Reservoir	Qu	antity Received
Sample Collection By Anai	ample Collection Details con Representative- Mohit Manda	al and Sanjib Roy	Sampling Dat 18.05,2023	e
Fests Required: pH, Cyanide, A Suspended solids, Oil & grease	mmoniacal Nitrogen (as N), Pheno	lic compounds, Chemical oxygen de	emand, Biochemical ox	ygen demand. To

	TEST RESULTS						
S.N.	Test Parameter	Measurement Unit	Test Method	Test Result			
1	pH	. 4	IS 3025 (Part 11) : 2022	8.09 at 34°C			
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27): 1986	0.106			
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	39.80			
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 2022	0.28			
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	136			
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :1993	18.80			
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	32.0			
8	Oil & grease	mg/l	IS 3025 (Part 39) : 2021	1.40			

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Verified By

Snehal Raut
Deputy Technical Manager

**Authorized Signatory** 

√ Chinmay Garway
Deputy Quality Manager

----END OF REPORT----

महायक महाप्रवधक (प्रयावरण प्रवधन

AGM (Environ, Mgmt.) सेल-आई. एस. पी., वर्नपुर

SAIL-ISP, BURNPUR



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# Test Report

	Sample Inward No.	ALPL/27102023/EW-1/5-4		Page I of I
ssued To:	1	ALFL/2/102023/EW-1/5-4	Analysis Start	27.10.2023
M/s IISCO Steel Plant -SAIL Environment Management Division Burnpur-713325 (West Bengal).	n, Inward Date	27.10.2023	Analysis End	30.10.2023
8	Reference	W.O. 3000000580		
	Reference Date	21.05.2022	Sample Category	Waste Water
Sample Name	S	Sample Location 4		
Waste Water		BOD 10 Outlet	30	Quantity Received
Sample Cell of B	nple Collection Details			11.
ests Required : pH, Cyanide, Am	n Representative- Mohit Mandi	al and Sanjib Roy olic compounds, Chemical oxygen d	Sampling D 18.05.202	ate 3

		TEST RESULTS			
S.N.	Test Parameter	Measurement Unit	Test Method	Test Resul	
1	pH	1	A. T.		
2	Cyanide (as CN <sup>-</sup> )	- 4	IS 3025 (Part 11): 2022	8.27 at 34°(	
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 27): 1986	0.157	
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 34): 1988	43.90	
5	Chemical oxygen demand	mg/l	IS 3025 (Part 43): 2022	0.38	
6	Biochemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	192	
0	(at 27°C for 3 days)	mg/l		192	
7	Total Suspended solids (TSS)		IS 3025 (Part 44) :1993	26.50	
8	Oil & grease	mg/l	IS 3025 (Part 17): 2022	24.0	
TPC	- B. 4400	mg/l	IS 3025 (Part 39): 2021	1.60	

TEST DESILI TO

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Verified Ry

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway
 Deputy Quality Manager

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# Test Report

ssued To:	Sample Inward No.	ALPL/27102023/EW-1/5-5	Page 1 of 1 Analysis Start	27
M/s IISCO Steel Plant -SAIL Environment Management Divisi	on. Inward Date		- Start	27.10.2023
Burnpur-713325 (West Bengal).	on, inward Date	27.10.2023	Analysis End	30.10.2023
	Reference	W.O. 3000000580		
Samuel N	Reference Date	21.05.2022	Sample Category	W
Sample Name Waste Water	S	Sample Location 5		Waste Wate
S	mula Callant	BOD 11 Outlet	Qu	antity Received
		il and Sanjib Roy lic compounds, Chemical oxygen de	Sampling Date 18.05,2023	

S.N.	Test Parameter	Measurement Unit	Test Method	Test Resul
1	pH	9		
2	Cyanide (as CN)	• 4	IS 3025 (Part 11): 2022	0.04
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 27): 1986	8.36 at 34°C
4	Phenolic compounds (as C <sub>0</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 34) : 1988	0.166
5	Chemical oxygen demand	mg/l	IS 3025 (Part 43): 1988	45.60
	Riochemical area	mg/l	15 3025 (Part 43) : 2022	0.64
6	Biochemical oxygen demand (at 27°C for 3 days)		IS 3025 (Part 58) :2006	200
7	Total Suspended 114	mg/l	IS 3025 (Part 44):1993	22.50
8	Total Suspended solids (TSS)	mg/l	TO TO THE PARTY OF	27.50
47	Oil & grease	mg/l	IS 3025 (Part 17): 2022	31.0
ES: • Ple	ase see watermark "Original Test Report" to confirm the	mgt	IS 3025 (Part 39): 2021	1.80

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Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

END OF REPORT-

महायक महाप्रवधक (प्रयावरण प्रवधन AGM (Environ, Mgmt.) सेल-आई. एस. पी., बर्नपुर

SAIL ISP, BURNPUR



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## Test Report

			d 05.12.2023	I	Page 1 of 1	
Issued To: M/s IISCO Steel Plant -SAIL Environment Management Division, Burnpur-713325 (West Bengal).		Sample Inward No.	ALPL/28112023/EW-3/5-1	Analysis Start	28.11.2023	
		Inward Date	28.11.2023	Analysis End	04.12.2023	
		Reference	W.O. 3000000580 Sample Cate		egory Waste Water	
		Reference Date 21.05.2022				
		7.1	Sample Location 1 Damra Outlet		Quantity Received 1L	
Waste Water Sample Collection Details			Sampling Date 28 11 2023		2023	
Tests Required : pH, Cyanic	le, Ammor	B and Environment departiacal Nitrogen (as N), Phe	nolic compounds, Chemical oxygen	demand, Biochemi	ical oxygen demand, Tot	
Suspended solids, Oil & grea	se		THE PERSON IN CO.			

#### TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
		#	IS 3025 (Part 11): 2022	7.57 at 28°C
1	pH		IS 3025 (Part 27): 1986	0.015
2	Cyanide (as CN')	mg/l	IS 3025 (Part 34): 1988	4.10
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 43) : 2022	< 0.1
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 58) :2006	40
5	Chemical oxygen demand	mg/l		***
	Biochemical oxygen demand	mg/l	IS 3025 (Part 44):1993	6.0
6	(at 27°C for 3 days)		IS 3025 (Part 17): 2022	7.0
7	Total Suspended solids (TSS)	mg/l	1S 3025 (Part 39) :2021	< 1.0
8	Oil & grease	mg/l	18 3025 (Falt 59) .2021	

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Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

END OF REPORT-



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# Test Report

Test Report No.: ALPL/05122023/06-2	dated	1 05.12.2023		Page 1 of 1
Issued To :	Sample Inward No.	ALPL/28112023/EW-3/5-2	Analysis Start	28.11.2023
M/s IISCO Steel Plant -SAIL  Environment Management Division,  Burnpur-713325 (West Bengal).	Inward Date	28.11.2023	Analysis End	04.12.2023
Dampare / 10020 ( West Bengar).	Reference	W.O. 3000000580		
	Reference Date	21.05.2022	Sample Categ	ory Waste Water
Sample Name Waste Water	s	ample Location 2 Dihika Outlet		Quantity Received
	Collection Details 3 and Environment departs	ment.	Sampling 28.11.2	

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	рН	* 2	• IS 3025 (Part 11) : 2022	7.72 at 28°C
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27) : 1986	0.023
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 34) : 1988	3.90
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l @ _ e	IS 3025 (Part 43): 2022	<0.1
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	36
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :1993	5.0
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	8.0
8	Oil & grease	mg/l	IS 3025 (Part 39) : 2021	<1.0

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Verified By

Snehal Raut

Deputy Technical Manager

**Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

----END OF REPORT----

महायक महाप्रबंधक (पंचावरण प्रबंधन

AGM (Environ. Mgmt.) सेल-आई. एस. पी., बर्नपुर

SAIL-ISP, BURNPUR



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# Test Report

dated	1 05.12.2023	73	Page 1 of 1
Sample Inward No.	ALPL/28112023/EW-3/5-3	Analysis Start	28.11.2023
Inward Date	28.11.2023	Analysis End	04.12.2023
Reference	W.O. 3000000580		
Reference Date	21,05.2022	Sample Categ	ory Waste Water
S	Sample Location 3 Reservoir		Quantity Received
CR and Environment depart	ment.	Sampling 28.11.2	023
	Sample Inward No.  Inward Date  Reference  Reference Date  Some Collection Details  CR and Environment depart	Sample Inward No. ALPL/28112023/EW-3/5-3  Inward Date 28.11.2023  Reference W.O. 3000000580  Reference Date 21.05.2022  Sample Location 3 Reservoir  e Collection Details  CB and Environment department.	Sample Inward No. ALPL/28112023/EW-3/5-3 Analysis Start  Inward Date 28.11.2023 Analysis End  Reference W.O. 3000000580  Reference Date 21.05.2022 Sample Category  Sample Location 3 Reservoir Sampling

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11): 2022	7.73 at 28°C
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27): 1986	0.027
2	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	3.50
1	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 2022	<0.1
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	32
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :1993	4.0
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17) : 2022	9.0
8	Oil & grease	mg/l	IS 3025 (Part 39): 2021	<1.0

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Varified Du

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

----END OF REPORT----

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 + 91 8045685558 ■ Email: info@anacon.in

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# Test Report

		-4 dated 05.12.2023		of I
Issued To:	Sample Inward No.	ALPL/28112023/EW-3/5-4	Analysis Start	28.11.2023
M/s IISCO Steel Plant -SAIL Environment Management Divisi Burnpur-713325 (West Bengal).	on, Inward Date	28.11.2023	Analysis End	04.12.2023
	Reference	W.O. 3000000580		
	Reference Date	21.05.2022	Sample Category	Waste Water
Sample Name	S	ample Location 4		The Water
Waste Water		BOD 10 Outlet	Q	antity Received
S	ample Collection Details			IL
Joint sampling	of PCP and Factor	ment. olic compounds, Chemical oxygen d	Sampling Dat	e
esis Required : pH, Cyanide, A	mmoniacal Nitrogen (as N) Phone	No.	28.11.2023	

		TEST RESULTS		
S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH	- 30		
2	Cyanide (as CN <sup>-</sup> )		IS 3025 (Part 11): 2022	7.84 at 28°C
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 27): 1986	0,011
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 34): 1988	3,6
.5	Chemical oxygen demand	mg/l -	IS 3025 (Part 43): 2022	<0.1
	Biochemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	60
0	(at 27°C for 3 days)	mg/l		- 00
7	Total Suspended solids (TSS)		IS 3025 (Part 44):1993	10.0
8	Oil & grease	mg/l	IS 3025 (Part 17): 2022	22.0
accia nje	1 se grouse	mg/l	IS 3025 (Part 39) : 2021	23.0

NOTES: Please see watermark "Original Test Report" to confirm the authenticity of this report. Results shall be referred to tested sample(s) and applicable to tested parameters only. Perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. Implied to invoiced amount only Non-perishable and REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

----END OF REPORT----

महायक महाप्रबंधक (पदावरण प्रबंधन

AGM (Environ. Mgmt.) सेल-आई. एस. पी., बर्नपुर

SAIL ISP, BURNPUR



# Anacon Laboratories Pvt. Ltd. Nagpur Lab

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Email: info@anacon.in https://www.anaconlaboratories.com

# Test Report

	-5 dated 05.12.2		Page 1 of 1	
ssued To:	Sample Inward No.	ALPL/28112023/EW-3/5-5	Analysis Start	28.11.2023
M/s HSCO Steel Plant -SAIL Environment Management Division, Burnpur-713325 (West Bengal).	Inward Date	28.11.2023	Analysis End	04.12.2023
	Reference	W.O. 3000000580		
	Reference Date	21.05.2022	Sample Category	Waste Water
Sample Name	9	ample Location 5	- Pre Caregory	waste water
Waste Water		BOD 11 Outlet	C	uantity Received
Samp	le Collection Details			IL
Joint sampling of P ests Required : pH, Cyanide, Ammo uspended solids, Oil & grease	CD and David	ment,	Sampling Da 28.11.2023	
uspended solids, Oil & grease	madein (as 14), Pheno	one compounds, Chemical oxygen d	emand, Biochemical of	xygen demand, To
		ST RESULTS	F 18	, B

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	На	<u> </u>		
2	Cyanide (as CN')		IS 3025 (Part 11): 2022	765at 28°C
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 27): 1986	0.035
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 34): 1988	8.70
5	Chemical oxygen demand	mg/l	IS 3025 (Part 43): 2022	<0.1
6	Biochemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	72
	(at 27°C for 3 days)	mg/l	IS 3025 (Part 44):1993	
7	Total Suspended solids (TSS)	mg/l	The state of the s	12.0
0	0.11 0	1112/1	IC 2025 (D	

IS 3025 (Part 39): 2021 NOTES: Please see watermark "Original Test Report" to confirm the authenticity of this report. Results shall be referred to tested sample(s) and applicable to tested parameters only Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and except in finite of instrument/method and shall be considered as 'absent'.

mg/l

mg/l

REMARKS: As requested by the client, samples were tested for above parameters only.

Oil & grease

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

IS 3025 (Part 17): 2022

Chinmay Garway Deputy Quality Manager

END OF REPORT-

31.0



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# Test Report

date	d 26.12.2023	Pag	e 1 of 1
Sample Inward No.	ALPL/21122023/EW-7/5-1	Analysis Start	21.12.2023
Inward Date	21.12.2023	Analysis End	25.12.2023
Reference	W.O. 3000000580		
Reference Date	21.05.2022	Sample Categor	y Waste Water
	Sample Location 1 Damra Outlet		Quantity Received IL
	lal and Sanjib Roy		
	Sample Inward No.  Inward Date  Reference  Reference Date  Collection Details	Inward Date   21.12.2023     Reference   W.O. 3000000580     Reference Date   21.05.2022     Sample Location 1   Damra Outlet	Sample Inward No. ALPL/21122023/EW-7/5-1 Analysis Start  Inward Date 21.12.2023 Analysis End  Reference W.O. 3000000580  Reference Date 21.05.2022 Sample Category  Sample Location 1 Damra Outlet Sampling D

#### TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH	. 4	IS 3025 (Part 11): 2022	7.68 at 26°C
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27): 1986	0.085
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	17.00
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 2022	0.18
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	96
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :1993	13.40
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	20.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	< 1.0

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Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

END OF REPORT

महायक महाप्रवधक (प्रयावरण प्रवध-

AGM (Environ. Mgmt.) सेल-आई. एस. पी., बर्नपुर

SAIL-ISP, BURNPUR



#### Anacon Laboratories Pvt. Ltd. Nagpur Lab

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# Test Report

Test Report No.: ALPL/2612202	3/05-2 date	d 26.12.2023		Page 1 of 1
Issued To:	Sample Inward No.	ALPL/21122023/EW-7/5-2	Analysis Start	21.12.2023
M/s IISCO Steel Plant -SAIL Environment Management Division Burnpur-713325 (West Bengal).	on, Inward Date	21.12.2023	Analysis End	25.12.2023
	Reference	W.O. 3000000580		
	Reference Date	21.05.2022	Sample Categor	y Waste Water
Sample Name Waste Water	S	ample Location 2 Dihika Outlet		Quantity Received
Sample Collection By Anac	ample Collection Details on Representative- Mohit Manda	al and Sanjib Roy	Sampling D	12
<b>Fests Required</b> : pH, Cyanide, A: Suspended solids, Oil & grease	mmoniacal Nitrogen (as N), Pheno	olic compounds, Chemical oxygen d	emand, Biochemical	oxygen demand, To

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	_	-	_	-

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11): 2022	7.96 at 26°C
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27) : 1986	0.123
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	24.00
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 2022	0.26
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	120
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :1993	16.70
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	31.0
8	Oil & grease	mg/l	IS 3025 (Part 39) : 2021	<1.0

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Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinnay Garway Deputy Quality Manager

----END OF REPORT-

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# Test Report

Test Report No.: ALPL/2612202	23/05-3 date	d 26.12.2023		Page 1 of 1
Issued To :	Sample Inward No.	ALPL/21122023/EW-7/5-3	Analysis Start	27.19.2023
M/s IISCO Steel Plant -SAIL Environment Management Divisi Burnpur-713325 (West Bengal).	on, Inward Date	27.10.2023	Analysis End	30.10.2023
Bumpur-713323 (West Bengur).	Reference	W.O. 3000000580		
	Reference Date	21.05.2022	Sample Category	Waste Water
Sample Name Waste Water		Sample Location 3 Reservoir	Qı	antity Received
	Sample Collection Details scon Representative- Mohit Mand	al and Sanjib Roy	Sampling Dat 21.12.2023	e
		olic compounds, Chemical oxygen d	emand, Biochemical ox	ygen demand, Tota

TEST RESULTS

		LEST RESULTS	PEL WILLIAM	
S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11) : 2022	8.22 at 26°C
2	Cyanide (as CN <sup>-</sup> )	mg/l	IS 3025 (Part 27): 1986	0.143
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	41.00
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 2022	0.40
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	144
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :1993	20.0
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	42.0
8	Oil & grease	mg/l	IS 3025 (Part 39): 2021	1.60

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REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

----END OF REPORT----

. महत्यक महाप्रवधक (प्रयावरण प्रवधन

AGM (Environ. Mgmt.) सेल-आई. एस. पी., बर्नपुर SAIL-ISP, BURNPUR



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# Test Report

Test Report No.: ALPL/2612202	3/05-4 date	ed 26.12.2023		Page 1 of 1
Issued To:	Sample Inward No.	ALPL/21122023/EW-7/5-4	Analysis Start	21.12.2023
M/s IISCO Steel Plant -SAIL Environment Management Division Burnpur-713325 (West Bengal).	on, Inward Date	21.12.2023	Analysis End	25.12.2023
	Reference	W.O. 3000000580	-	
	Reference Date	21.05.2022	Sample Category	Waste Water
Sample Name Waste Water		Sample Location 4 BOD 10 Outlet	(	Quantity Received
Sample Collection By Anac	ample Collection Details con Representative- Mohit Mand	al and Sanjib Roy	Sampling D	ate
Tests Required: pH, Cyanide, A Suspended solids, Oil & grease	mmoniacal Nîtrogen (as N), Phen	olic compounds, Chemical oxygen o	lemand, Biochemical o	xygen demand, To

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH	· A.	IS 3025 (Part 11): 2022	8.39 at 26°C
2	Cyanide (as CN <sup>-</sup> )	mg/l	IS 3025 (Part 27): 1986	0.095
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	37.60
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 2022	0.28
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	176
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :1993	24.50
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	27.0
8	Oil & grease	mg/l	IS 3025 (Part 39): 2021	1.40

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Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

----END OF REPORT-

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# Test Report

Test Report No.: ALPL/26122023/05-5	date	d 26.12.2023	Page 1 of 1	
	Sample Inward No.	ALPL/21122023/EW-7/5-5	Analysis Start	21.12.2023
Issued To:  M/s IISCO Steel Plant -SAIL  Environment Management Division,  Burnpur-713325 (West Bengal).		21.12.2023	Analysis End	25.12.2023
Burnpur-/13323 (West Bengal).	Reference	W.O. 3000000580		
	Reference Date	21.05.2022	Sample Catego	ry Waste Water
Sample Name Waste Water	5	Sample Location 5 BOD 11 Outlet		Quantity Received 1L
Sample Collection By Anacon Rep	Collection Details presentative- Mohit Mand	lal and Sanjib Roy	Sampling 21,12,20	

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	Hq	. 2	IS 3025 (Part 11): 2022	8.42 at 26°C
2	Cyanide (as CN <sup>-</sup> )	mg/l	IS 3025 (Part 27): 1986	0.115
3	Ammoniacal Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	40.00
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 2022	0.36
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	184
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :1993	25.50
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	34.0
8	Oil & grease	mg/l	IS 3025 (Part 39) ; 2021	1.20

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Indicates detection limit of instrument/method and shall be considered as 'absent'.

REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

Deputy Quality Mana

END OF REPORT-

AGM (Environ, Mgmt.) सेल-आई. एस. पी., बर्नपुर

SAIL-ISP, BURNPUR



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# Test Report

Test Report No.: ALPL/290120	024/20-1 date	ed 29.01.2024			Page 1 of 1
Issued To:	Sample Inward No.	ALPL/23012024/EV	V-7/5-1	Analysis Star	t 23.01.2024
M/s IISCO Steel Plant -SAIL Environment Management Divis Burnpur-713325 (West Bengal).		ate 23.01.2024 Analysis		Analysis End	27.01.2024
	Reference	W.O. 3000000580			
	Reference Date	21,05.2022		Sample Categ	gory Waste Water
Sample Name Waste Water	4	Sample Location 1 Damra Outlet			Quantity Received
Anacon repre	Sample Collected By sentative- Mohit Mondal and Sanji	b Roy	Sampling	g Date: 23.01	2024
Tests Required: pH, Cyanide, a Suspended solids, Oil & grease	Ammonical Nitrogen, Phenolic con	mpounds, Chemical oxyg	en demand,	Biochemical oxygo	en demand, Total

#### TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11) : 2022	7.52 at 25°C
2	Cyanide (as CN <sup>-</sup> )	mg/l	IS 3025 (Part 27): 1986	0.077
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	14.60
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	g/l	IS 3025 (Part 43): 1992	0.16
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	80
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	11.20
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	24.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	< 1.0

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Verified By

Snehal Raut Deputy Technical Manager Authorized Signatory

Chinmay Garway Deputy Quality Manager

----END OF REPORT-----

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# Test Report

ple Inward No.	ALPL/23012024/EW-	715 7	Access to the Parties	22 01 2021
and an indi	ALI 1/23012024/EW	113-2	Analysis Start	23.01.2024
ard Date	23.01.2024		Analysis End	27.01.2024
rence	W.O. 3000000580			
rence Date	21.05.2022		Sample Categ	gory Waste Wat
S	Sample Location 2 Dihika Outlet			Quantity Receive
	o Roy	Samplin	g Date	23.01.2024
	ected By Mondal and Sanjib	rence W.O. 3000000580 rence Date 21.05.2022 Sample Location 2 Dihika Outlet ected By Mondal and Sanjib Roy	rence W.O. 3000000580  rence Date 21.05.2022  Sample Location 2 Dihika Outlet  ected By Mondal and Sanjib Roy  Samplin	rence W.O. 3000000580  rence Date 21.05.2022 Sample Category  Sample Location 2 Dihika Outlet Sampling Date

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S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11): 2022	7.78 at 25°C
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27): 1986	0.096
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	19.00
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 1992	0.20
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	100
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	14.00
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	35.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	<1.0

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REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

----END OF REPORT----

महायक महाप्रबंधक (पर्वावरण प्रबंधन AGM (Environ, Mgmt.)

सेल-आई. एस. पी., बर्नपुर SAIL-ISP, BURNPUR



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# Test Report

dated	1 29.01.2024		Page 1 of 1
Sample Inward No.	ALPL/23012024/EW-7/5	5-3 Analysis Star	23.01.2024
Inward Date	23.01.2024	Analysis End	27.01.2024
Reference	W.O. 3000000580		
Reference Date	21.05.2022	Sample Cates	gory Waste Water
S	ample Location 3 Reservoir		Quantity Received
ple Collected By e- Mohit Mondal and Sanjib	Roy	Sampling Date	23.01.2024
	Sample Inward No.  Inward Date  Reference  Reference Date  Sple Collected By	Sample Inward No.   ALPL/23012024/EW-7/5	Sample Inward No. ALPL/23012024/EW-7/5-3 Analysis Star Inward Date 23.01.2024 Analysis End Reference W.O. 3000000580 Reference Date 21.05.2022 Sample Cates  Sample Location 3 Reservoir Ple Collected By Sampling Date

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S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11) : 2022	8.19 at 25°C
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27): 1986	0.135
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	35.30
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 1992	0.30
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	136
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	18.90
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	45.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	1.80

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Verified By

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Chinmay Garway

Deputy Quality Manager

END OF REPORT-

BALLISP, BURNPUR



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# Test Report

Test Report No.: ALPL/29012024/20- 4	date	d 29.01.2024		70	Page 1 of 1
Issued To:	Sample Inward No.	ALPL/23012024/EW-	-7/5-1 Analys	sis Start	23.01.2024
M/s IISCO Steel Plant -SAIL Environment Management Division, Burnpur-713325 (West Bengal).	Inward Date	23.01.2024	Analy	sis End	27.01.2024
Burnpur-/15525 (West Bengar).	Reference	W.O. 3000000580			
	Reference Date	21.05.2022	Sampl	e Category	Waste Water
Sample Name Waste Water		Sample Location 4 OD Plant 10 Outlet	***	Qu	antity Received
	e Collected By Mohit Mondal and Sanjil	b Roy	Sampling Date	23	.01,2024

#### TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11): 2022	8.35 at 25°C
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27): 1986	0.066
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	39.40
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 1992	0.32
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	184
- 6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	25.00
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	33.0
8	Oil & grease	mg/l	IS 3025 (Part 39) ;2021	1.80

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REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Shehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

----END OF REPORT----

महायक महाप्रवध्यक्ष (प्रधायरण प्रवधनः AGM (Environ. Mgmt.) सेल-आई. एस. पी., वर्नपुर



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# Test Report

Samp	le Collected By - Mohit Mondal and Sanjib	OD Plant 11 Outlet	Sampling Date	1L. 23.01.2024
Sample Name Waste Water		ample Location 5		Quantity Received
	Reference Date	21.05.2022	Sample Car	tegory Waste Water
Burnpur-713325 (West Bengal).	Reference	W.O. 3000000580		
M/s IISCO Steel Plant -SAIL Environment Management Division,	Inward Date	23.01.2024	Analysis Er	27.01.2024
Issued To:	Sample Inward No.	ALPL/23012024/EW-7/	5-5 Analysis St	art 23.01.2024
Test Report No.: ALPL/29012024/20-03	date	d 29.01.2024	Page 1 of	1

#### TEST RESULTS

s.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11): 2022	8.39 at 25°C
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27): 1986	0.148
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	41.60
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 1992	0.38
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	192
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	26.00
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17); 2022	41.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	1.40

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• "Indicates detection limit of instrument/method and shall be considered as 'absent'.

REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Deputy Technical Manager

**Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

END OF REPORT-



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# Test Report

date	d 04.03.2024		1	Page 1 of 1
Sample Inward No.	ALPL/28022024/EW	<i>I-5/5-</i> 1	Analysis Star	28.02.2024
Inward Date	28.02.2024		Analysis End	02.03.2024
Reference	W.O. 3000000580			
Reference Date	21.05.2022		Sample Categ	gory Waste Water
	Sample Location 1 Damra Outlet			Quantity Received 1L
ole Collected By e- Mohit Mondal and Sanji	b Roy	Sampling	Date: 28.02	.2024
	Sample Inward No.  Inward Date  Reference  Reference Date	Inward Date 28.02,2024  Reference W.O. 3000000580  Reference Date 21.05,2022  Sample Location 1 Damra Outlet	Sample Inward No. ALPL/28022024/EW-5/5-1  Inward Date 28.02.2024  Reference W.O. 3000000580  Reference Date 21.05.2022  Sample Location 1 Damra Outlet	Sample Inward No. ALPL/28022024/EW-5/5-1 Analysis Start  Inward Date 28.02.2024 Analysis End  Reference W.O. 3000000580  Reference Date 21.05.2022 Sample Category  Sample Location 1 Damra Outlet

#### TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11): 2022	7.66 at 28°C
2	Cyanide (as CN')	mg/l	IS 3025 (Part-27): 1986	0.084
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	17.40
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	g/l	IS 3025 (Part 43): 1992	0.19
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	96
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	13.40
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	20.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	< 1.0

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Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

----END OF REPORT----

महायक महाप्रवधक (प्यावरण प्रवधन AGM (Environ, Mgmt.)

सेल-आई. एस. पी., बर्नपुर SAIL-ISP, BURNPUR



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# Test Report

No. ALPL/28022024/EW-5/5-2 28.02.2024	Analysis Start Analysis End	28.02.2024 02.03.2024
28.02.2024	Analysis End	02.03.2024
		(Newson State Production Co. St.)
W.O. 3000000580		
21.05.2022	Sample Categor	y Waste Water
Sample Location 2 Dihika Outlet		Quantity Received
Sanjib Roy	oling Date	28.02.2024
	21.05.2022  Sample Location 2 Dihika Outlet  Sample	21.05.2022 Sample Category Sample Location 2 Dihika Outlet Sampling Date

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11): 2022	7.84 at 28°C
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27): 1986	0.077
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	22.80
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 1992	0.24
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	108
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	15.00
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	27.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	<1.0

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REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

✓ Chinmay Garway

Deputy Quality Manager

----END OF REPORT-----

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# Test Report

Test Report No.: ALPL/04032024/34-3	dated	1 04.03.2024			Page 1 of 1
Issued To:	Sample Inward No.	ALPL/28022024/EW	7-5/5-3 A	nalysis Start	28.02.2024
M/s IISCO Steel Plant -SAIL Environment Management Division, Bumpur-713325 (West Bengal).	Inward Date	28.02.2024	A	nalysis End	02.03.2024
The state of the s	Reference	W.O. 3000000580		(4)	
	Reference Date	21.05.2022	S	ample Category	Waste Water
Sample Name Waste Water	S	ample Location 3 Reservoir		Q	uantity Received 1L
The Application of the Control of th	le Collected By - Mohit Mondal and Sanjib	Roy	Sampling Da	ate 2	8.02,2024

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11): 2022	8.24 at 28°C
2	Cyanide (as CN <sup>-</sup> )	mg/l r	IS 3025 (Part 27): 1986	0.123
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	37.00
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 1992	0.34
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	148
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	20.40
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17) : 2022	37.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	1.60

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REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snéhal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway
Deputy Quality Manager

----END OF REPORT----

महायक महाप्रवंधक (पंयावरण प्रवंधन

AGM (Environ, Mgmt.) सेल-आई, एस. पी., वर्नपुर SAIL-ISP, BURNPUR

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## Test Report

Test Report No.: ALPL/04032024/34	-4 date	d 04.03.2024			Page 1 of 1
Issued To:	Sample Inward No.	ALPL/28022024/EW-	5/5-4	Analysis Start	28.02.2024
M/s IISCO Steel Plant -SAIL Environment Management Division, Burnpur-713325 (West Bengal).	Inward Date	28.02.2024		Analysis End	02.03.2024
	Reference	W.O. 3000000580		2.4	
, ,	Reference Date	21.05.2022		Sample Categor	y Waste Water
Sample Name Waste Water		Sample Location 4 OD Plant 10 Outlet			Quantity Received
Sample Collected By Anacon representative- Mohit Mondal and Sanjib Roy			Sampling	g Date	28.02.2024
Tests Required : pH, Cyanide, Ammo Suspended solids, Oil & grease	onical Nitrogen, Phenolic com	pounds, Chemical oxygen	demand, B	iochemical oxygen	demand, Total

#### TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11) : 2022	8.19 at 28°C
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27): 1986	0.090
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	40.70
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 1992	0.38
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	200
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	28.00
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	30.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	2.20

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REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snehal Raut

Deputy Technical Manager

**Authorized Signatory** 

Chinmay Garway
Deputy Quality Manager

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# Test Report

Fest Report No.: ALPL/04032024/34-05	date	ed 04.03.2024		Page 1 of 1	
Issued To:	Sample Inward No.	ALPL/28022024/EW-	5/5-5	Analysis Start	28.02.2024
M/s IISCO Steel Plant -SAIL Environment Management Division, Burnpur-713325 (West Bengal).	Inward Date	28.02.2024		Analysis End	02.03.2024
	Reference	W.O. 3000000580			
	Reference Date	21.05.2022		Sample Categor	y Waste Water
Sample Name Waste Water		Sample Location 5 BOD Plant 11 Outlet			Quantity Received 28.02.2024
Sample Collected By Anacon representative- Mohit Mondal and Sanjib Roy			Sampling	Date	23.01.2024

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11): 2022	8.42 at 28°C
2	Cyanide (as CN <sup>-</sup> )	mg/l	IS 3025 (Part 27): 1986	0.168
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	42.30
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 1992	0.44
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	208
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	28.50
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	36.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	1.40

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• <' indicates detection limit of instrument/method and shall be considered as 'absent'.

REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Y Chinmay Garway Deputy Quality Manager

----END OF REPORT----

महायक महाप्रवधक (प्यावश्ण अप-AGM (Environ, Mgmt.) सेल-आई. एस. पी., बर्नपुर SAIL-ISP, BURNPUR



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# Test Report

Sample Inward No.		- 71	
Sample inward No.	ALPL/07032024/EW-5/5-1	Analysis Start	07.03,2024
Inward Date	07.03.2024	Analysis End	11.03.2024
Reference	erence W.O. 3000000580		
Reference Date	21.05.2022	Sample Catego	ory Waste Water
Sample Location 1			Quantity Received
Sample Collected By Joint Sampling of PCB and Environment Department of IISCO Steel Plant			te:07.03.2024
1	Reference Reference Date  See Collected By	Reference W.O. 3000000580  Reference Date 21,05,2022  Sample Location 1 Damra Outlet  e Collected By  ronment Department of HSCO Steel Plant	Inward Date 07.03.2024 Analysis End  Reference W.O. 3000000580  Reference Date 21.05.2022 Sample Categ  Sample Location 1 Damra Outlet  e Collected By

#### TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	рН		IS 3025 (Part 11): 2022	7.71 2996
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27): 1986	7.71 at 28°C
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34) : 1988	0.013
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	g/l	IS 3025 (Part 43): 1992	5.20
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	<0.10
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	6.0
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	0.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	8.0 < 1.0

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REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snehal Raut Deputy Technical Manager Authorized Signatory

Chinmay Garway Deputy Quality Manager

END OF REPORT

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# Test Report

Test Report No.: ALPL/12032024/33-2	dated	d 12.03.2024		Page 1 of 1
	Sample Inward No.	ALPL/07032024/EW-5/5-2	Analysis Start	07.03.2024
Issued To: M/s IISCO Steel Plant -SAIL	Inward Date	07.03.2024	Analysis End	11.03.2024
Environment Management Division, Burnpur-713325 (West Bengal).	Reference	W.O. 3000000580		
	Reference Date	21.05.2022	Sample Catego	waste Water
Sample Name Waste Water	1972-1973			Quantity Received IL
Samp Joint Sampling of PCB and Env	Sampling Date:	07.03.2024		

#### TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11): 2022	7.74 at 28°C
2	Cyanide (as CN <sup>-</sup> )	mg/l	IS 3025 (Part 27): 1986	0.021
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	4.30
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 1992	< 0.10
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	36
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	5.0
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	9.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	<1.0

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REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snchal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway
Deputy Quality Manager

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----END OF REPORT----

महायक महाप्रवंधक (पर्यावरण प्रवंधन AGM (Environ. Mgmt.) सेल-आई. एस. पी., वर्नपुर SAIL-ISP, BURNPUR



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# Test Report

Test Report No.: ALPL/1203202	4/33-3 date	d 12.03.2024		Page 1 of 1
	Sample Inward No.	ALPL/07032024/EW-5/5-3	Analysis Start	07.03.2024
Issued To: M/s IISCO Steel Plant -SAIL	Inward Date	07.03.2024	Analysis End	11.03.2024
Environment Management Division Burnpur-713325 (West Bengal).	Reference	W.O. 3000000580		
	Reference Date	21.05.2022	Sample Category	Waste Water
Sample Name Waste Water	S	Sample Location 3 Reservoir		Quantity Received
Joint Sampling of PCB a	Sample Collected By nd Environment Department of IIS	SCO Steel Plant	Sampling Date: 0	7,03,2024
Tests Required: pH, Cyanide, A Suspended solids, Oil & grease	mmonical Nitrogen, Phenolic com	npounds, Chemical oxygen demand,	Biochemical oxygen	demand, Total

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
• 1	pH		IS 3025 (Part 11) : 2022	7.80 at 28°C
2	Cyanide (as CN')	mg/l	IS 3025 (Part 27): 1986	0.019
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	4.10
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 1992	<0.10
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	44
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	8.0
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	10.0
8	Oil & grease	mg/l	1S 3025 (Part 39) :2021	<1.0

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • 'mg/l' is equivalent to 'ppm'.

REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway
Deputy Quality Manager

----END OF REPORT-

A Carlot a language



# Anacon Laboratories Pvt. Ltd. Nagpur Lab

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# Test Report

Test Report No.: ALPL/12032024/33	- 4 date	ed 12.03.2024		Page I of 1
1	Sample Inward No.	ALPL/07032024/EW-5/5-4	Analysis Start	07.03.2024
Issued To: M/s IISCO Steel Plant -SAIL	Inward Date	07.03.2024	Analysis End	11.03.2024
Environment Management Division, Burnpur-713325 (West Bengal).	Reference	W.O. 3000000580		
	Reference Date	Reference Date 21.05.2022 Sa		Waste Water
Sample Name Waste Water		Sample Location 4 BOD Plant 10 Outlet		Quantity Received IL
Sar Joint Sampling of PCB and E	Sampling Date: 07	7.03.2024		
Tests Required : pH, Cyanide, Ammo Suspended solids, Oil & grease	onical Nitrogen, Phenolic cor	npounds, Chemical oxygen demand	, Biochemical oxygen	demand, Total

#### TEST RESULTS

		THE PERSON NAMED IN COLUMN TWO ISSUES OF THE PERSON NAMED IN COLUMN TWO ISSUES		
S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	pH		IS 3025 (Part 11): 2022	7.83 at 28°C
2	Cyanide (as CN <sup>-</sup> )	mg/l	IS 3025 (Part 27): 1986	0.048
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	7.70
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 1992	< 0.10
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	64
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	10.0
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	29.0
8	Oil & grease	mg/l	IS 3025 (Part 39) :2021	<1.0

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REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snelfal Raut Deputy Technical Manager **Authorized Signatory** 

Hehinmay Garway Deputy Quality Manager

----END OF REPORT---

महायक महाप्रवंधक (पंचावरण प्रवंधन AGM (Environ, Mgmt.) सेल-आई. एस. पी., वर्नपुर SAIL-ISP, BURNPUR



#### Anacon Laboratories Pvt. Ltd. Nagpur Lub

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 MIDC Butibori, Nagpur, Maharashtra, India - 441 122
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 ♦ https://www.anaconlaboratories.com

# Test Report

Test Report No.: ALPL/12032024/33-5	date	ed 12.03.2024	Page 1 of 1	
	Sample Inward No.	ALPL/07032024/EW-5/5-5	Analysis Start	07.03.2024
Issued To: M/s IISCO Steel Plant -SAIL Environment Management Division,	Inward Date	07.03.2024	Analysis End	11.03.2024
Burnpur-713325 (West Bengal).	Reference	W.O. 3000000580		
	Reference Date	21,05,2022	Sample Category	Waste Water
Sample Name Waste Water		Sample Location 5 OD Plant 11 Outlet		Quantity Received
Samp Joint Sampling of PCB and Envi	le Collected By ronment Department of II	SCO Steel Plant	Sampling Date: 0	7.03,2024
Tests Required : pH, Cyanide, Ammonio Suspended solids, Oil & grease			. Biochemical oxygen	lemand, Total

#### **TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	рН		IS 3025 (Part 11): 2022	7.71 at 28°C
2	Cyanide (as CN <sup>-</sup> )	mg/l	IS 3025 (Part 27): 1986	0.034
3	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34): 1988	8.60
4	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43): 1992	<0.10
5	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2022	76
6	Biochemical oxygen demand (at 27°C for 3 days)	mg/l	IS 3025 (Part 44) :2023	12.0
7	Total Suspended solids (TSS)	mg/l	IS 3025 (Part 17): 2022	34.0
8	Oil & grease	mg/i	· IS 3025 (Part 39) :2021	<1.0

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only
• Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • 'mg/l' is equivalent to 'ppm'
• <' indicates detection limit of instrument/method and shall be considered as 'absent'.

REMARKS: As requested by the client, samples were tested for above parameters only.

Verified By

Snehal Raut Deputy Technical Manager **Authorized Signatory** 

Chinmay Garway Deputy Quality Manager

----END OF REPORT---

महायक महाप्रबंधक (पंचावरण प्रबंधन AGM (Environ, Mgmt.) सेल-आई. एस. पी., वर्नपुर SAIL-ISP, BURNPUR



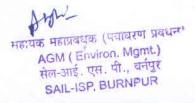


# Annexure 2 Monitoring Results

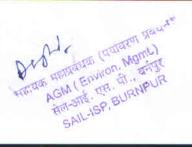
महायक महाप्रवंधक (पंचावरण प्रवंधन । AGM (Environ. Mgmt.) सेल-आई. एस. पी., वर्नपुर SAIL-ISP, BURNPUR

# Stack Monitoring Data

Month	Unit	Stack	PM (mg/Nm³)	SO <sub>2</sub> (mg/Nm <sup>3</sup> )	NOx (mg/Nm <sup>3</sup>		
	Blast	Bf-5 Cast	40				
	Furnace	House-1					
		Bf-5 Cast House-2	40				
		Bf-5 Stock House	36				
		Bf-5 (Stove)	10	65	46		
8	Coke Oven	COB #10	30	76	45		
	Coke Over	COB #10	32	64	76		
October 2023		Dolomite Plant	40	1			
	LDCP				(manual)		
	LDCP	Lime Plant-1	41				
		Lime Plant-2	45				
		Lime Plant-3	46	222	-		
		WRM	17	***			
	Mills	Bar Mill	25				
		USM	22	222			
	Sinter Plant	Sinter Plant # 1	38				
		Sinter Plant # 2	33	111			
	PBS	Boiler -1	10	132	101		
	BOF	SMS	30				
	Blast Furnace	Bf-5 Cast house-1	43		****		
		Bf-5 Cast house-2	47	****			
		Bf-5 Stock house	40				
		Bf-5 (Stove)	9	142	88		
November 2023	Coke Oven	COB #10	35	258	72		
	Coke Oven						
	LDCD	COB #11	36	107	106		
	LDCP	Dolomite Plant	40				
		Lime Plant-1	43	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
		Lime Plant-2	46				
		Lime Plant-3	38				
	Mills	WRM	9		LEATA.		
		Bar Mill	10		A MARINE LA		
		USM	12				
	Sinter Plant	Sinter Plant # 1	39				
		Sinter Plant # 2	43		1		
	BOF	SMS	25				
		Bf-5 Cast house-1	40				
	Blast Furnace	Bf-5 Cast house-2	40				
December 2023		Bf-5 Stock	40	***			
		house	11	146	89		
[7]	Cales Ours	Bf-5 (Stove)		146			
	Coke Oven	COB #10	30	61	56		
		COB #11	34	100	101		
	1.000	Dolomite Plant			:		
	LDCP	Lime Plant-2	35		I monomit		



Month	Unit	Stack	PM (mg/Nm³)	SO <sub>2</sub> (mg/Nm <sup>3</sup> )	NOx (mg/Nm³
		Lime Plant-3	40		
		Lime Plant-4	40		
		WRM	16		
	Mills	Bar Mill	19		
		USM	11		-
	Sinter Plant	Sinter Plant # 1	39		
	Omitor i larit	Sinter Plant # 2	36		
	PBS	Boiler - 2	14	143	121
	BOF	SMS	25	140	121
	Blast	Bf-5 Cast	40		
	Furnace	house-1	The state of the s		
		Bf-5 Cast	40		(444)
		house-2			
		Bf-5 Stock	40		- manual -
		house			
		Bf-5 (Stove)	16	74	31
	Coke Oven	COB #10	24	87	48
		COB #11	35	89	94
		Lime Plant-1	35		
January 2024		Lime Plant-2	41		
		Lime Plant-3	37		and a
	Mills	WRM	18		11000
	12.500	Bar Mill	23		/200
		USM	19		
	Sinter Plant	Sinter Plant # 1	38		
	Cirtici I Idili	Sinter Plant # 2	27	STATE OF THE STATE	(200)
	PBS	Boiler -1	12	114	98
	BOF	SMS	22	114	90
	BOI	Bf-5 Cast	42	100000000000000000000000000000000000000	DESIRON:
		house-1	42	<del></del>	-
	Blast	Bf-5 Cast	37		700004.5
	Furnace	house-2	31		
	Tarridoc	Bf-5 Stock	40	200.04	(Samille)
		house	40		
			10	407	00
	Coke Oven	Bf-5 (Stove)	16	127	68
February 2024	Coke Over	COB #10	28	57	53
		COB #11	43	112	151
		Lime Plant-1	38	***	- Jess.
		Lime Plant-2	42		Navional L
		Lime Plant-3	38		
		WRM	20		HOT.
	Mills	Bar Mill	14		1000
		USM	16	770	
	Sinter Plant	Sinter Plant # 1	29	The second	(337)
		Sinter Plant # 2	20		
	PBS	Boiler -2	11	127	113
	BOF	SMS	29		
		Bf-5 Cast	39		/ /
	(*)	house-1		-	
	Blast Furnace	Bf-5 Cast house-2	43	300	1000
		Bf-5 Stock	34		

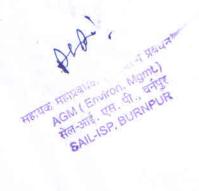


Month	Unit	Stack	PM (mg/Nm³)	SO <sub>2</sub> (mg/Nm <sup>3</sup> )	NOx (mg/Nm³)
		house			
		Bf-5 (Stove)	18	98	38
	Coke Oven	COB #10	26	80	75
		COB #11	42	72	69
0	LDCP	Dolomite Plant	40	· (	
		Lime Plant-1	47		-
March 2024		Lime Plant-2	42		
		Lime Plant-3	45	)::	
	Mills	WRM	9	() minus	
	0.2.39284	Bar Mill	11	) ****	
		USM	11	) man	
	Sinter Plant	Sinter Plant # 1	38		
	Andrew VIII Committee	Sinter Plant # 2	32		
	PBS	Boiler -1	11	115	9
	BOF	SMS	22		

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# Ambient Air Quality Monitoring Data

Month	Location of Station		P	arameters	$(\mu g/m^3)$	
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx
		Norm	100	60	80	80
	Town Department		95	58	11	13
	Chhotodighari		94	56	12	14
October 2023	Rangapara		87	49	9	12
	Kuilapur		92	54	10	13
	Nakrasota	/	98	55	12	16
	Dharampur		93	57	10	14
	Central Town		98	59	12	14
	Chhotodighari		96	58	11	15
November 2023	Rangapara		93	52	10	13
	Kuilapur		95	55	9	14
	Nakrasota		92	56	11	15
	Dharampur		97	58	12	13
	Central Town		99	56	11	13
	Chhotodighari		97	52	13	16
	Rangapara		93	58	9	12
December 2023	Kuilapur		91	58	12	14
	Nakrasota		95	55	12	14
	Dharampur		92	52	13	15
	Central Town		97	54	12	14
	Chhotodighari		96	56	11	15
January 2024	Rangapara		98	57	10	13
	Kuilapur		96	56	9	13
	Nakrasota		94	58	11	13
	Dharampur		95	53	12	16
	Central Town		96	56	13	17
	Chhotodighari		99	58	12	16
February 2024	Rangapara		97	52	11	14
	Kuilapur		99	54	10	13
	Nakrasota		98	55	13	18
	Dharampur		95	51	12	17
	Central Town		94	57	14	18
	Chhotodighari		95	55	10	15
	Rangapara		96	51	11	13
March 2024	Kuilapur		97	54	12	14
	Nakrasota		99	56	13	16
	Dharampur		93	53	12	16



#### **Work Environment**

Month	Unit	Location		Param	eters	
	•		SPM (µg/m³)	PM <sub>10</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m³)	NOx (µg/m³)
	Coke Oven #10	Ram Side	1531	519	60	72
	Coke Oven #11	Ram Side	1725	536	64	73
	BF-5	Cast House	3794	1034	61	78
October 2023	Sinter Plant	Floor Area	2841	1532	28	56
	BOF	Converter	2499	718	44	59
	Bar Mill	Floor Area	1014	372	26	39
	RMHP	Floor Area	1722	774	32	46
	LDCP	Floor Area	1836	749	31	45
	Oxygen Plant	Floor Area	469	245	34	49
	PBS	Floor Area	446	245	27	38
	Coke Oven #10	Coke Side	1649	631	58	71
	Coke Oven #11	Coke Side	1691	572	62	69
	BF-5	Cast House	3276	993	63	77
Navamharanaa	Sinter Plant	Floor Area	2771	1413	26	54
November2023	BOF	Converter	2233	644	34	49
	USM	Floor Area	319	198	19	35
	RMHP	Floor Area	1882	799	31	48
	LDCP	Floor Area	1917	688	29	44
	Oxygen Plant	Floor Area	389	104	27	42
	PBS	Floor Area	418	219	29	41
	Coke Oven #10	Ram side	1771	712	57	66
	Coke Oven #11	Ram side	1732	628	64	74
	BF-5	Cast House	2956	814	57	68
	Sinter Plant	Floor Area	2994	1519	24	59
December2023	BOF	Converter	4013	2061	49	71
	WRM	Floor Area	422	272	18	32
	RMHP	Floor Area	1772	714	29	45
	LDCP	Floor Area	1833	746	27	42
	Oxygen Plant	Floor Area	454	126	24	39
	PBS	Floor Area	528	262	28	40
	Coke Oven #10	Coke side	1681	693	54	67
	Coke Oven #11	Coke side	1774	722	62	71
	BF-5	Cast House	2744	798	56	69
	Sinter Plant	Floor Area	2795	1472	22	56
January 2024	BOF	Converter	1834	552	27	44
	Bar Mill	Floor Area	394	288	17	29
	RMHP	Floor Area	1630	688	26	42
	LDCP	Floor Area		781	24	32
		A STATE OF THE PARTY OF THE PAR	1775			
	Oxygen Plant	Floor Area	399	139	23	27
	PBS	Floor Area	517	289	25	47
	Coke Oven #10	Ram side	1782	712	56	55
	Coke Oven #11	Ram side	1695	681	58	74
	BF-5	Cast House	2592	713	54	72
February 2024	Sinter Plant	Floor Area	2613	1219	21	47
rebruary 2024	BOF	Converter	1784	619	25	42
	USM	Floor Area	368	272	16	28
	RMHP	Floor Area	1829	723	24	39
	LDCP	Floor Area	1801	763	22	34
	Oxygen Plant	Floor Area	371	148	19	28



Month	Unit	Location		Param	neters	
			SPM (µg/m³)	PM <sub>10</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (μg/m³)	NOx (μg/m³)
	PBS	Floor Area	498	266	23	41
	Coke Oven #10	Coke side	1588	642	54	62
	Coke Oven #11	Coke side	1481	598	56	71
	BF-5	Cast House	2492	623	52	76
	Sinter Plant	Floor Area	2722	1134	22	46
March 2024	BOF	Converter	1499	537	23	41
	WRM	Floor Area	348	244	18	29
	RMHP	Floor Area	1938	788	26	42
	LDCP	Floor Area	1911	714	21	35
	Oxygen Plant	Floor Area	387	141	24	32
	PBS	Floor Area	485	272	25	42

# Work Environment Noise Monitoring

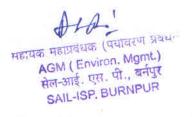
Month		otodig nari	7.0	OB ate	1,141,141	nicle ate		nnel ate	Dha	rampur	Kı	Kuilapur		akrasota
	D	N	D	N	D	N	D	N	D	N	D	N	D	N
Oct 2023	62	51	61	52	64	54	62	53	61	51	61	50	62	53
Nov 2023	61	52	62	54	62	53	61	51	59	50	60	51	63	52
Dec-2023	63	53	60	52	61	50	63	52	60	52	62	53	64	54
Jan-2024	60	51	62	53	63	52	62	53	61	54	63	52	62	51
Feb-2024	57	50	63	52	62	53	63	54	59	53	60	54	63	52
Mar-2024	61	52	64	52	63	51	61	53	60	52	61	53	62	52

D - During Day Time, N - During Night Time



# Coke Oven Fugitive Emission

Month	Parameters	Norm	Battery 10 (Rebuilt Batt.)	Battery 11 (New Batt.)	
	PLD	10 % (COB#10)	1.2	4.1	
		5 % (COB #11)			
	PLL	1 %	0.28	0.53	
	PLO	4%	0.82	1.4	
October 2023	Charging Emissions	50 Sec/ Charge (COB #10)	12	14	
		16 Sec/ Charge (COB #11)			
	PLD	10 % (COB#10) 5 % (COB #11)	1.2	4.2	
	PLL	1 %	0.28	0.51	
November 2023	PLO	4%	0.84	1.9	
NOVEITIBET 2020	Charging Emissions	50 Sec/ Charge (COB #10) 16 Sec/ Charge (COB #11)	12	13	
а	PLD	10 % (COB#10) 5 % (COB #11)	1.1	4.0	
	PLL	1 %	0.27	0.58	
December 2023	PLO	4%	0.84	1.6	
2020	Charging Emissions	50 Sec/ Charge (COB #10)	14	14	
		16 Sec/ Charge (COB #11)			
	PLD	10 % (COB#10) 5 % (COB #11)	1.2	3.8	
	PLL	1 %	0.26	0.56	
January 2024	PLO	4%	1.1	1.5	
	Charging Emissions	50 Sec/ Charge (COB #10) 16 Sec/ Charge (COB #11)	13	14	
	PLD	10 % (COB#10) 5 % (COB #11)	1.1	3.9	
	PLL	1 %	0.24	0.48	
February 2024	PLO	4%	0.72	1.6	
	Charging Emissions	50 Sec/ Charge (COB #10) 16 Sec/ Charge (COB #11)	13	14	
	PLD	10 % (COB#11) 5 % (COB#11)	1.0	3.4	
March - 2024	PLL	1%	0.19	0.52	
	PLO	4%	0.58	1.5	
	Charging Emissions	50 Sec/ Charge (COB #10)	12	14	
		16 Sec/ Charge (COB #11)			



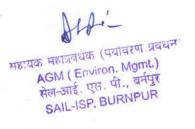
# **Annexure 3**

# Pollution Control Equipment Installed

महायक महाप्रवधक (प्यावरण प्रवधनः AGM (Environ. Mgmt.) सेल-आई. एम. पी., बर्नपुर SAIL-ISP, BURNPUR

# IISCO Steel Plant Pollution Control Equipment Installed

SI. No.	Shop	Pollution Control System	Nos.
1.	Coke	HPLA System	2
	Oven	BOD Plant	2
		Bag Filter	5
Si		RO Plant	1
		Gravel filter	2
		Pressure filter	1
	ia.	ESP	5
		Chimney	5
2.	Blast	Dust Catcher	1
	Furnac	Scrubber	1
	е	Clarifier	2
		ESP	3
		Drum filter	2
		Chimney	6
3	SMS	Dog House (Including ducting)	3
(BOF)		ESP (Dry type attached with chimney)	2
		ESP (Wet type attached with Gas	3
		holder)	
		Gas Holder	1
		Bag House at Transfer Points	3
	27	Thickener	4
		Belt press filter for sludge	4
		Chimney	4
4	Sinter	Bag Filter	4
	Plant	ESP	4
		RO Plant	1
		Chimney	4
5	LDCP	Bag filter	8
		Chimney	8
6.	Power	Ash Handling System	1
	Plant	RO Plant	1
		Chimney	5
7.	Rolling	Fce water treatment plant	1
	Mills	Mill water treatment plant	2
		RO Plant	2
		Chimney	3

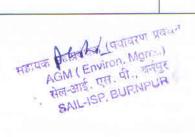


# Annexure 4 CSR Activities

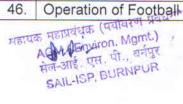


# Peripheral/Community Development Program conducted during FY: 2023-24

SI. No.	Details of program	Approved Budget/Work Order value (Rs. In Lakh)
1.	Free Coaching Centre (FCC) for school dropouts & scholarship to the meritorious students & poor students from underprivileged class	53.50
2.	Repair/Renovation/Extension of Class rooms etc. at Dhemomain school	10.00
3.	Financial aid to Bharati Bhavan for "Sishu Utsav"	3.00
4.	Providing Tiffin, educational kits & accessories (school bag, water bottle, Tiffin box, pencil box & raincoat), uniform including shoes and socks, honorarium for teachers and celebration of important events to Kishalaya Preparatory School & Scholarship to the meritorious students & poor students from underprivileged class	28.00
5.	Construction of new building for Burnpur Girl's High School (Approx. 98% Non-SAIL BPL)	300.00
6.	Distribution of School Uniform, School Accessories to the students of Dhemomain Colliery School and Bari Vidyalaya Primary Section	5.00
7.	Construction of four additional class rooms, toilet, teachers room and office of Swami Vivekananda Ashrama, Shyamdih	5.00
8.	Infrastructure development of Kishalaya Preparatory School	40.00
9.	Scholarship to SC & ST Students	0.51
10.	Vocational Training (Tailoring & AC-Refrigeration) for Village Youths at RKM Vocational training center & Sponsorship of BPL category students in courses viz. Computer operation & programming assistant, Welder, Fitter, Electrician from peripheral villages of ITI, RKM, Asansol	20.00
11.	Skill development training on General Duty Assistant & Phlebotomy course	15.00
12.	Skill development training in peripheral villages under Recognition of Prior Learning program	18.00
13.	Skill development training in peripheral villages under Recognition of Prior Learning program	5.00
14.	Regular Extended OPD with help of mobile medical van, enhancement of outreach camp, Preventive action against Malaria, Dengue etc. to 20 peripheral villages	22.00
15.	Regular Extended OPD with help of mobile medical van, enhancement of outreach camp, Preventive action against Malaria, Dengue etc. to 10 peripheral villages	11.00
16.	Regular Extended OPD with help of mobile medical van, enhancement of outreach camp, Preventive action against Malaria, Dengue etc. to 10 peripheral villages	11.00
17.	Providing tiffin to the students of Burnpur Ambagan Volunteers Social Welfare Organisation	3.00
18.	Supplying Assistive living devices to PwDs at Burnpur, Asansol, Bankura & Purulia	50.00
19.	"Stop Malnutrition" for the under privileged children and regular educational coaching to "Stop school dropout" in Chobka red light area & Bhuiapara	15.71
20.	Organizing camp for Health & Nutrition of Mother & Pregnant ladies among underprivileged women at peripheral villages	4.26



SI. No.	Details of program	Approved Budget/Work Order value (Rs. In Lakh)
21.	Regular additional health camps, Mobile Medical Units, free/subsidised treatment at Burnpur Hospital for peripheral communities	40.00
22.	Providing Cooked nutritious meal to school children (1571 nos.) of different schools in and around Burnpur through community kitchen for 120 days	39.75
23.	Improving Nutrition & Health of the School children (1901 children) of different schools in and around Burnpur through Gift milk programme for 175 days	76.85
24.	AIDS awareness project cum medical camp for sex workers of Lachipur & Chobka Red-light Area	10.00
25.	Financial aid to Burnpur Mahila Voluntary Samity for stitching & knitting training	6.67
26.	Providing Sanitary napkin to village women/girl	22.96
27.	Financial assistance to Burnpur Mahila Voluntary Samity for Industrial gloves making training	3.04
28.	Skill development training for village women at BMVS center (Stitching, embroidery & advanced beautician course) End to end service	15.00
29.	Up skilling of women on Kantha stitch, zardosi, Zari, batik print, fabric – End to end service	6.00
30.	Financial assistance to BMVS for Computer Training Course	2.90
31.	Bidushi coaching & training for jobs to aspiring girl students (30 students) of matriculation and above	14.00
32.	Training on Community Kitchen to women in peripheral villages	10.00
33.	Maintenance of Tube Wells with Hand Pump already installed in Different villages	2.50
34.	Setting up solar submersible pump set in peripheral village with pipeline laying	45.00
35.	Providing Community Toilet in 5 (Five) peripheral villages under "Swachha Bharat Mission" including maintenance	- 50.00
36.	Maintenance and repair of existing sanitations already installed in different villages	5.00
37.	Construction of toilets for Kishalaya Preparatory School	9.97
38.	Construction of Toilets at proposed Burnpur Girls School	30.00
39.	Providing training to the villagers (Boys & Girls) for Football & Kabaddi throughout the year	11.00
40.	Organizing Inter village Football & Kabaddi tournament	5.00
41.	Financial aid to village students for Physical education & yoga centers	1.00
42.	Financial assistance to Asansol Rifle Club for Sponsoring a Rifle and supporting equipment for imparting training to nationally recognized sports	4.00
43.	Financial assistance for supply of 170 metre long used conveyor for installation and use in new 25 metre pistol range at Asansol Rifle Club	0.50
44.	Construction of a 30 lanes 50 meters shooting range with a covered area of 5000 Sq. feet at Asansol Rifle Club.	35.56
45.	Financial aid for promotion of sports activity among the ITI students and youth at the Ramakrishna Mission Ashrama Pvt. ITI, Asansol	4.85
46.	Operation of Football-Academy	57.25



SI. No.	Details of program	Approved Budget/Work Order value (Rs. In Lakh)
47.	Development of Sports infrastructure at IISCO (Phase- II)	179.11
48.	Civil works for development of sports infrastructure, paver road & other CSR works	111.52
49.	Renovation of Fountain works, garden & lighting work of Nehru Park	29.83
50.	Design, fabrication & reaction of multi activity tower with GRP climbing wall & rappling wall for outbound activities at Nehru Park	32.88
51.	Organizing Hool Divas	2.00
52.	Celebration of Dr. B. R. Ambedkar Jayanti and other events (Shifted from Education to Art & Culture thrust area)	5.00
53.	Tribal Cultural functions & Dance Competition	5.00
54.	Financial assistance for restoring the cultural heritage of IISCO Steel Plant, Burnpur (Also CSR initiatives by erstwhile IISCO & SAIL-ISP)	33.22
55.	Installation of Ambedkar Statue on the recommendation of National Commission for Scheduled Castes under thrust area Art & Culture	10.00
56.	Installation of Dr. BR Ambedkar statue	7.75
57.	Civil jobs for restoring cultural heritage at identified bungalow	26.04
58.	Repairing/Construction of roads/Infrastructure Development in peripheral villages	20.00
59.	Construction of community centers with toilet, repairing/renovation of community centers in peripheral villages of Burnpur	50.00
60.	Construction of Vendor Rest Room at Burnpur Station Road Market	14.99
61.	Financial aid for running Cheshire Home, Burnpur (Security, food, clothing, education, maintenance and upkeep, special trainers, warden, celebration of important days etc.)	30.00
62.	Financial assistance to Asansol Anandam for providing tiffin to divyang students, honorarium for teachers, raw material for training, stationary etc. & repair & maintenance of Jacuzzi for hydrotherapy installed earlier under CSR	6.00
63.	Afforestation/tree plantation & Environment development	1.00
64.	Afforestation/tree plantation & Environment development	2.00
65.	Afforestation/tree plantation & Environment development/development of parks in peripheral villages	12.00
66.	Publicity of ISP CSR Projects/activities	5.00
Total		

