



SHAKAMBHARI ISPAT & POWER LTD.

(Formerly known as Ess Dee Aluminium Ltd.)

CIN: U24109WB2004PLC170941 | PAN: AABCE3113G | GSTIN: 19AABCE3113G3Z0

Ref: -SIPL/SMC/MoEFCC/Oct-2025 to March-2026

Date: 31.05.2026

To,

The Dy. Director General of Forest (DDGF)

GOI, MoEF&CC, Sub Office, Kolkata

IB-198, Salt Lake City, Sector-III, Kolkata – 700106

SUB: Six Monthly Compliance report (Oct-2025 to March-2026) to Environmental Clearance conditions vide MoEF&CC F. No.: IA-J-11011/282/2021-IA-II(IND-I) dated 19.07.2023 and F. No. J-11011/201/2013-IA- II (I) Dated 21st December, 2016 & EC amendment dated 29th April, 2020 by M/s Shakambhari Ispat & Power Limited, Vill-Madandih, PO-Bartoria, Dist- Purulia (WB)-723121

Respected Ma'am,

With reference to the subject, we are submitting herewith the six-monthly compliance report (Period Oct-2025 to March-2026) of M/s Shakambhari Ispat & Power Limited, Vill-Madandih, PO-Bartoria, Dist- Purulia (WB) as per the directives of Ministry of Environment Forest and Climate Change, Government of India. Point wise compliance status report along with latest environment monitoring data is enclosed for your kind consideration.

Hard copy of the report has not been sent following MoEFCC Eastern Regional Office direction vide File No. 106-12/EPE Dated 11.05.2020. Hope you will find the same in order.

Kindly acknowledge our submission.

Thanking you and with regards,

Yours faithfully,

For Shakambhari Ispat & Power Limited

Authorized Signatory



Encl: as above

Copy to:

The Environmental Engineer, West Bengal Pollution Control Board, Asansol Regional Office, Kalyanpur Satellite Township Project, Dr. B.C. Roy Road, PO- Dakshin Dhadka, Asansol-713302 Dist.-Paschim Bardhaman (WB)

Regd. Office: "Diamond Prestige", 41A, A.J.C. Bose Road, 8th Floor # 801, Kolkata, West Bengal - 700017, India.

Unit Madandih: Vill - Madandih, PO - Bartoria, Dist - Purulia, West Bengal - 723121, India.

Unit Rukni: Vill - Mohuda, PO - Rukni, PS - Para, Dist - Purulia, West Bengal - 723145, India.

Unit Mogra: Vill & PO - Hoera, PS - Mogra, Dist - Hooghly, West Bengal - 712147, India.

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SHAKAMBHARI ISPAT & POWER LIMITED

COMPLIANCE STATUS OF ENVIRONMENTAL CLEARANCE

MoEF&CC, EC F. No.: IA-J-11011/282/2021-IA-II(IND-I) dated 19.07.2023, and
F. No. J-11011/201/2013-IA II (I) Date: 21.12.2016 and EC amendment dated 29.04.2020

COMPLIANCE PERIOD:

(October -2025 to March -2026)

PROJECT LOCATION:

Village-Madandih, P.O.-Bartoria, Dist.-Purulia, West Bengal-723121



Name of the Project	:	Shakambhari Ispat & Power Limited Village-Madandih, PO-Bartoria Dist.-Purulia (WB)
Environmental Clearance F. No.	:	MoEF&CC, F. No: IA-J-11011/282/2021-IA-II(IND-I) dated 19.07.2023 and EC F. No. J-11011/201/2013-IA II (I) Date: 21.12.2016 & EC amendment dated 29.04.2020.
Period of Compliance Report	:	(October -2025 to March -2026)

MoEF&CC, EC F. No: IA-J-11011/282/2021-IA-II(IND-I) dated 19.07.2023		
Sl. No.	CONDITIONS	COMPLIANCE STATUS
A- SPECIFIC CONDITION:		
i.	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as applicable to this project.	Noted.
ii.	The project proponent shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.	It shall be complied with. Shakambhari Ispat & Power Ltd. (SIPL) is complying/ in the process of complying with environmental protection measures and safeguards in accordance to proposed documents submitted in the ministry. The recommendations made in the EIA/EMP for environmental management, risk mitigation measures for new projects will be implemented with implementation of projects.
iii.	The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.	SIPL ensures to adopt best available technologies available in the market. Our efforts are/shall be to reducing carbon emission with best possible effort and it is being/shall be incorporated at every stage of project. Dense afforestation with regular maintenance is maintained as carbon sequestration/capturing resource. To reduce carbon emission 10 Nos. of battery driven car are used for transportation. In addition, 800 kwh solar panel has been already installed and will be extend further to use the renewable energy sources.
iv.	The total proposed project land shall be converted for industrial use prior to commencement of the project.	Noted
v.	Environment Sensitive Areas near the plant premises are village Madandih at 50 meters, Gopalganj Primary school at 0.70 km and Harmadih Rural Hospital at 0.58 km in East direction from the plant boundary (Ferro Division) within study area. Project Proponent shall take appropriate environmental safeguard measures to minimise the impact on the habitation of the locals. PP needs to strengthen green belt all around the plant area to reduce the dust pollution. The PP shall	As an environmental safeguard plan, SIPL has already taken initiative of adequate plantation to foster the greenbelt at boundary wall of Madandih village side. Sheet proofing has been made as extra precaution to obstruct dust emission from ferro division. Tree plantation has been carried out in Rural hospital of Harmadih and Gopalganj Primary school. Additional plantation has also been done in the surrounding of Durga Mandir at Madandih village. We have planned more plantation in forthcoming monsoon season in surrounding



	also include these locations in its environmental monitoring programme.	village on available space with help of local villagers. Ambient Air Quality monitoring is being done to evaluate the current status. Monitoring report is attached in Annexure-1.
vi.	The total water requirement of 15,139 m ³ /day, shall be met from the DVC (13,735 m ³ /day) and recycled water (1,404 m ³ /day) after obtaining necessary permission from the Competent Authority. No ground water shall be abstracted. Efforts shall further be made to use maximum water from the rain water harvesting sources.	Noted. SIPL has already obtained water drawing permission from DVC for existing setup. On further, requirement shall be met from DVC as per implementation of the project. Permission Copy attached in Annexure-2. No ground water being/shall be abstracted in this project. Industrial waste water being recycled reused in industrial operations and dust suppression etc.
vii.	The project proponent shall strictly implement the mitigation measures proposed to minimise the PM10 values.	Being complied. Ambient Air and Fugitive Air monitoring report are attached in Annexure-1 & 3.
viii.	Three tier Green Belt shall be developed in at least 33% of the project area in the forthcoming monsoons of 2023 (as committed) with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. PP shall also develop greenbelt in the form of shelter belt comprising of total of 6 rows of 2x2 m plantation with tall trees & broad leaves with thick canopy along with windshield inside the plant premises to act as green barrier for air pollution & noise levels towards Madandih, Radhamadhabpur and Parvatpur Villages. Gopalganj Primary School and Harmadhi Rural Hospital. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.	Complied. SIPL is dedicated to complying with guidelines and making an effort to keep the plantation growing and surviving. Company has dedicated horticulture team for plantation and maintenance. Company had targeted 2500 per hectare greenbelt covering 33% of the total plant areas. With consultation the DFO, native species such as Radhachura, Neem, Arjun, Spathodia, Banyan, Peepal, Bakul, Cornocarpur, Kadam, Rain Tree, Shishu, Sonajhuri, Siris, Pitanjiba, Ficus, Krishnachura, Chaatim, Kanchan etc. has been planted. At a frequent interval survival rate of existing greenbelt is being derived. Accordingly, maintenance and plantation program being taken care. There were 62450 surviving trees in the plant premises in August 2025. As per latest data, tree density of 2502 has been found in existing project area which is going to be enhanced year by year.
ix.	All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads. Facilities for parking of trucks carrying raw coal from the linked coalmines shall be created within the Unit.	Majority of roads involves in heavy vehicle movement are concreted and rest of areas those are not involved in transportation are covered with paver block in existing plant area. Photographs are attached in Annexure-4. SIPL has already purchased automated road sweeping machine and the same is operational. Dedicated parking area for trucks has been provided. Annexure-5. Periphery plantation of surrounded road is being/shall made as shown in Annexure-6.
x.	All the commitments made towards socio-economic development of the nearby villages including the commitments made during the previous EC shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in	SIPL accomplished its commitments pertaining to the socioeconomic development of the surrounding villages, including those promised during the previous EC, and the progress report has been sent to the MoEF&CC Regional Office in Kolkata.



	accordance to the Ministry's OM dated 30.09.2020 amounting to Rs. 4.985Crores shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC.	For the neighbouring villages, SIPL has already started action and is working on action plan based on social impact assessment and a social-economic development plan. - Elegant Care Foundation named with company's brand name "Elegant", playing pivotal role for implementing these plans. - Public bus stand had been constructed near Madandih Village at SH-5. - CSR team of the company in consultation with local people and guidance of senior officer of the implementing need-based program in locality, and commitments made for social-economic development. Sri Biranchidham Cultural Centre and several other women empowerment programs have been carried out. - Knitting machines were distributed in local villages like Madandih, Radhamadhabpur, Parvatpur, Erakusum, Gopalganj and Harmadhi. - As a support scheme, as sewing training centre has been established at Gopalganj village. Documents with photographs are attached in Annexure-7.
xi.	As committed PP shall adopt three villages namely: Madandih, Radhamadhabpur and Parvatpur in East direction and prepare and implement a robust plan to develop them into model villages in next three years.	SIPL has initiated developmental programs in the villages those are adopted, and commitments will be implemented with due priority. The company has a specialized CSR/IR team to oversee the welfare and development initiatives in the villages that surround the plant. A few photos pertaining to the completed work are included in Annexure-7.
xii.	The recommendations of the approved Site-Specific Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.	It shall be implemented in consultation with State Forest Department and implantation report shall be submitted with six monthly compliance report to the Regional Office of the MoEF&CC. Wildlife conservation plan is yet to be approved from competent authority.
xiii.	The ETP for Mini Blast Furnace effluent should be designed to meet Cyanide standard as notified by the MoEF&CC.	Noted. Mini Blast Furnace plant is not implemented yet. It shall be complied as per direction.
xiv.	The Standards issued by the Ministry vide G.S.R. No. 277(E) dated 31st March, 2012 regarding integrated iron and steel plant shall be followed. The Standards issued by the Ministry vide G.S.R. No. 277(E) dated 31st March, 2012 regarding integrated iron and steel plant shall be followed.	Noted and being complied.
B- GENERAL CONDITIOS:		
I- Statutory compliance:		



i.	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.	Noted. After obtaining EC, SIPL has obtained CTE from WBPCB, for implemented units i.e. 1x1000TPD Rolling mills, 1x600TPD DRI Kiln, 2x9MVA SAF, CTO has been obtained for operation. Both CTE and CTO copies are attached in Annexure-8 .
ii.	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.	Noted and agreed
II- Air quality monitoring and preservation		
i.	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 06 Nos. Continuous Ambient Air Quality Station (CAAQMS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	SIPL has already installed CEMS in all process stacks and data is transmitted to CPCB and SPCB through updated servers. CAAQMS shall be to install with the implementation of the project. Meanwhile, stack emission and ambient air monitoring is being carried out through NABL accredited laboratories. Reports are attached in Annexure -9 & 1 .
ii.	The project proponent shall carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.	Ambient air quality is monitored to assess ground level concentrations PM10, PM2.5, SO2, and NOx. Latest reports are enclosed in Annexure-1 .
iii.	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	It is being complied. Reports are enclosed in Annexure-3 .
iv.	Sampling facility at process stacks shall be provided as per CPCB guidelines for manual monitoring of emissions.	complied.
v.	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources.	Air Pollution Control Devices (APCDs) like ESPs and Bag filters as well as water sprinkling system are provided to control/suppress dust from dust generation



	so as to comply prescribed stack emission and fugitive emission standards.	points.
vi.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Being/shall be complied.
vii.	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	Road Swiping machines and mobile vacuum cleaners has been deployed to clean plant roads. Vacuum cleaner for shop floors cleaning has also been provided.
viii.	Ensure covered transportation and conveying of raw material to prevent spillage and dust generation. The project proponent uses leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	All the raw material transportation vehicles are covered with tarpaulins to prevent spillage and dust generation. Photographs are attached in Annexure-10 .
ix.	Recycle and reuse of iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/agglomeration.	It is being/shall be complied. Iron fines being provided to pellet plant whereas coal fines being used in CPP.
x.	The project proponent shall provide primary and secondary fume extraction system at all heat treatment furnaces.	Fume extraction with spark arrestor and bag filter at SMS are already installed.
xi.	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	SIPL has installed proper water spraying system for controlling dust emission from stock piles. Wind Shelter Fencing will be done with implementation of the project.
xii.	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	Being/shall be complied.
xiii.	Pollution control system in the plant shall be provided as per the CREP Guidelines of CPCB.	SIPL has followed CREP guidelines by CPCB for pollution control system.
xiv.	The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. Sufficient numbers of additional truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere.	In order to effective control of dust emissions, SIPL has already installed de-dusting equipment such as bag filters and ESPs. Bag filter units for intermediate bins, product houses, coal circuit, etc., for effective dust extraction system has been installed. Every DRI kiln has a dust transporting system from cooler discharge to ABC. The DRI Kiln has wet scrubbers and enough fixed-type water sprinklers to suppress dust in places that handle raw materials and products along the conveyor, finished product house area, cooler discharge, Coal Handling Plant (CHP), Kiln axis, and other dust-prone areas. Movable water tankers and road sweeping machine are used for water spraying and road sweeping in order to reduce fugitive emissions and dust due to vehicular movements on the road.



xv.	Bag filters shall be cleaned regularly and efficiency of bag filter system shall be monitored at regular intervals.	SIPL has technically qualified team for every separate division for operation and maintenance of bag filter & ESPs system to achieve optimum efficiency.
xvi.	Water Sprinklers/Water mist system shall be installed near raw material yards, operational units and other strategic locations to control fugitive emissions from the plant.	Sufficient nos. of water sprinklers have been installed to control dust emission from raw material yard, operational areas and dust prone areas.
xvii.	The particulate matter emissions from the process stacks shall be less than 30 mg/Nm ³ and measures shall be undertaken as per the submitted action plan. Efficient Air monitoring equipment shall be installed.	It is being/shall be complied. All existing projects complies with previous EC and current CTO authorized by West Bengal Pollution Control Board. All new projects are complying the stack emission limits of less than 30 mg/Nm ³ . Stack monitoring reports are enclosed in Annexure-9 .
xviii.	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. b. Proper covered vehicle shall be used while transport of materials. c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.	a. Sufficient number of fixed type water sprinklers are used for dust suppression in raw material and product handling are like conveyor belt, product house, coal handling plant, Ore handling areas and fly ash handling areas. b. Materials are transported in tarpaulin covered vehicles. c. Wheel washing mechanism with complete water recirculation system will be provided at suitable locations as per directions.
xix.	Briquetting and Jigging plant shall be installed in Ferro Alloys Plant.	Noted. Jigging plant is already installed and efficiently operating.
xx.	The PP shall minimize the evaporation losses in jigging operation to less than 10% using suitable advanced process.	Noted. Waste Water generated from cooling tower blowdown and softener back wash being taken to homogenization tank and used in jigging operation. For best use of waste water recycle & reuse practice is adapted.
xxi.	The 4th hole extraction system shall be provided in the Sub Merged Arc Furnaces and EAF.	Noted and complied.
xxii.	Industry is going to use silica quartz in large quantities and going to produce Silico Manganese and Ferro Silicon alloy steel. Therefore, it is necessary to control silica/quartz exposures at production Departments, not only emission norms as per Indian Factories Act. The permissible limit for silica/quartz should be within 10 mg/m ³ for total dust as per Indian Factories Act. Therefore, it is recommended to monitor personal and area exposures for silica quartz dust in the process plants.	Noted. Manpower working for Silico manganese and ferro silicon production, are provided with nose mask and safety goggles as preventive measures. In addition, as per direction Factory act, health is monitored in regular frequency. Monitoring reports are attached in Annexure-11 .



xxiii.	No Ferro-chrome production shall be carried out without prior Environmental clearance from MOEF&CC.	SIPL has already obtained permission from MoEF&CC for production of High Carbon Ferro-Chrome.
xxiv.	Hoppers of the coal crushing unit and other washery units shall be fitted with high efficiency bag filters/mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor systems and from transportation roads.	SIPL has already installed hoppers and closed conveyor system at coal handling system with efficient bag filter and water sprinkling system installed there. Regular maintenance has been done and preventive measure being taken for any abnormality.
xxv.	The raw coal, washed coal and coal wastes (rejects) shall be stacked properly at earmarked site (s) within stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored mineral does not catch fire.	SIPL has coal sheds for storage of coal being used in different operations i.e. DRI, CPP & SAF. All the coal fines and rejects being used in CPP for power generation. Coal washery plant not yet implemented.
xxvi.	The temporary reject sites should appropriate planned and designed to avoid air and water pollution from such sites.	Noted. It shall be complied. There is no any temporary reject site therefore, air and water pollution from such sites not envisaged.
xxvii.	During operational phase at Captive Power Plant, Action Plan to monitor coke/coal dust exposures in different process plants using personal and area air samplers and to compare with permissible limits as per Indian Factories Act, 1948 shall be implemented.	Company has engaged third party NABL accredited monitoring laboratory for periodic checking of fugitive level. Latest reports are enclosed in Annexure-3 . Necessary precautions like PPE's are provided to the manpower working in dust prone areas.
xxviii.	The coal dust should be monitored at coal unloading, crushing, furnace areas and should be within 2 mg/m ³ , respirable dust fraction containing less than 5% quartz as per Indian Factories Act, 1948.	It is being complied as per directions.
xxix.	Online stack monitoring system for IF and RHF shall be installed and monitoring report shall be submitted to the concerned Regional Office of the MoEF&CC along with the six-monthly compliance report.	It shall be complied. Stack monitoring report for Induction furnaces are enclosed in Annexure-9 .
xxx.	Low NO _x Burners will be installed at Reheating Furnace for control of Gaseous emissions generated while using PNG.	Noted. It shall be complied with implementation of reheating furnace.
III- Water quality monitoring and preservation		
I.	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs	Noted. It shall be complied. ETP is already installed at rolling mill based on recirculation system. Treated water is being reused and recycled back in the operation for cooling purposes No industrial effluent is getting discharged outside factory outlets.



	recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	
ii.	The project proponent shall monitor regularly ground water quality at least twice a year (pre and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.	Ground water is monitored twice a year through NABL accredited laboratory and report is enclosed in Annexure-12A .
iii.	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.	It is being/shall be complied as per conditions. Recycle and reuse practice has been adapted for effective utilization of industrial waste water through catch pits.
iv.	Water meters shall be provided at the inlet to all unit processes in the plants.	SIPL has provided separate water meter to calculate the water usage in individual units. As per need, quantity being/shall be evaluated, further installation will also be done in expansion project.
v.	The project proponent shall make efforts to minimise water consumption in the plant complex by segregation of used water, practicing cascade use and by recycling treated water.	Regular monitoring is being done. Maximum reuse and recycle practice have been adopted and no effluent discharged outside plant premises.
vi.	The proposed project shall be designed as "Zero Liquid Discharge" Plant. ETP shall be installed and there shall be no discharge of effluent from the plant. Domestic effluent shall be treated in Sewage Treatment Plant. Suitable measures shall be adopted for sewage water handling to ensure no contamination of any kind of water body.	As recycle and reuse policy has been adopted and no effluent is being discharged outside of factory, waste water generated in different units are collected in equalization tank and later used in slag quenching, dust suppression, bed ash cooling and metal recovery works. Latest effluent water monitoring report is enclosed in Annexure-12B .
vii.	All stock yards shall have impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains and catch pits to trap the run off material and shall be implemented as per the action plan submitted in EIA/EMP report.	Flooring work of stock yards are mostly completed and it will be extended till expansion project. Water spray system for dust suppression has been/will be installed with implementation of new project. Garland drain and catch pit has been/shall be made to trap material run off.
viii.	Rain water harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.	As per action plan submitted in EIA/EMP report, SIPL has Rain Water Harvesting system.
ix.	The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.	Complied. ETP has been installed at rolling mill. Analysis Report is attached in Annexure-12B .
x.	The project proponent shall provide appropriate ETP for effluents discharged from coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to Coke oven plants) as amended from time to time.	COBP is not included in this project. So, no scope for ETP installation.



xi.	Treated water from ETP of COBP shall not be used for coke quenching.	
xii.	The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.	Being Complied. Waste water generated from floor washings, boiler and cooling tower blowdowns, softener blowdown etc. taken into catch pits/equalization tank and further used in dust suppression, slag quenching, ash conditioning and cooling purposes without discharging outside plant premises.
xiii.	Heavy metal content in raw coal and washed coal shall be analysed once in a year and records maintained thereof.	It shall be complied with installation of coal washery.
xiv.	The rejects should preferably be utilized in FBC power plant or disposed off through sale for its gainful utilization. If the coal washery rejects are to be disposed off, it should be done in a safe and sustainable manner with adequate compaction and post closure arrangement to avoid water pollution due to leachate from rejects and surface run off from reject dumping sites.	Iron ore fines being sent to SIPL, Unit: Rukni to use in pellet plant and coal fines being utilized in CPP. Disposal of such fines are ensured as per direction to prevent any kind of contamination, Installation of coal washery not started yet.
xv.	An Integrated Surface Water Management Plan for the washery area up to its buffer zone considering the presence of any river/rivulet/pond/lake etc. with impact of coal washing activities on it, shall be prepared, submitted to MoEFCC and implemented.	Will be complied with installation of coal washery.
xvi.	Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant.	Upon installation of coal washery, generated waste water from coal washery will be recycled and reused in green belt development. Coal washery plant yet to be implemented.
xvii.	Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground water resources in consultation with Central Ground Water Board.	Will be complied after washery project implementation.
xviii.	No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make-up water requirement of washery should not exceed 1.5 m ³ /tonne of raw coal.	Noted and will be complied.
xix.	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.	Condition is not applicable as mine lease don't comes under this project.



xx.	The project proponent shall take all precautionary measures to ensure riverine/ riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.	Condition is not applicable as mine lease don't comes under this project.
xxi.	Air Cooled condensers shall be used in the captive power plant.	It is being complied. Air Cooled condensers are used in captive power plant.
xxii.	Tailing management plan shall be implemented as included in EIA report.	Will be complied as per installation of Iron Ore Beneficiation plant.
xxiii.	Tailings from Iron Ore beneficiation plant shall be dewatered in filter press and no slime /tailing pond shall be permitted.	Will be followed after implementation of the project
IV- Noise monitoring and prevention		
i.	Noise pollution shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and amendments thereof, and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Noise pollution is monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and amendments thereof, and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report. Latest Reports are enclosed in Annexure-13A and 13B .
ii.	The ambient noise levels should conform to the standards prescribed under E(P)A Rules,1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	Noted and complied. Latest Report is enclosed in Annexure-13A .
iii.	PP shall identify extreme hot areas through heat stress survey as well as noise monitoring within process plants to ensure that workers not exposed above 90 dBA levels as per Factories Act,1948.	Heat stress analysis report is provided in Annexure-14 .
V- Energy Conservation measures		
i.	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.	Top of ladle used in metal transfer are covered with redex power for heat loss prevention to keep metal in required temperature. Molten metal is kept below top allowance level in the ladle for safe handling & transfer.
ii.	Restrict Gas flaring to < 1%.	Will be implemented with blast furnace installation.
iii.	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;	As a source of renewal energy sources, SIPL has installed 800 kwh solar panel in first phase. It will be extended further.
iv.	Provide LED lights in their offices and residential areas.	Complied.
v.	The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.	Will be complied with installation of reheating furnace installation.

vi.	Practice hot charging of slabs and billets/blooms as far as possible.	It is fully Complied.
vii.	Ensure installation of regenerative type burners on all reheating furnaces.	Will be complied with installation of reheating furnace installation.
viii.	Blast Furnaces shall be equipped with Top Recovery Turbine, dry gas cleaning plant, stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility.	Will be complied with installation of blast furnace installation.
ix.	Coke Dry Quenching (CDQ) shall be provided for coke quenching for both recovery and nonrecovery type coke ovens.	Coke oven plant is not included in this project. So, no scope for coke dry quenching.
x.	The project proponent shall provide waste heat recovery system on the DRI Kilns.	Complied and WHRB is provided with all DRI Kilns.
xi.	The dolochar generated shall be used for power generation.	Dolochar generated in DRI kilns is used in CPP as raw material for electric power generation.
xii.	Tar shall be recovered from producer gas and shall be sold to registered processors and phenolic water shall be incinerated in After Burn Chamber (ABC) of DRI kilns.	Noted and shall be complied.
xiii.	The PP shall implement the guidelines on sponge iron plants issued by the CPCB/SPCB in this regard.	Noted. It is being/shall be Complied.
VI- Waste management		
i.	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil.	Being/shall be complied for collection of oil spillage for further.
ii.	Kitchen waste shall be composted or converted to biogas for further use.	It is being/shall be complied.
iii.	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.	It is being followed. The fly ash generated from plant are handed over to brick and cement manufacturer for further utilization, it also used for abandoned mine filling. Accordingly, the company has come into agreement with Eastern Coalfield Limited for filling the illegally mined place at Bioched Bandh Area near Narsamunda Colliery of Sodepur area. Copy of the agreement and permission are attached in Annexure-15 .
iv.	The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this	Noted and complied. Single use plastic (SUP) is strictly prohibited inside plant premises. Our EHS personnel are regularly creating awareness among workers.



	regard is available at https://cpcb.nic.in/technical-guidelines-3/ . All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six-monthly compliance report being submitted by the project proponents.	
v.	A proper action plan must be implemented to dispose of the electronic waste generated in the industry.	E-Waste generated in premises are disposed through authorized vendor.
vi.	Solid waste utilization- a. PP shall install a slag crusher to convert steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making. b. PP shall recycle/reuse solid waste generated in the plant as far as possible. c. Used refractories shall be recycled as far as possible.	a. Slag generated from induction furnace being used for road making and earth filling after metal recovery. b. Ferro manganese slag being utilized for Silico manganese production and silico manganese slag used as aggregate. Fly ash being provided to brick manufacturers, cement plants and used for abandoned mines filling c. Used refractories being sold to its recyclers and reused within plant premises as far as possible.
vii.	SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.	SMS slag being used for road making and earth filling purpose after metal recovery.
viii.	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	It shall be complied upon installation of sinter plant.
ix.	Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.	All metallic waste like metal scrap and flux reused in SMS plant.
x.	In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximise heat recovery.	Coke oven is not included in this project.
xi.	Tar Sludge and waste oil shall be blended with coal charged in coke ovens (applicable only to recovery type coke ovens).	Coke oven is not included in this project.

xii.	Rejects from coal washery shall only be used either in the captive power plant (or) in the Thermal Power Plants meeting emission standards.	Will be complied with installation of Coal washery project.
VII- Green Belt		
i.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration by trees.	SIPL has prepared GHG emission inventory and carbon sequestration by trees, report is attached in Annexure-16 .
ii.	Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.	It shall be complied. Carbon footprint and Sequestration report of SIPL is enclosed in Annexure-16 .
iii.	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.	SIPL has completed concreting majority of the internal road for heavy vehicle movement. Rest of places are covered with paver blocks. Photographs are attached in Annexure-4 . Adequate greenbelt development has been done in accordance to restrict soil erosion. Photograms are enclosed in Annexure-6 .
VIII- Public hearing and Human health issues		
i.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Complied. It is already submitted.
ii.	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.	Heat stress analysis report is provided in Annexure-14 . Personnel working in high temperature zone are provided PPEs like apron, hand gloves, face shields etc.
iii.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP. Safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	It is being/shall be complied.
iv.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Occupational health surveillance of the workers being done on regular interval and record is maintained. Health reports are enclosed herewith in Annexure-17 .
IX- Environment Management		
i.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.	Noted. It is being complied. SIPL has already started implementing developmental



	No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.	activities as a part of Corporate Environmental Responsibility (CER) in surrounding villages. Details are enclosed in Annexure-7 .
ii.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Complied. It is already submitted. Corporate Environmental Policy is attached in Annexure-18 .
iii.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	An Environmental Cell has been set under the supervision of GM level to look after regular activities related to environment & pollution control measures.
iv.	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Integrated Regional Office of the MoEF&CC.	It is being/shall be complied. Third-party agencies periodically conduct NABL-accredited monitoring to evaluate emission levels from ESP and bag filter pollution control systems."
X- Miscellaneous		
i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Complied. Advertisement in two local newspapers enclosed in Annexure-19 .
ii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied.
iii.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of	Complied. Compliance status being uploaded on the company website. http://shakambhariispat.com/environmental-compliance



	monitored data on their website and update the same on half-yearly basis.	
iv.	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	Monitoring of criteria pollutants around the plant like PM10, SO2, NOX etc. being displayed in main gate as well as company website with six monthly compliance report. http://shakambhariispat.com/environmental-compliance Ambient air quality and stacking monitoring reports are attached in Annexure-1 & Annexure-9 . Environmental Display Board is attached as Annexure-20 .
v.	Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be implemented.	Internal roads are made in view of free movements within plant premises. MSA as per IRC guidelines being/shall be implemented as per project implementations.
vi.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Complied. Six monthly reports on compliance status are submitted to sub office at Kolkata.
vii.	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Complied. Environment statement (Form-V) for financial year 24-25, has been already submitted to WBPCB and Sub Office of MoEF&CC Kolkata and financial year 2025-26 will be submitted accordingly, Same is uploaded in Company website. Copy is enclosed in Annexure 21 .
viii.	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	After obtaining CTE (NOC) vide no. NO 180762 dated 18.08.2023 from company has started the project activities w.e.f. 21.08.2023. Copy of CTE attached as Annexure-8 .
ix.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Noted. Company is in the process of implementation of the commitments and recommendations made in EIA/EMP report, commitments made during the Public Hearing and also that during presentation to the Expert Appraisal Committee. It shall be complied as per the commitments.
x.	The recommendations of the approved Site-Specific Wildlife Management Plan (in case of involvement of Schedule-I species) shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.	Noted. Wildlife conservation plan is yet to be approved from competent authority, it shall be implemented in consultation with State Forest Department and implantation report shall be submitted with six monthly compliance report to the Regional Office of the MoEF&CC.
xi.	The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the	Noted, it shall be complied as per directions.



	EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left-over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.	
xii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Noted and agreed.
xiii.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted.
xiv.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted.
xv.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted.
xvi.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	It is being complied. SIPL extend full cooperation to the officer (s) of the Regional Office and furnish the requisite data/ information/monitoring reports.
xvii.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.



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SPECIFIC CONDITION:		
i.	The project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office	SIPL has installed 24x7 Continuous Emission Monitoring system in major process stacks to monitor emission status and it is connected with CPCB server.
ii.	No dumping is permitted in the abandoned coal mines 2B and 2C in nearby Parbelia Village. The iron ore trailing and excess ash should be stored within the plant premises for the period of 2 years for which land is available. The status of storage of above material shall be periodically reviewed by the regional office for land adequacy and environmental management. For future storage of iron ore tailing and excess ash, beyond the period of 2 years, the proponent will submit the land acquisition details to the Ministry.	It is being complied. No material dumping has been done in abandoned coal mines 2B and 2C nearby Parbelia village. As Iron Ore Beneficiation plant has been installed so far, so ore tailings facility is not furnished at this stage.
iii.	In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points, coal handling plant etc. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control the dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.	In order to effective control of dust emissions, SIPL has already installed de-dusting equipment such as bag filters and ESPs. Bag filter units for intermediate bins, product houses, coal circuit, etc., for effective dust extraction system has been installed. Every DRI kiln has a dust transporting system from cooler discharge to ABC. The DRI Kilns has wet scrubbers and enough fixed-type water sprinklers to suppress dust in places that handle raw materials and products along the conveyor, finished product house area, cooler discharge, Coal Handling Plant (CHP), Kiln axis, and other dust-prone areas including captive power plants. Movable water tankers and road sweeping machine are used for water spraying and road sweeping in order to reduce fugitive emissions and dust due to vehicular movements on the road. In order to measure dust concentration, fugitive air monitoring is done. Reports are enclosed herewith Annexure-3 .
iv.	The ETP for Mini Blast Furnace effluent should be designed to meet Cyanide standard as notified by the MoEF&CC.	Noted. It shall be complied Mini Blast Furnace is not installed yet.
v.	No effluent shall be discharged outside the plant premises and 'zero' discharge shall be adopted.	Recycle and reuse practice has been adopted throughout plant and no effluent is being discharged outside plant premises.
vi.	Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm ³ and installing energy efficient technology.	Online Continuous Emission Monitoring System (OCEMS) have been installed in all process stacks like Ferro, CPP, DRI. All Air Pollution Control Devices (APCD) i.e. ESPs and Bag Filters along with dust extraction and dust suppression system are installed and efficiently operated. NABL accredited laboratory has been engaged in stack monitoring and report is attached in Annexure-9 .



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vii.	Hot gases from DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely. The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack.	Hot gases from DRI kiln being passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely. The gas then being cleaned in ESP before leaving out into the atmosphere through ID fan and stack.
viii.	Efforts shall further be made to use maximum water from the rain water harvesting sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent should be treated and used for ash handling, dust suppression and green belt development. ETP sludge should be disposed off scientifically.	Best possible effort is made to optimize water usage through comprehensive conservation and recycling initiatives. To collect rainwater and use less water, we have a rainwater collecting pond. To use less water, the CFBC boiler has air-cooled condensers and a closed-circuit cooling system. Rolling mill, SMS, and DRI cooling water is recycled back into the system. ETP treats rolling mill effluent before recycling it back into the process. Sludge produced by ETP is used in SAF or supplied to a pellet production facility in order to produce iron ore pellets. Rejects from cooling tower blowdown and softener/DM plants are taken into neutralization/homogenization tanks and used for ash handling, dust suppression, and road spraying to reduce fugitive dust emissions.
ix.	All the coal fines, char from DRI plant shall be utilized and no char shall be used for briquette making or disposed off anywhere else. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner.	Complied All the coal fines and the dolochar generated from DRI plant being strictly utilized in Captive power plant. Used refractories are sold to recyclers.
x.	All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads. Facilities for parking of trucks carrying raw coal from the linked coalmines shall be created within the Unit.	Majority of roads involves in heavy vehicle movement are concreted and rest of areas those are not involved in transportation of heavy vehicles are covered with paver block. Photographs are attached in Annexure-4 . Dedicated parking spots for trucks has been provided. Annexure-5 . Plantation with native species i. e. Radhachura, Neem, Arjun, Spathodia, Banyan, Peepal, Bakul, Conocarpus, Kadam, Rain tree, shishu, Sonajhuri, Siris, Pitanjiba, Ficus, Krishnachura Kanchan, Gamhar etc. along the plant road and periphery as well as inside the plant has been done some photographs are shown shown in Annexure-6 .
xi.	The Standards issued by the Ministry vide G.S.R. No. 277(E) dated 31st March, 2012 regarding integrated iron and steel plant shall be followed.	Noted and complied.
xii.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 th November, 2009 shall be followed.	Noted and complied. Latest Ambient Air Quality Report is enclosed in Annexure 1 .
xiii.	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly	Reducing air pollution within the factory is on the top priority. To maintain gaseous emissions, including secondary fugitive emissions, within the most recent allowable limits, effective operating control methods have been implemented.



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	monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.	Latest fugitive monitoring reports are attached here in Annexure-3 .
xiv.	Regular monitoring of influent and effluent surface, sub- surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more Stringent.	Regular monitoring being done. Recycle and reuse practice has been adapted and no effluent being discharged outside the factory premises. Latest monitoring report of Ground water, Effluent water and Surface water and is enclosed as Annexure-12A, 12B & 12C .
xv.	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.	Appropriate handling, storage, utilization and disposal of solid waste is being done. Analysis of TCLP report is done by NABL laboratory. Reports are attached in Annexure-22 .
xvi.	A time bound action plan shall be submitted to reduce solid waste generated due to the project related activity, its proper utilization and disposal.	It is being complied. Solid wastes generated in the project activities are utilized in plant premises. Excavated soils are used in greenbelt development and earth filling. Old Metal structures are remelted in induction furnace. Old debris are used in land filling work.
xvii.	Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendments. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office.	It is being followed. All the fly ash generated from plant are handed over to brick and cement manufacturer for further utilization and for abandoned mine filling with proper agreement and permission. Accordingly, Company has come into agreement with Eastern Coalfield Limited for filling the illegally mined place at Bieched Bandh Area near Narsamunda Colliery of Sodepur area. Copy of the agreement and permission are attached in Annexure-15 .
xviii.	A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.	Complied. It is already been submitted.
xix.	Green belt shall be developed in at least 33% of the project area by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines.	Complied. SIPL is dedicated to complying with guidelines and making efforts to keep the plantation growing and surviving. Company has dedicated horticulture team for plantation and maintenance. Company had targeted 2500 per hector greenbelt covering 33% of the total plant areas. With consultation with DFO, native species such as Radhachura, Neem, Arjun, Spathodia, Banyan, Peepal, Bakul, Cornocarpur, Kadam, Rain Tree, Shishu, Sonajhuri, Siris, Pitanjiba, Ficus, Krishnachura, Chaatim, Kanchan etc. has been planted. At a frequent interval survival rate of existing greenbelt is being derived. Accordingly, maintenance and plantation program being made to take care of healthy plantation growth. As per latest data, tree density of 2502 has been



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		found in existing project area which is going to be enhanced year by year.
xx.	All the commitments made to the public during Public Hearing/public consultation meeting shall be satisfactorily implemented and adequate budget provision shall be made accordingly.	It is compiled/being complied. SIPL is in the regular process of implementation of the commitments made in the Public Hearing and also that during presentation to the Expert Appraisal Committee. Various CSR activities have been taken in action like distribution of blanket and winter dresses, drinking water for local needy villagers, free medical camps, study material for needy students, repairing and colouring of school building, grain distribution in nearby village to the underprivileged communities. Photographs attached in Annexure-7 .
xxi.	At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken reporting this regard shall be submitted to the Ministry's Regional Office.	It has been complied. Details of issues discussed in public hearing has been taken into CSR activities. Details in Annexure-7 .
xxii.	The proponent shall prepare a detailed CSR Plan for every year for the next 5 years for the existing-cum- expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.	SIPL is in the regular process of implementation of the commitments made in the Public Hearing and also that during presentation to the Expert Appraisal Committee. Various CSR activities have been taken in action like distribution of blanket and winter dresses, drinking water for local needy villagers, free medical camps, study material for needy students, repairing and colouring of school building, grain distribution in nearby village communities, public toilet construction, supporting local government hospital at Harmadih by providing oxygen cylinder. Motive of these CSR activities is skill development of local youth and increasing employment opportunity. Local women are provided training in tailoring work through Elegant Care Foundation. Our IR and CSR teams are strongly associated with local people for welfare activities. Some photographs are attached in Annexure-7 .
xxiii.	The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i)	Complied. SIPL have implemented standard operating procedure to look into any infringement/deviation/violation of environmental or forest



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	Standard operating process/procedure to being into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of noncompliance/ violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.	norms/conditions. SIPL have also the Hierarchical system/ Administrative order to deal with environmental issues and compliance of EC conditions. SIPL have in placed reporting system for non – compliance / violation of environmental norms. Board of Directors  Corporate Environment Policy of the company is attached as Annexure-18.
xxiv.	The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.	Complied Solar lighting system have been installed in the village Radhamadhabpur & Erakusum on roads side near Kali Mandir, Madandih, Khuwar, Harmadih and it is maintained regularly.
xxv.	The project proponent shall provide for LED lights in their offices and residential areas.	Complied.
xxvi.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	It is being Complied. At present no any major project activities are going on, and workers whoever involved in construction activities are from nearby area and do not require to stay at project site. Construction worker involved in project activities if required to stay, are provided with housing within site with necessary infrastructure and facilities like toilets, safe drinking water, medical care facilities etc.
GENERAL CONDITIOS:		
i.	The project authorities must strictly adhere to the stipulations made by the West Bengal Pollution Control Board and State Government.	Complied. Both CTE and CTO has been obtained from WBPCB. Please refer Annexure-8.
ii.	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Complied. No further expansion or modification will be undertaken without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
iii.	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM ₁₀ , PM _{2.5} , SO ₂ and NO _x are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at	Ambient Air Quality Monitoring being carried on as per direction in four locations consideration of maximum ground level concentration of PM₁₀, PM_{2.5}, SO₂, and NO_x. Latest Ambient Air Quality monitoring report and stack monitoring report is enclosed as Annexure-1 & Annexure-9.



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Sl. No.	CONDITIONS	COMPLIANCE STATUS
	Bhubaneswar and the SPCB/ CPCB once in six months.	
iv.	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May, 1993 and 31st December 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	Effluent water generated from rolling mill being treated in ETP and reused back in the same unit. Sludge generated from ETP are utilized in SAF/ provided to pellet making plant. Cooling tower blowdown and DM plant rejects being taken into neutralization tank and reused in dust suppression and greenbelt development activities, ash conditioning purposes, slag quenching, bed ash cooling etc. No effluent being discharge outside plant.
v.	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 should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during nighttime.	Noise control measure has already been implemented to keep the noise level well within the 85 dB(A) and ambient noise level below 75 dB(A) (during day time) and 70 dB(A) (during night time). Ambient Noise and Work Zone Noise Monitoring report is enclosed as Annexure-13A & 13B .
vi.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational health surveillance of the workers being done on regular interval and record is maintained. Health reports are enclosed herewith in Annexure-17 .
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.	The company has been developed rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.
viii.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio- economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	It is being/shall be complied. Shakambhari Ispat & Power Ltd. (SIPL) is complying/ in the process of complying with environmental protection measures and safeguards in accordance to proposed documents submitted in the ministry. In accordance to that Elegant Care Foundation has taken social, cultural, health and cultural activities on regular basis. The recommendations made in the EIA/EMP for environmental management, risk mitigation measures for new projects will be implemented with implementation of projects.
ix.	Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEF&CC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Bhubaneswar. The funds so provided shall not be diverted for any other purpose.	Funds are being issued to cover capital and recurring costs for environmental pollution control measures in accordance with MoEF&CC guidelines. To reduce pollution, facilities such as ESPs, silos, bag filters, water sprinkling, road sweeping, green belt development, and water recycling system have been installed. Road construction is nearing completion through concretization and pavement. Technical personnel have been hired to effectively operate, monitor, and maintain the installed equipment.
x.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila	Complied. EC letter has been submitted to local body and uploaded



EC F. No. J-11011/201/2013-IA II (I) Date: 21.12.2016 and EC amendment dated 29.04.2020		
Sl. No.	CONDITIONS	COMPLIANCE STATUS
	Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	In company website. http://shakambhariispat.com/environmental-orders
xi.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF & CC at Bhubaneswar. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Complied. Compliance status being uploaded on the company website. http://shakambhariispat.com/environmental-compliance Monitoring of criteria pollutants around the plant like PM 10, SO ₂ , NO _x etc. being displayed in main gate as well as company website. Enclosed in Annexure-20 .
xii.	The project proponent shall also submit six monthly report status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Bhubaneswar/ CPCB/SPCB shall monitor the stipulated conditions.	Six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data had been submitted to MOEF & CC and Pollution Control Board in both soft & hard copies. Now it is being submitted in soft copy only as per direction of Hon'ble MoEF&CC F. NO. 106-12/EPE dated. 11.05.2020.
xiii.	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MoEF&CC at Bhubaneswar by e-mail.	Complied. Environment statement (Form-V) for financial year 24-25, has been already submitted to WBPCB and Sub Office of MoEF&CC Kolkata and financial year 2025-26 will be submitted accordingly. Same is uploaded in Company website. Copy is enclosed in Annexure-21 .
xiv.	The project proponent shall inform the public that the project has been accorded environment clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of the Ministry of Environment, Forest and Climate Change (MoEF&CC) at http://envfor.nic.in . This shall 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	It is Complied.



EC F. No. J-11011/201/2013-IA II (I) Date: 21.12.2016 and EC amendment dated 29.04.2020		
Sl. No.	CONDITIONS	COMPLIANCE STATUS
	the region of which one shall be in the vernacular language of the locality concerned and copy of the same should be forwarded to the Regional Office at Bhubaneswar	
xv.	Project authorities shall inform the Regional Office as well as the 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.	Complied. Land Development for the project was started w.e.f. 22.03.2017 and the date of financial closure is 14.01.2017
Additional condition as per EC Amended F. No. J-11011/201/2013-IA. II (I) dated 29th April, 2020		
i.	An affidavit ensuring compliance to the non-compliances/partial compliances reported in the monitoring report of the Regional Office dated 18/02/2019 shall be submitted to the Ministry and to the Regional Office of the Ministry at Bhubaneswar within three months from date of issue of this letter.	Complied. We have already submitted the affidavit following the direction of Hon'ble MoEF&CC.



ANNEXURE- 1



ENVIROCHECK

Recognised by MoEF & CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017) & NABET (CERTIFICATE NO. - NABET/EIA/2326/IA 0117)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

FORMAT NO : ENV/FM/37

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	05.02.2026 – 06.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/01	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Ambient Air
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XVIII
			Report ID No.	:	ENV/08/Feb./TR(A)/XVIII/25-26
Sample Testing Location	:	Permanent Testing			

A]	GENERAL INFORMATION
1.	Location of Sampling : East Direction from the Plant Boundary (Ferro Division)
2.	Duration of Sampling : 24 hrs. (10:30 a.m. – 10:30 a.m.)

B]	METEOROLOGICAL INFORMATION	UNIT	METHOD	OBSERVED VALUE
1.	Temperature	°C	ASTM E 337-02 : Sec.11, Vol. 11.07	21.0
2.	Humidity	%	ASTM E 337-02 : Sec.11, Vol. 11.07	60.0
3.	Rainfall	mm	IS : 5235 & Specification of Surface Meteorological Instrument, IMD, GOI	<0.2

C]	RESULTS				
SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS	LIMIT
1.	Fine Particulate Matter (Size less than 2.5 μm) of PM2.5	μg/m³	IS 5182 (Part 24)	46.26	60.0
2.	Respirable Suspended Particulate Matter (Size less than 10 μm) of PM10	μg/m³	IS 5182 (PART 23)	78.58	100.0
3.	Sulfur Dioxide	μg/m³	IS 5182 Part 2, Sec.1	11.20	80.0
4.	Nitrogen dioxide	μg/m³	IS 5182 Part 6	21.52	80.0
5.	Carbon Monoxide	mg/m³	IS 5182 Part 10 (Non Dispersive Infrared Absorption Method)	0.40	2.0
6.	Lead as Pb	μg/m³	USEPA IO 3.4	<0.01	1.0
7.	Benzo (a) Pyrene	ng/m³	IS 5182 Part 12	<0.36	1.0
8.	Benzene	μg/m³	IS 5182 (Part 11) Method 1	<0.74	5.0
9.	Ozone	μg/m³	IS 5182 Part IX	<10.0	100.0
10.	Ammonia	μg/m³	IS 5182 Part 25	<4.18	400.0
11.	Nickel as Ni	ng/m³	USEPA IO 3.4	<0.02	20.0
12.	Arsenic as As	ng/m³	USEPA IO 3.4	<0.01	6.0

Remarks : Result relates only to the sample submitted.

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 { 033-25792891/25497490, Fax : 033-25289141
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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

FORMAT NO : ENV/FM/37

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026 – 05.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/01	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Ambient Air
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XVI
			Report ID No.	:	ENV/08/Feb./TR(A)/XVI/25-26
Sample Testing Location	:	Permanent Testing			

A]	GENERAL INFORMATION
1.	Location of Sampling : Gopalganj Primary School
2.	Duration of Sampling : 24 hrs. (09:30 a.m. – 09:30 a.m.)

B]	METEOROLOGICAL INFORMATION	UNIT	METHOD	OBSERVED VALUE
1.	Temperature	°C	ASTM E 337-02 : Sec.11, Vol. 11.07	18.0
2.	Humidity	%	ASTM E 337-02 : Sec.11, Vol. 11.07	56.0
3.	Rainfall	mm	IS : 5235 & Specification of Surface Meteorological Instrument, IMD, GOI	<0.2

C]	RESULTS				
SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS	LIMIT
1.	Fine Particulate Matter (Size less than 2.5 µm) of PM2.5	µg/m³	IS 5182 (Part 24)	42.62	60.0
2.	Respirable Suspended Particulate Matter (Size less than 10 µm) of PM10	µg/m³	IS 5182 (PART 23)	71.56	100.0
3.	Sulfur Dioxide	µg/m³	IS 5182 Part 2, Sec.1	12.80	80.0
4.	Nitrogen dioxide	µg/m³	IS 5182 Part 6	20.04	80.0
5.	Carbon Monoxide	mg/m³	IS 5182 Part 10 (Non Dispersive Infrared Absorption Method)	0.40	2.0
6.	Lead as Pb	µg/m³	USEPA IO 3.4	<0.01	1.0
7.	Benzo (a) Pyrene	ng/m³	IS 5182 Part 12	<0.36	1.0
8.	Benzene	µg/m³	IS 5182 (Part 11) Method 1	<0.74	5.0
9.	Ozone	µg/m³	IS 5182 Part IX	<10.0	100.0
10.	Ammonia	µg/m³	IS 5182 Part 25	<4.18	400.0
11.	Nickel as Ni	ng/m³	USEPA IO 3.4	<0.02	20.0
12.	Arsenic as As	ng/m³	USEPA IO 3.4	<0.01	6.0
Remarks	:	Result relates only to the sample submitted.			

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

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TEST REPORT

FORMAT NO : ENV/FM/37

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026 – 05.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/01	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Ambient Air
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XVII
			Report ID No.	:	ENV/08/Feb./TR(A)/XVII/25-26
Sample Testing Location	:	Permanent Testing			

A]	GENERAL INFORMATION
1.	Location of Sampling : Madandih Village (0.5 km Distance from Plant)
2.	Duration of Sampling : 24 hrs. (10:00 a.m. – 10:00 a.m.)

B]	METEOROLOGICAL INFORMATION	UNIT	METHOD	OBSERVED VALUE
1.	Temperature	°C	ASTM E 337-02 : Sec.11, Vol. 11.07	18.0
2.	Humidity	%	ASTM E 337-02 : Sec.11, Vol. 11.07	56.0
3.	Rainfall	mm	IS : 5235 & Specification of Surface Meteorological Instrument, IMD, GOI	<0.2

C]	RESULTS				
SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS	LIMIT
1.	Fine Particulate Matter (Size less than 2.5 μm) of PM2.5	μg/m ³	IS 5182 (Part 24)	44.12	60.0
2.	Respirable Suspended Particulate Matter (Size less than 10 μm) of PM10	μg/m ³	IS 5182 (PART 23)	73.89	100.0
3.	Sulfur Dioxide	μg/m ³	IS 5182 Part 2, Sec.1	9.56	80.0
4.	Nitrogen dioxide	μg/m ³	IS 5182 Part 6	18.20	80.0
5.	Carbon Monoxide	mg/m ³	IS 5182 Part 10 (Non Dispersive Infrared Absorption Method)	0.32	2.0
6.	Lead as Pb	μg/m ³	USEPA IO 3.4	<0.01	1.0
7.	Benzo (a) Pyrene	ng/m ³	IS 5182 Part 12	<0.36	1.0
8.	Benzene	μg/m ³	IS 5182 (Part 11) Method 1	<0.74	5.0
9.	Ozone	μg/m ³	IS 5182 Part IX	<10.0	100.0
10.	Ammonia	μg/m ³	IS 5182 Part 25	<4.18	400.0
11.	Nickel as Ni	ng/m ³	USEPA IO 3.4	<0.02	20.0
12.	Arsenic as As	ng/m ³	USEPA IO 3.4	<0.01	6.0
Remarks	:	Result relates only to the sample submitted.			

Reviewed By :

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(Tanushree Malik)
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TEST REPORT

FORMAT NO : ENV/FM/37

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	05.02.2026 – 06.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/01	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Ambient Air
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XIX
			Report ID No.	:	ENV/08/Feb./TR(A)/XIX/25-26
Sample Testing Location	:	Permanent Testing			

A]	GENERAL INFORMATION
1.	Location of Sampling : Near Harmadiah Rural Hospital
2.	Duration of Sampling : 24 hrs. (11:00 a.m. – 11:00 a.m.)

B]	METEOROLOGICAL INFORMATION	UNIT	METHOD	OBSERVED VALUE
1.	Temperature	°C	ASTM E 337-02 : Sec.11, Vol. 11.07	21.0
2.	Humidity	%	ASTM E 337-02 : Sec.11, Vol. 11.07	60.0
3.	Rainfall	mm	IS : 5235 & Specification of Surface Meteorological Instrument, IMD, GOI	<0.2

C]	RESULTS				
SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS	LIMIT
1.	Fine Particulate Matter (Size less than 2.5 μm) of PM2.5	μg/m³	IS 5182 (Part 24)	34.12	60.0
2.	Respirable Suspended Particulate Matter (Size less than 10 μm) of PM10	μg/m³	IS 5182 (PART 23)	68.58	100.0
3.	Sulfur Dioxide	μg/m³	IS 5182 Part 2, Sec.1	6.82	80.0
4.	Nitrogen dioxide	μg/m³	IS 5182 Part 6	16.50	80.0
5.	Carbon Monoxide	mg/m³	IS 5182 Part 10 (Non Dispersive Infrared Absorption Method)	0.23	2.0
6.	Lead as Pb	μg/m³	USEPA IO 3.4	<0.01	1.0
7.	Benzo (a) Pyrene	ng/m³	IS 5182 Part 12	<0.36	1.0
8.	Benzene	μg/m³	IS 5182 (Part 11) Method 1	<0.74	5.0
9.	Ozone	μg/m³	IS 5182 Part IX	<10.0	100.0
10.	Ammonia	μg/m³	IS 5182 Part 25	<4.18	400.0
11.	Nickel as Ni	ng/m³	USEPA IO 3.4	<0.02	20.0
12.	Arsenic as As	ng/m³	USEPA IO 3.4	<0.01	6.0
Remarks	:	Result relates only to the sample submitted.			

Reviewed By :

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(Tanushree Malik)
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ANNEXURE- 2

DAMODAR VALLEY CORPORATION



AGREEMENT

EXECUTED ON THIS 30TH DAY OF MARCH 2026

BETWEEN

DAMODAR VALLEY CORPORATION

AND

SHAKAMBHARI ISPAT & POWER LTD.

(UNIT MADANDIH)

FOR SUPPLY OF RAW WATER

FOR

THEIR UNIT

AT

VILL-MADANDIH, PO-BARTORIA, DIST-PURULIA, WEST BENGAL-723121

FROM

¾ KM UPSTREAM OF PANCHET DAM (DVC LAND IN LAKHANPUR MOUZA ON THE RIVER
BANK PLOT NO-102)

FOR

INDUSTRIAL (USES)

ALLOCATED QUANTITY: 1.69 (ONE POINT SIX NINE) MGD



Gmp
वरररर प्ररररर (प्रररररर)
अल प्रररररर ररररर
दाघानि, ररररर
SENIOR MANAGER (CIVIL)
WATER TARIFF CELL
DVC, MADHON



पश्चिमबङ्ग पश्चिम बंगाल WEST BENGAL

AT 654905

AGREEMENT

Supply of Raw Water

FOR

INDUSTRIAL USE

This Agreement is made on this 30th Day of March 2026

BETWEEN

DAMODAR VALLEY CORPORATION, a Corporation constituted under the Damodar Valley Corporation Act being Act No. XIV of 1948 (hereinafter referred to as "the said Act") and having its Headquarters of DVC Towers, VIP Road, Kolkata -700 054 in the state of West Bengal (hereinafter to as "the First Party", which term shall unless excluded by or repugnant to the subject or context include its successors-in-interest and assigns) of the ONE PART

AND

M/S. SHAKAMBHARI ISPAT & POWER LIMITED (Unit - Madandih), a Limited Company having their registered office at DIAMOND PRESTIGE, 41A, A.J.C. BOSE ROAD ,8TH FLOOR NO. 801 KOLKATA-700017 in the state of WEST BENGAL (CIN NO. U24109WB2004PLC170941, GST NO. 19AABCE3113G320 & PAN AABCE3113G) (Hereinafter referred to as "the Second Party" which term shall unless excluded by or repugnant to the subject or context include its successors-in-interest and/or permitted assigns) of OTHER PART.



बिनायक प्रसाद (अधीक्षक)
भेल प्रमुख निवास
दामोदर, बंगाल
SENIOR MANAGER (CIVIL)
WATER TARIFF CELL
DVC, MADANDIH

WHEREAS one of the functions of the First party under Section 12(a) of the said Act is the promotion and operation of the schemes inter-alia for the supply of water in the Damodar Valley.

AND WHEREAS under the provisions of Section 15 of the said Act the First Party is vested with power to determine and levy rates for bulk supply and retail distribution of water for Industrial and Domestic purposes and specify the manner of recovery of such rates.

AND WHEREAS under the provisions of section 17 of the said Act construction, operation or maintenance in the Damodar Valley of any dam or other work of any installation for extraction of water shall not be effected by any person without the consent of the First Party.

AND WHEREAS, upon the request of the Second Party made to the First Party under cover of its Letter No. NIL dated NIL (annexed hereto), seeking permission to construct, operate and/or maintain a water supply scheme and to draw water from the $\frac{3}{4}$ KM UPSTREAM OF PANCHET DAM (DVC LAND IN LAKHANPUR MOUZA ON THE RIVER BANK PLOT NO-102) for industrial use for its unit situated at VILL-MADANDIH, PO-BARTORIA, DIST-PURULIA, WEST BENGAL-723121. in accordance with the approved plans and drawings forwarded by the Chief Engineer (Civil), DVC, Maithon under cover of his Letter No. NIL, and the Letter No. MD/DVRR/W-6-(PART-VIII)/SHAKAMBARI ISPAT & POWER LTD./2019/639-44 dated 08th March 2019 issued by the Member Secretary, DVRR, CWC, Maithon (annexed hereto), as laid down under the relevant provisions of the said Act, the First Party agreed to such construction, operation and/or maintenance of the water supply scheme by the Second Party.

AND WHEREAS, pursuant thereto, the First Party and the Second Party entered into a Agreement on 15th November 2022 for an initial period of five (5) years, as referred to in Clause-16 of the said Agreement, together with its terms and conditions.

AND WHEREAS, the five-year tenure of the said Agreement dated 15th November 2022 will expire on 14th November 2027,

and the Second Party, under cover of its Letter No. NIL dated 28/01/2026, has requested the First Party for Execution of Renewal Agreement pursuant to change in company name, for drawl of 1.69 MGD raw water from the river system to allow continuation of the operation and/or maintenance of the water supply scheme for industrial use, in accordance with the relevant provisions of the said Act, and to enter into a renewal agreement to that effect.

AND WHEREAS the First Party has agreed to such operation and/ or maintenance of the water supply scheme has further agreed to such of water to the Second Party for an initial period of five years as referred to in Clause-16 herein under on the terms and conditions as hereinafter appearing. **NOW THIS AGREEMENT WITNESSTH AND IT IS HEREBY DECLARED AND AGREED AS FOLLOWS: -**

01. (a) WATER PERMISSION:

(i) The "First Party" hereby grants to the "Second Party" the permission to construct, operate and/or maintain the said water supply scheme in accordance with the Plan and Drawing annexed hereto and to extract such quantities of water from $\frac{3}{4}$ KM UPSTREAM OF PANCHET



बरीय मथन (बदलित)
जल प्रदायक विभाग
दरभंगा, बिहार
SENIOR MANAGER CIVIL
MAITHON PURULIA

DAM (DVC LAND IN LAKHANPUR MOUZA ON THE RIVER BANK PLOT NO-102) for the purpose of INDUSTRIAL use for their unit, VILL-MADANDIH, PO-BARTORIA, DIST-PURULIA, WEST BENGAL-723121, as the "Second Party" may require up to **1.69 (ONE POINT SIX NINE) MGD** at the point in the Damodar Valley indicated in the said plan and Drawing annexed hereto and in the manner hereinafter mentioned provided the "Second Party" desiring to increase or decrease the quantity of water to be extracted as permitted aforesaid the "First Party" may require the "Second Party" to give the "First Party" THREE(3) MONTHS' notice in writing and approach DVRRC stating the quantity of water required and the "First Party" after receipt of approval of DVRRC will permit the additional drawl of water depending on the condition prevailing at that time provided further that failure on the part of 'the First Party' will not be construed as breach of this Agreement. The sourcing point and allocation of water by DVRRC is function specific. The allocation shall, in no way, be utilized /misused by 'the Second Party' by sale of water to any other consumer or its sister concern (or any agency on its behalf) for any purpose whatsoever. In the event of any such act, the same will be construed as breach of the terms and conditions of this agreement on the part of 'the Second Party' as specified in clause-17.

- (i) These structures and pumping installations shall be the property of the "Second party" and shall be maintained by them.

01. (b) LAND PERMISSION:

- (i) The "First Party" who is seized and possessed of and is otherwise well and sufficiently entitled to the plots of land measuring 7785 sq. ft. of DVC land, more particularly described in the drawing hereto annexed, hereby grants to the "Second Party" the right to use/build at his own cost, the intake works comprising the pump house supporting structures and approaches and also lay down pipes and other works on the above mentioned piece and parcel of land.
- (ii) The "Second Party" shall apply to the "First Party" for extension of the license-period of the temporarily allotted piece of land for permissive possession/occupation for the specific use if applicable as mentioned hereinabove in Cl. 01. (b). (i) before expiry of every license-period/term of 11 (eleven) months as per the subsisting rules & regulations for temporary use/permissive possession/occupation. The "Second Party" hereby agrees to comply with all the existing terms and conditions as may be decided by the Corporation from time to time and agrees to pay the license fee as may be revised time to time without raising any dispute in this regard.
- (iii) For the temporary use/occupation of the said 7785 sq. ft. of DVC land, the second party shall pay the "First party" a license fee as applicable and to be enhanced @7% from 1st of April of each Financial Year per term of 11 (eleven) months from the date of permissive possession/occupation of the said land if applicable, is made over to the 'Second Party'. The amount applicable as License Fee for the term is to be paid in advance from the date of occupation of the said land by the 'Second



वरिय प्रविर्क (अरुनिक)
अल प्रशुलक देभाग
दांवांनि, रीधर
SENIOR MANAGER (CIVIL)
WATER TARIFF CELL
(TIN) 84 11-10

Party' and shall have to be paid in advance for each consecutive License Period of 11 months, enhanced @7% in the 1st day of April of each Financial Year.

- (iv) The aforesaid license-period and the rate of license fee may be altered and /or revised and/or enhanced as per discretion of 'the FIRST party' and 'the SECOND PARTY' agrees to make the payments as per the revised rate as and when made applicable.
- (v) The "Second Party" shall not be entitled to transfer or let out the said land to others without the consent of the "First Party".
- (vi) The "First Party" shall not put up any structure of its own on the aforesaid piece of land without the consent of the "Second Party" which shall not be unnecessarily withheld.
- (vii) On the termination of the tenure of the temporary use and occupation period, the "Second Party" shall quit, vacate and deliver peaceful possession of the said land by removing the intake works built thereon and restoring it to its original condition at his own cost.
- (viii) Neatness and cleanliness of the area occupied should be observed by the "Second Party".

02. APPROVAL OF PLAN & DRAWING INSPECTION:

The installation of the "Second Party" required for extraction of water at the point on the $\frac{3}{4}$ KM UPSTREAM OF PANCHET DAM (DVC LAND IN LAKHANPUR MOUZA ON THE RIVER BANK PLOT NO-102) of DVC indicated in the said plan and Drawing shall be duly approved by the "First Party" before erection provided the "First Party" or its representatives duly authorized in that behalf shall, from time to time, and at all times be entitled to enter such installations of the "Second Party" for inspection."

03. (a) EXCESS DRAWAL:

No drawal in excess of the water, as permitted shall be made by "the second party" without obtaining the specific prior written permission/approval of DVRRC and subject to such terms and conditions as "the First Party" may like to impose. Notwithstanding, whatever is mentioned in this agreement regarding excess drawal, it is hereby agreed and accepted by the second party that, for the quantities of water consumed in excess of the approved monthly drawal and for any other unauthorized drawal of water, sanctioned quantum will be charged @ normal rate plus overdrawal/unauthorized drawal in excess of sanctioned drawal on monthly basis will be charged @ 2 (Two) times the normal rate.

(b) LESS DRAWAL:

The less drawal of water by 10% or more of the agreement quantity during any 5 (five) consecutive years will automatically call for revision of the agreement quantity. The revised agreement quantity will be reduced to average of preceding 5 yrs' actual drawal, without making any further reference to the consumer incorporating the actual average drawal. However, the consumer may opt to apply to DVRRC for increase the quantity as per provision under Clause -1(a) hereinaabove.



बरोम प्रसक (असे, नेक)
जल प्रसक विभाग
दोवानी, रीवा
SENIOR MANAGER (O&M)
WATER SUPPLY CELL
DVC, MANDLA

04. MODE OF MEASUREMENT & METERS:

For the purpose of measurement of the quantity of water extracted, the "Second Party" shall under this Agreement, with the prior Approval of the First Party, install at such points as may be indicated by 'the First Party', as many meters or as equal to the different type or types of uses of water so as to register the quantity of water for the purpose of determining the water drawal pattern (excess/less drawal) of the Second Party in such units of measurement as may be adopted by "the First Party" from time to time provided that for the purpose of checking the accuracy of the meter/meters installed by "the Second Party", "the First Party" may install check meters or other mutually agreed upon check measures and "the Second Party" shall provide all facilities such as log book etc. required by "the First Party" for such installation or such check.

It shall be the responsibility of the 'Second Party' to repair/rectify/replacement of meter/meters within a period of 30 days from the date of detection of the fault by either party. And that 'the second party' has to submit a report certified by the representative of the first party every year regarding their compliance with proper and satisfactory functioning of meter with proper logging of meter readings which will be given due importance during periodic review of water utilization by DVRRC. Non-compliance of above may tantamount to cancellation of water allotment.

The reading of the meters referred to above shall be jointly taken by the accredited representative of the consumer and Corporation on/or as near as practicable to the last day of each English calendar month or as decided by the corporation and the reading so taken shall be binding, final and conclusive between the consumer and the Corporation as to the quantity of water drawal by the consumer, provided that in the event of any meter being found defective and the quantity of drawal of water during the period when the meter was defective shall be determined, unless otherwise mutually agreed as detailed in clause - 6 & 10 here-in-under.

05. SEALING OF METERS:

All meters referred to in the above mentioned Clause - 04 excepting the ones with automatic recorder on charts if any, shall be properly sealed on behalf of both the parties hereto and shall not be interfered with by either party except in the presence of the other party or its representatives duly authorized in that behalf.

06. METER READING, INSPECTION & BASIS OF PAYMENT:

The Control Valve House housing the meter/meters of 'the Second Party' shall remain in the custody of 'the second Party' and 'the First Party' through its representative duly authorized in that behalf shall at all times be entitled to enter the said Control Valve House and inspect the meter/meters. The meter reading shall be entered up daily at 9.00 hours in a register by the second Party or its representatives duly authorized in that behalf. The readings may be checked and attested by 'the First Party' or its representative duly authorized in that behalf, at convenient intervals.



करोय प्रसन्न (अर्थात्)
जल प्रशस्ति अर्थात्
दावापत्र, गैर-
SENIOR MANAGER (CWS)
WATER METER CELL
Date: 11/11/2019

Provided that where it is not possible to record the quantity of water extracted for a particular use directly owing to the absence of a meter directly recording such quantity, the quantity extracted for such use shall be determined by taking the difference between the quantity recorded in the main meter, recording the total quantity extracted for all uses under this Agreement, and the quantity recorded for the other uses for which there may be direct meter/meters.

Provided further that if this meter/meters installed by 'the second party' for recording the quantity of water is/are out of order, the quantity of water extracted may be assessed by taking the average of the quantity extracted during the preceding 3 (three) months as per the reading of the meter/meters, provided further that nothing as aforesaid shall prevent the respective parties from arriving at a mutual settlement as regard the quantity of water extracted during the above period for the purpose of ascertaining excess/less drawal by the second party.

The basis of payment shall be the quantity of water extracted in a month. In other words, bills shall be raised monthly or quarterly or as decided by the corporation, based on the extracted quantity.

07. QUANTITY OF WATER CONSUMED OR EXTRACTED:

The Registers of meter reading referred to in the above mentioned Clause- 06 or the assessed quantity of water mutually agreed upon by and between both the parties hereto or the average of the quantity of water extracted during the three months as aforesaid or computed by taking the difference between the direct recording and main meter shall be the prima facie evidence of the quantity of water extracted by 'the second Party'.

08. PROPRIETARY RIGHT OF METERS AND UPKEEPMENT:

Meters as mentioned in the above mentioned Clause -04 shall be the property of 'the Second Party' and 'the Second Party' shall be liable for the upkeepment of the meter and for carrying out test once a year or more to the satisfaction of the First Party about the accuracy of such meter/meters.

09. ACCURACY OF METERS :

In the event of any dispute or difference between 'the First Party' and the Second Party as to the sufficiency or accuracy or state of repair or condition of the said meter or as to the quantity of water extracted through such meter, such difference or dispute shall be referred to and determined by an Engineer to be appointed by both the parties hereto

10. BASIS OF ASSESSMENT IN ABSENCE OF METER :

(a) It is accepted and agreed by the 'Second Party' that the total quantity of consumption of water for the month shall be computed by the first party on the basis of permitted quantity of water and the bills shall be raised on such quantity as referred to in Schedule-I & II. However, the Second Party is required to install and commission the meter(s) up to the satisfaction of the First Party for ascertaining excess/less drawal as referred to in clause 3.(a) & 3.(b) hereinabove.



Emp
नवीन प्रदीप (अधीनस्थ)
जन प्रमुख, नवीन
राजधानी, मुंबई
SENIOR MANAGER/DEPUTY
WATER TARIFF CELL
DWC, MUMBAI

(b) If at any time the meters installed for measurement of water extracted shall at any time, cease to register correctly or be removed for repair, calibration etc., then for the period until the said meters shall have been repaired replaced or otherwise adjusted as to register the quantity of water passing through it correctly, the quantity shall be computed as per proviso of clause 06 hereinabove. The First Party, however, shall be entitled to charge and 'the Second Party' shall be liable to pay for such quantity of water as mentioned in Schedule-I & II and the bills shall be continued to be raised by first party based on the permitted quantity as mentioned hereinabove.

Notwithstanding the bills shall be raised as per provisions contained in preceding cl. 10.(a). The Second Party shall make every Endeavour to get the meter repaired and installed to the satisfaction of the First Party within a period of 1(one) months.

11. BILLS & PAYMENTS:

(a) Bills & Tariff:

The price for supply of water shall be charged to the 'Second Party' in accordance with Schedule-I & the First Party's 'Schedule of Rates' as given in Schedule-II and other conditions in force from time to time, provided that any levy such as any Surcharge, Sales Tax, Octroi or any another amount by whatever other name called known or made by the Corporation, the state Government or any other competent authorities on quantity of water allocated to the 'the second Party' under this agreement, shall be paid by 'the second Party'.

(b) Security Deposit:

The First Party may require the Second Party to deposit a Security Amount equivalent to water charges for three calendar months, considering quantity allocated in MGD as specified in Clause- 1(a) and given in the schedule -I annexed hereto and or as modified as per clause-13 here-in-under and as per the prevailing water rate mentioned in schedule of rates in Schedule-II. The Second Party shall have to pay altered security amount if the quantity of allocation is changed by DVRRC as per the terms of this agreement and as and when the water rates are revised and notified to the second party from time to time during the tenure of this agreement. In the event of termination of this agreement such security deposit shall be refunded after adjustment of dues, if any, to the Second Party without any interest thereon.

The 'Second Party' has deposited Bank Guarantee No. 0325226IFG000430 dated 16.01.2026 of Indian Bank amounting Rs. 1,14,443/- (Rupees one lakh, fourteen thousand, four hundred, forty three only) as Bank Guarantee for land Security Deposit,

and Bank Guarantee No. 0325226IFG000431 dated 16.01.2026 of Indian Bank amounting Rs. 1,30,33,654/- (Rupees one crore, thirty lakhs, thirty three thousand, six hundred, fifty four only) equivalent to three calendar months water charges considering allocated water quantity of 1.69 MGD (One Point Six Nine MGD) and Industrial Rate @ 18.85 per KL for FY-2026-27 as water security deposit ,

The 'Second Party' also hereby do agree to renew the Security Deposit BG or provide new BG at the prevailing water rate of that time at least 03 (Three) months before the expiry of the



पञ्जीत (अधीनस्थ)
अन्य विभागों में
स्थानांतरित, यदि
SENOR MALLA THIRU
पञ्जीत (अधीनस्थ)

current SDBG. In case the consumer fails to renew the Security Deposit Bank Guarantee 03 (Three) months before the expiry of the Bank Guarantee or any subsequent renewal thereof, the First Party shall retain the right to invoke the Bank Guarantee amount and without any reference to the Second Party.

(c) Periodicity of Billing:

Bills will be raised to the Second Party monthly/quarterly based on actual drawal or as decided by the Corporation as the case may be. It will be the responsibility of second party to make the aforesaid payment within the due date without raising any dispute in this regard.

(d) Mode of payment:

The 'second party' shall pay the bill amount to the first party's office at Kolkata by RTGS/Cheque/Demand Draft drawn on Kolkata Branch of any Nationalized Bank, payable to Chief Accounts Officer, DVC, Kolkata or NET Banking/NEFT crediting the amount at DVC's Virtual Account Number mentioned in the consumer Bill within 30 days from the date of issue of the bill. The license fee, however, is to be paid by the second party as per terms mentioned in Clause- 1 (b).

(e) Provisional Billing for disputed bills:

In the case of any disputed bill(s) and or non-receipt/delayed receipt of bill, the second party shall collect the duplicate bill from the office of first party and make the payment immediately. However Delay Payment Surcharge, if applicable, as mentioned here-in-under in clause 11.(f) shall have to be borne by the second party. In case of disputed bills, the second party shall continue to pay full amount as per the bill raised by the first party. The necessary adjustment shall be done by the first party on resolution of dispute and/or differences.

(f) Delay Payment Surcharge:

If 'the second party' fails to make the payment of any bill amount within the due date, the second party shall pay the surcharge of 2.0 % per month on the amount of the bill from the due date of payment to the date of receipt of such amount in first party's office at Kolkata/ in Corporation's Account which shall be treated as date of payment. The rate of Delay Payment Surcharge is however liable to revision from such date as the Corporation may decide with prior notice of one month in writing to the consumer.

(g) Default in payment:

In the event any bill remaining unpaid for 60 days from the date of issue of the bill, the first party shall give the second party 7(Seven) days' clear notice in writing of its intention to discontinue the supply of water and on the expiry of such period if the payment has not been received, 'the first party' may forthwith discontinue supply of water to the second party till the period the default continues. Such discontinuance of supply shall not be deemed as breach on the part of the Corporation to comply with any of the terms of this Agreement and shall not relieve the consumer of its obligations and liabilities under the Agreement.

(h) Resolution of Dispute on Bill Amount:



Genp
सरोज प्रमोद (अधीक्षक)
असि प्रमोद (अधीक्षक)
राजेश्वर, मयपुर
SENIOR MANAGER (CIVIL)
WATER TANKER CELL
DVC, AHMEDNAGAR

In the event of any dispute on the amount of the bill the consumer shall submit the details indicating the reason/reasons for such dispute and the aforesaid dispute/disputes normally shall be resolved by mutual discussion and/or mutual exchange of written documents between the consumer and the Corporation through authorized representative within 30 (thirty) days from the date of receipt of such reference made by the second party to 'the First Party'.

12. MODE OF SUPPLY UNDER NORMAL & ABNORMAL CONDITION:

Save as provided herein **1.69 (ONE POINT SIX NINE) MGD** which, however, need not be continuous, throughout 24 hours, shall be available to 'the Second Party' provided that in case of draught or other unforeseen circumstances, & force majeure or any other cause over which the First Party has no control, the First Party shall not be responsible for any diminution or discontinuance of supply on such occasions, "&" but it shall restore the normal conditions of supply as soon as it reasonably can be done to the extent possible. "The First Party" shall not be considered to be in default or in breach in supplying agreed quantity of raw water due to causes beyond the control of the "The First Party" such as acts of God, Natural Calamities, Civil Wars, Fire, Draught, Riot and acts of unsurpassed power, etc.

13. VALIDITY PERIOD OF QUANTUM OF WATER ALLOCATION:

Notwithstanding whatever is stated herein above, the allocated quantum of water for drawal by 'the Second Party' i.e. initial allocation of quantity (in MGD/Cusec) by DVC/DVRRC shall remain valid for INITIAL AGREEMENT period of 5 (five) years.

In case the average drawal by the second party during the initial agreement period of five years is not below 90% of allocated quantity, then the allocated quantity as specified in Clause- 1(a) shall be treated as the 'allocated quantum' of water for drawal by 'the second party' during the forthcoming period provided that the average drawal during last consecutive 5 (five) years is not less by more than 10% of allocated quantity at the time of review by DVRRC.

In case the drawal is found less by more than 10%, the first party may reduce the quantum of allocation accordingly based on the average drawal. However, the second party shall have the liberty to apply for increasing the re-allocated quantity as per provision of Clause- 1(a). Any change in the allocated quantity after review by DVRRC Shall deem to replace the quantity of drawal specified in Clause- 1(a) and Schedule- I annexed hereto.

Fresh application for re-allotment of the earlier quantity of water for drawal by the second party, shall be required to be submitted by 'the Second Party' twelve (12) months prior to expiry of the initial agreement block of 5(five) years.

If the fresh application as above, is not submitted by 'the second party' in due time to the review committee of DVRRC, 'The first party' shall have the right to reduce ex-parte the re-allocation of water as decided by the committee as deemed fit for equitable distribution taking into consideration the average drawal by the second party during the preceding 5(five) years.

'The second party' hereby accepts and agrees to the aforesaid re-allocation of water without any dispute and the bills shall be raised on the basis of the drawal quantity in MGD.



सरोज कुमार (अधीक्षक)
जल प्रभुत्व विभाग
राजधानी, दिल्ली
SENIOR MANAGER (WATER)
WATER TARIFF CELL

14. RULES & REGULATION:

'The Second Party' agrees to conform to and abide by all rules and regulations made by the First Party including guidelines for water allocation set by DVRRRC now in force and/or which may from time to time be made by the First Party consistent with this agreement relating to the extraction of water from the First Party's sources within the statutory limit of the said Act.

'The second party' shall ensure the optimal use of allotted quantum for the specific purpose and surrender the wasteful usage from the allotted quota. 'The second party' shall take all cares to avoid any untoward hydraulic conditions and undesirable changes in the river/supply channel.

The second party' shall also ensure that the minimum flow in the river channel required for ecological balance is not interfered with. The Second Party shall take care that the intake structure and drawl of water, under no circumstance be detrimental to the safety and operation procedures of adjoining intakes/reservoir bridges both upstream & downstream of the intake point and also that the proposed intake is strong enough to be able to withstand floods in the river.

Notwithstanding whatever is stated in Clause-13 above, the review committee for allocation of water shall have prerogative to review periodically to reflect and incorporate the changes which take place in the realm of Water Resource Management.

"The Second Party" will ensure that the effluent water discharging out of the plant/industry will conform to the latest rules/bye laws/ regulations/prescribed water quality parameters by pollution control board of respective State Governments and/or Central Government.

Notwithstanding that the Corporation may not have acted on some previous breach, defaults or event of like nature on the part of the second party, it shall be lawful for the Corporation to enforce the terms and conditions of these presents in the event of a subsequent breach, default or event of like nature in all matters related to withdrawal of raw water by 'the Second Party'.

Any waiver by 'the First Party' of any breach of the terms and conditions of this agreement by the Second Party shall not constitute waiver of any subsequent breach of any other terms or conditions of this agreement.

15. DISPUTE OR DIFFERENCE & ARBITRATION:

Any dispute(s) or difference(s) arising out of or in connection with the agreement at any time between the 'First Party' and the 'Second Party' shall to the extent possible be settled amicably between the parties.

In the event of any dispute(s) or difference(s) whatsoever arising under the agreement or in connection therewith including any question relating to existence, meaning and interpretation of the agreement or any alleged breach thereof, the same shall be referred to the



बरीच बराच (गोपनीय)
जन-प्रतिनिधी (पुणे)
राज्याचे, पुणे
SENOR MANU-UTRICAL
WATER TAP-CELL
DVC, MAHARASHTRA

Secretary/CEO/Chairman of Damodar Valley Corporation, Kolkata-700 054, to nominate Sole Arbitrator for settlement of disputes.

The Arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 or any statutory modification thereof or for the time being in force or the latest. The decision/judgment of the Sole Arbitrator shall be final and binding on both the parties. The cost of Arbitration shall equally be borne by both the parties. The venue of Arbitration shall be at Kolkata.

However, in case the 'Second Party' is a Central Public Sector Enterprise/Govt. Department, the dispute arising between the parties shall be settled through **Permanent Arbitration Machinery (PAM)** of the Department of Public Enterprise, Govt. of India as per prevailing rules.

All suits arising out of dispute(s) or difference(s) between the 'First Party' and the 'Second Party' are subject to jurisdiction of Court in the City of Kolkata.

16. TENNURE OF AGREEMENT OR VALIDITY :

This agreement shall subject as hereinbefore provided be and remain in force for a period of **5 (five) years** initially from the effective date of this Agreement and thereafter shall continue uninterruptedly under the existing terms and conditions until determined by either party after the expiration of the fifth or any subsequent year on giving **3 (Three) months'** prior notice in writing of such intention and at the expiration of such notice this Agreement shall absolutely cease and determine but without prejudice to the rights and remedies, if any, of either party which may have accrued or arisen hereunder in the meantime and provided that the Second Party shall on giving the First Party 3 (three) months' prior notice in writing of such intention be at liberty at any time after the expiration of the fifth or any subsequent year to terminate this Agreement by making payment of the charges equal to water charges for one year as per Schedule of Rates (Annexed as Schedule-II) in force at that time.

17. TERMINATION :

If 'the 'Second Party' commits any breach of the terms and conditions of this agreement or if there is any default on the part of 'the second Party', 'the First party' shall be at liberty to terminate this agreement upon one months' notice to 'the second party' without prejudice to the rights and remedies, if any, which may have accrued or arisen thereunder.

Special Note: - The existing Agreement format is currently under revision. A new agreement will be executed once the updated version is finalized.



Gmp
सहस्रकारी (प.प.प.)
नगरपालिकाको
कार्यालय, काठमाडौं
सुदूरपश्चिम प्रदेश
काठमाडौं-२२२००१
DVC, KOLKATA

IN WITNESS WHEREOF THE PARTIES TO THESE PRESENTS HAVE HERE UNTO PUT THEIR
REPECTIVE HANDS AND SEALS EACH THE DAY AND YEAR FIRST ABOVE WRITTEN.

The Agreement along with Schedule of rates would come into effect on and from the date of
commencement of water supply.

The Agreement has been signed in duplicate (both copies Original) on the request of the
Second Party.


SIGNED, SEALED AND DELIVERED
FOR AND ON BEHALF OF
DAMODAR VALLEY CORPORATION

कार्यवाहक निदेशक (मैथिल) एवं प्रियोजना शा
Executive Director (Civil) & Project H
दांडाधोनि, मैथन, धनबाद
DVC, Maithon, Dhanbad

WITNESS:

1.

2.


महाप्रबंधक (असैनिक)
General Manager (Civil)
दांडाधोनि, मैथन, D.V.C. Maithon

CH.M. PAJAPAT
मरीय प्रबंधक (असैनिक)
जल प्रमुख निदेश
दांडाधोनि, मैथन
SENIOR MANAGER (CIVIL)
WATER TARIFF CELL
DVC, MAITHON

SIGNED, SEALED AND DELIVERED

FOR AND ON BEHALF OF


SHAKAMBHARI ISPAT & POWER LTD
(Unit – Madandih)



Registered Office at DIAMOND PRESTIGE,
41A, A.J.C. BOSE ROAD, 8TH FLOOR NO. 801 KOLKATA-700017

WITNESS:

1. Mr. Gulshan Yadav, Executive (Accounts)

2. Mr. Somnath Tewari, Asst. Officer (EHS)





SCHEDULE- I

[Referred to in Clause-1(a)]

Quantity of Water allocated by DVRRC for drawal by M/s. SHAKAMBHARI ISPAT & POWER LTD. DIAMOND PRESTIGE, 41A, A.I.C. BOSE ROAD, 8TH FLOOR ROOM NO. 801 KOLKATA-700017, 1.69 (ONE POINT SIX NINE) MGD

THIS AGREEMENT COMES INTO EFFECT FROM 30TH day of March Two Thousand and Twenty Six.
THE DATE OF COMMENCEMENT OF WATER DRAWAL SHALL BE ACTUAL DATE TO BE MENTIONED LATER.

[N.B.: The quantity of raw water allocation as revised by DVRRC from time to time as per the proviso of the agreement shall from the integral part of this agreement]

SCHEDULE- II

[Referred to in Clause-11]

SCHEDULE OF RATES(Effective from 1st April 2025)

**FOR
RAW WATER SUPPLY**

SOURCES OF DRAWAL	INDUSTRIAL	DOMESTIC/MUNICIPALITY/PHED
	Rate	Rate
Reservoir / River (Per KL)	₹ 18.85	₹ 2.312
Extra Charges for drawing water from water supply canal (Per KL)	₹ 0.52	

The Tariff will be enhanced annually at the end of every financial year (i.e. w.e.f. 1st April) as follows:

(i) For Domestic/Municipality/PHED use - 05% shall be increased in raw water tariff annually.

(ii) For Industrial use - 10% shall be increased in raw water tariff annually.

Note: 1) The Water Supply Bills shall be raised on the basis of actual drawal quantity as for all the consumers with the above tariff.

2) An incentive of 10% on the monthly billed amount will be allowed to those industries who have taken appropriate measures for 'Zero Effluent Discharge'. The said incentive will be applicable only if the payments are made within due date and on production of requisite certificate from State Pollution Control Authority.

N.B. : Revised rate will be applicable as and when notified by the Corporation.

For and on behalf of

**SHAKAMBHARI ISPAT & POWER LTD.
(UNIT-MADANDIH)**

Registered Office: DIAMOND PRESTIGE,
41A, A.I.C. BOSE ROAD, 8TH FLOOR
ROOM NO. 801 KOLKATA-700017



For and on behalf of

DAMODAR VALLEY CORPORATION

Registered Office: DVC TOWERS, VIP ROAD,
KOLKATA- 700054.

अवधूत कुमार मिश्रा (सिविल) एवं परियोजना प्र.
Executive Director (Civil) & Project M.
121012101210, गैरमन, ए.



DAMODAR VALLEY CORPORATION

P.O.- MAITHON DAM,

Tel No. (06540) 279402/279683/279445; Fax No. 06540-274313



ANNEXURES

ENCLOSURES FORMING THE PART OF THE AGREEMENT:-

Annexure (1) to (4) mentioned below and annexed hereto shall form the integral part of this Agreement;

(1) ANNEXURE-'A'	Schedule -I & Schedule -II
(2) ANNEXURE-'B'	Detail of the Company
(3) ANNEXURE-'C'	1. DVCRC Allocation Letter MD/DVRR/W-6-116/2007/659-666 dated 20.07.2007 2. DVCRC Allocation Letter MD/DVRR/WA-6(Part-VII)/2017/838-44, dated 01.09.2017 3. DVCRC Allocation Letter MD/DVRR/WA-6(Part-VIII) SHAKAMBHARI ISPAT & POWER LTD./2019/639-44 dated 08.03.2019 4. E-mail from Shakambhari Ispat & Power Limited dated 29th December 2025 5. Change of Name registered under ROC, Kolkata on Dated 13.10.2025 6. DVC Letter No. MRO/WATER TARIFF CELL/SIPL (123)/582 Dated 05.01.2026 7. Application of Shakambhari Ispat & Power Limited (Unit - Madandih) for renewal of agreement pursuant to change in company name, for drawl of 1.69 MGD raw water from DVC'S river system dated 28.01.2026
(4) ANNEXURE-'D'	1. Annexure of Security Deposit Shakambhari Ispat & Power Limited (Unit - Madandih). 2. Certificate of Incorporation of Shakambhari Ispat & Power Limited. 3. GST Regn of Shakambhari Ispat & Power Limited. 4. PAN of Shakambhari Ispat & Power Limited. 5. Power of Attorney from Shakambhari Ispat & Power Limited to Sign Agreement 6. Intake Drawings and Mouza Map of Shakambhari Ispat & Power Limited (Unit - Madandih)

For and on behalf of

SHAKAMBHARI ISPAT & POWER LTD.

(UNIT-MADANDIH)

Registered Office : DIAMOND PRESTIGE,
41A, A.J.C. BOSE ROAD ,8TH FLOOR
ROOM NO. 801 KOLKATA-700017



For and on behalf of

DAMODAR VALLEY CORPORATION

The Executive Director (Civil) &
HOP, DVC, Maithon

Corporate Office: DAMODAR VALLEY
CORPORATION, DVC TOWERS,
VIP ROAD, KOLKATA-700054

अवधाना नित्यक (सिद्धि) एवं परिषदना प्राप्ति
Executive Director (Civil) & Project Head
दांघाणि, मैथन, धनबाद
DVC, Maithon, Dhanbad

DETAILS OF THE COMPANY

ANNEXURE - 'B'

A. DETAILS OF APPLICANT:

01. Name in Capital Letters	RAJ KUMAR MISHRA
02. Designation	General Manager
03. Relationship with Intending Consumer	Employee
04. Complete Postal Address	SHAKAMBHARI ISPAT & POWER LIMITED Vill-Madandih, PO-Bartoria, Dist-Purulia, West Bengal-723121
05. Telephone No. (Mob. Number)	8695621900
06. FAX No.	-
07. eMail Address	rk.mishra@shakambharigroup.in

B. DETAILS OF THE WATER CONSUMER:

01. Details of Registered Office:

Registered Office	Postal Address: SHAKAMBHARI ISPAT & POWER LIMITED Diamond Prestige, 41A, A.J.C. Bose Road, 8 th Floor Room No. 801 Kolkata-700017
	Telephone No. : 033-66255252
	FAX No. : --
	eMail Address : accounts@shakambharigroup.in
	GST REGN No.: 19AABCE3113G320
	PAN: AABCE3113G
	CIN: U24109WB2004PLC170941

02. Details of Contact Person:

NAME: Bijoy Kumar Mahato	
Contact Person	Postal Address: SHAKAMBHARI ISPAT & POWER LIMITED Vill-Madandih, PO-Bartoria, Dist-Purulia, West Bengal-723121
	Telephone No. : 9233301432
	FAX No : -
	eMail Address : accounts@shakambharigroup.in

03. Complete Billing Address:

Billing Address	Postal Address: SHAKAMBHARI ISPAT & POWER LIMITED Vill-Madandih, PO-Bartoria, Dist-Purulia, West Bengal-723121
	Telephone No. : 9233301432
	FAX No : --
	eMail Address : accounts@shakambharigroup.in



Comp

C. DETAILS OF PROJECT/UNIT/PUMP LOCATION/INTAKE POINT ETC.:

01.	Name of the Village/Place	Vill-Madandih, PO-Bartoria, Dist-Purulia, West Bengal
02.	Plot no	2, 86 and OTHERS
03.	Dag No.	—
04.	Mouza Name & No.	MADANDI & JL No- 120
05.	J.L. No.	JL NO.-120
06.	Police Station Name & No.	Neturia
07.	Name of Post Office with PIN	Bartoria PIN- 723121
08.	District	Purulia
09.	Postal Address of the Plant/ Unit site	Vill-Madandih, PO-Bartoria, Dist-Purulia, West Bengal-723121
10.	Point of Water Withdrawal (Location)	3/4 KM upstream of Panchet Dam (DVC Land in Lakhanpur Mouza on the river bank Plot No- 102)
	Co-Ordinate of Intake Point:	23°38'22.29"N & 86°43'53.38"E
	Telephone No.	9233301432
	FAX No.	:
	eMail Address	: accounts@shakambhargroup.in
11.	Location of Water Treatment Plant	Inside Plant
12.	Location of Pumping Station	Lakhanpur, Panchet Reservoir
13.	Number of pumps installed	Two (02)
14.	Capacity of pumps	90 KW and 180 KW (one stand by)
15.	Location of water meter	Intake Point
16.	Location of Intake point	3/4 KM upstream of Panchet Reservoir
17.	Quantum of water withdrawal in MGD (approved by DVRRC)	1.69 (One Point Six Nine) MGD
18.	Date of Commencement of water withdrawal from pumping station (to be filled up later)	Previous Agreement dated 09.04.2015 for 0.55 MGD & revised Agreement dated 17.11.2017 for 0.40 MGD and further revised Agreement dated 15.11.2022 for 1.69 MGD

D. DETAILS OF RAW WATER USAGE:

(Attach Separate sheet, if necessary, giving details):

Copy
 4/12/2022
 11/11/2022
 15/11/2022
 15/11/2022
 15/11/2022
 15/11/2022

[Signature]
 15/11/2022
 (Raj Kumar Mishra)

Signature with full name of person
 signing the Agreement & stamp/
 Seal of Company



ANNEXURE- 3



ENVIROCHECK

Recognised by MoEF & CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017) & NABET (CERTIFICATE NO. - NABET/EIA/2326/IA 0117)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

FORMAT NO : ENV/FM/57

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/01	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Fugitive Emission (Work Zone)
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XX
			Report ID No.	:	ENV/08/Feb./TR(A)/XX/25-26
Sample Testing Location	:	Permanent Testing			

A]	GENERAL INFORMATION
1.	Location of Sampling : Near DRI 350 TPD Control Room
2.	Duration of Sampling : 08 hrs. (10:00 a.m. – 06:00 p.m.)

B]	METEOROLOGICAL INFORMATION	UNIT	METHOD		OBSERVED VALUE
1.	Temperature	°C	ASTM E 337-02 : Sec.11, Vol. 11.07	:	23.0
2.	Humidity	%	ASTM E 337-02 : Sec.11, Vol. 11.07	:	70.0

C]	RESULTS			
SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Suspended Particulate Matter	µg/m³	IS 5182 (Part 4)	768.26
2.	Sulfur Dioxide	µg/m³	IS 5182 Part 2, Sec.1	16.56
3.	Nitrogen Dioxide	µg/m³	IS 5182 Part 6	26.50
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 (033-25792891/25497490, Fax : 033-25289141
Laboratory : 189,190,192,186 & 51 Rastraguru Avenue, Kolkata - 700028 (033-25792889
Email : info@envirocheck.in/envirocheck50@gmail.com / Website : www.envirocheck.in
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TEST REPORT

FORMAT NO : ENV/FM/57

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/01	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Fugitive Emission (Work Zone)
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XXI
			Report ID No.	:	ENV/08/Feb./TR(A)/XXI/25-26
Sample Testing Location	:	Permanent Testing			

A]	GENERAL INFORMATION
1.	Location of Sampling : Near DRI – 100 TPD : Kiln Control Room
2.	Duration of Sampling : 08 hrs. (10:30 a.m. – 06:30 p.m.)

B]	METEOROLOGICAL INFORMATION	UNIT	METHOD		OBSERVED VALUE
1.	Temperature	°C	ASTM E 337-02 : Sec.11, Vol. 11.07	:	23.0
2.	Humidity	%	ASTM E 337-02 : Sec.11, Vol. 11.07	:	70.0

C]	RESULTS			
SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Suspended Particulate Matter	µg/m³	IS 5182 (Part 4)	812.30
2.	Sulfur Dioxide	µg/m³	IS 5182 Part 2, Sec.1	12.62
3.	Nitrogen Dioxide	µg/m³	IS 5182 Part 6	28.50
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 { 033-25792691/25497490, Fax : 033-25299141
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TEST REPORT

FORMAT NO : ENV/FM/57

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/01	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Fugitive Emission (Work Zone)
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XXII
			Report ID No.	:	ENV/08/Feb./TR(A)/XXII/25-26
Sample Testing Location	:	Permanent Testing			

A]	GENERAL INFORMATION
1.	Location of Sampling : Near S.M.S Control Room
2.	Duration of Sampling : 08 hrs. (11:00 a.m. – 07:00 p.m.)

B]	METEOROLOGICAL INFORMATION	UNIT	METHOD		OBSERVED VALUE
1.	Temperature	°C	ASTM E 337-02 : Sec.11, Vol. 11.07	:	23.0
2.	Humidity	%	ASTM E 337-02 : Sec.11, Vol. 11.07	:	70.0

C]	RESULTS			
SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Suspended Particulate Matter	µg/m³	IS 5182 (Part 4)	460.53
2.	Sulfur Dioxide	µg/m³	IS 5182 Part 2, Sec.1	9.20
3.	Nitrogen Dioxide	µg/m³	IS 5182 Part 6	16.56
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 { 033-25792891/25497490, Fax : 033-25289141
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TEST REPORT

FORMAT NO : ENV/FM/57

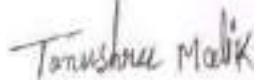
Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	05.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/01	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Fugitive Emission (Work Zone)
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XXIII
			Report ID No.	:	ENV/08/Feb./TR(A)/XXIII/25-26
Sample Testing Location	:	Permanent Testing			

A]	GENERAL INFORMATION
1.	Location of Sampling : Near Ferro Alloy SEAF Control Room
2.	Duration of Sampling : 08 hrs. (11:30 a.m. – 07:30 p.m.)

B]	METEOROLOGICAL INFORMATION	UNIT	METHOD		OBSERVED VALUE
1.	Temperature	°C	ASTM E 337-02 : Sec.11, Vol. 11.07	:	24.0
2.	Humidity	%	ASTM E 337-02 : Sec.11, Vol. 11.07	:	68.0

C]	RESULTS			
SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Suspended Particulate Matter	µg/m³	IS 5182 (Part 4)	653.70
2.	Sulfur Dioxide	µg/m³	IS 5182 Part 2, Sec.1	11.20
3.	Nitrogen Dioxide	µg/m³	IS 5182 Part 6	25.04
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :


(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :


(Dr. Ajoy Paul)
(Quality Manager)

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 [033-25792891/25497490, Fax : 033-25289141
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TEST REPORT

FORMAT NO : ENV/FM/57

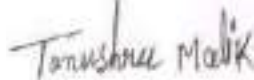
Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/01	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Fugitive Emission (Work Zone)
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XXIV
			Report ID No.	:	ENV/08/Feb./TR(A)/XXIV/25-26
Sample Testing Location	:	Permanent Testing			

A]	GENERAL INFORMATION
1.	Location of Sampling : Near 16 MW Control Room
2.	Duration of Sampling : 08 hrs. (11:30 a.m. – 07:30 p.m.)

B]	METEOROLOGICAL INFORMATION	UNIT	METHOD		OBSERVED VALUE
1.	Temperature	°C	ASTM E 337-02 : Sec.11, Vol. 11.07	:	23.0
2.	Humidity	%	ASTM E 337-02 : Sec.11, Vol. 11.07	:	69.0

C]	RESULTS			
SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Suspended Particulate Matter	µg/m³	IS 5182 (Part 4)	625.53
2.	Sulfur Dioxide	µg/m³	IS 5182 Part 2, Sec.1	9.20
3.	Nitrogen Dioxide	µg/m³	IS 5182 Part 6	18.58
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :


(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :


(Dr. Ajoy Paul)
(Quality Manager)

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 { 033-25792891/25497490, Fax : 033-25289141
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TEST REPORT

FORMAT NO : ENV/FM/57

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	05.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/01	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Fugitive Emission (Work Zone)
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XXV
			Report ID No.	:	ENV/08/Feb./TR(A)/XXV/25-26
Sample Testing Location	:	Permanent Testing			

A]	GENERAL INFORMATION
1.	Location of Sampling : DRI 600 TPD : Near M.C.C Room
2.	Duration of Sampling : 08 hrs. (10:30 a.m. – 06:30 p.m.)

B]	METEOROLOGICAL INFORMATION	UNIT	METHOD		OBSERVED VALUE
1.	Temperature	°C	ASTM E 337-02 : Sec.11, Vol. 11.07	:	23.0
2.	Humidity	%	ASTM E 337-02 : Sec.11, Vol. 11.07	:	69.0

C]	RESULTS			
SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Suspended Particulate Matter	µg/m³	IS 5182 (Part 4)	762.56
2.	Sulfur Dioxide	µg/m³	IS 5182 Part 2, Sec.1	11.16
3.	Nitrogen Dioxide	µg/m³	IS 5182 Part 6	20.0
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 [033-25792891/25497490, Fax : 033-25289141
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TEST REPORT

FORMAT NO : ENV/FM/57

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	05.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/01	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Fugitive Emission (Work Zone)
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XXVI
			Report ID No.	:	ENV/08/Feb./TR(A)/XXVI/25-26
Sample Testing Location	:	Permanent Testing			

A]	GENERAL INFORMATION
1.	Location of Sampling : Near Rolling Mill Dispatch Area
2.	Duration of Sampling : 08 hrs. (11:00 a.m. – 07:00 p.m.)

B]	METEOROLOGICAL INFORMATION	UNIT	METHOD		OBSERVED VALUE
1.	Temperature	°C	ASTM E 337-02 : Sec.11, Vol. 11.07	:	22.2
2.	Humidity	%	ASTM E 337-02 : Sec.11, Vol. 11.07	:	67.0

C]	RESULTS			
SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Suspended Particulate Matter	µg/m³	IS 5182 (Part 4)	460.10
2.	Sulfur Dioxide	µg/m³	IS 5182 Part 2, Sec.1	8.26
3.	Nitrogen Dioxide	µg/m³	IS 5182 Part 6	16.50
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

<End of Report>

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 { 033-25792891/25497490, Fax : 033-25289141
Laboratory : 189,190,192,186 & 51 Rastraguru Avenue, Kolkata - 700028 { 033-25792889
Email : info@envirocheck.in/envirocheck50@gmail.com / Website : www.envirocheck.in
Branch Office : • Siliguri • Haldia • Durgapur • Dhanbad • Gangtok • Port Blair • Dehradun • New Delhi
Overseas : • UAE • Qatar • Netherlands

ANNEXURE- 4

PAVER BLOCK AND RCC ROAD









ANNEXURE- 5

TRUCK PARKING AREA



ANNEXURE- 6

GREENBELT PHOTOGRAPHS







ANNEXURE- 7

SHAKAMBHARI ISPAT AND POWER LIMITED

Vill. – Madandih, P.O – Bartoria, P.S – Neturia, District – Purulia, West Bengal

ELEGANT CARE FOUNDATION

REPORT ON CSR ACTIVITIES.: OCTOBER-2025 TO MARCH-2026.

Project	Segment	Activities	Villages Covered	Expected Outcome	Photo
Women Sewing Training Institute	<i>Livelihood.</i>	<i>The Women Sewing Training Institute was started in Gopalgunj in Shakambhari Ispat & Power Ltd, CSR operational area.</i> <i>The main objective of this activity is to empower the communities with focus on women for accessing better livelihood opportunities</i> <i>Total trainees enrolled:167</i> <i>Successful trainee completed course:57</i>	<i>Madandih</i> <i>Erekusum</i> <i>Radhamadhabpur</i> <i>Harmadih</i> <i>Gopalgunj (Layabadi)</i>	• Trainees who are passed in evaluation examination. trainees are able to making Petticoat, Nighty Pajama, Kurta. • Our future plan Among the successful trainee we will form (Mahila Swanirvar Dal) from among the trainees who successfully passed our tailoring course. We provide cash as a "revolving fund" to support all groups that are buying fabrics and other raw materials, starting commercial production of blouses, petticoats, nighties and school dresses as ordered, and selling these items at local stores.	

Project	Segment	Activities	Villages Covered	Expected Outcome	Photo
Repairing of Defunct Hand pump & Tube well.	Health, Drinking water & Sanitation.	<i>we have taken an initiative to repair defunct tube well and handpump of our operation area in entire season. These tube well in our operation area plays a major role in to meet the demand of water for villagers</i>	The defunct tube wells are as follows Madandih Arekusum Harmadih Layabadi Gopalgunj etc.	In this financial year as per requirement of villagers we have repaired near about several no. of tube well. This initiative eradicated water scarcity of local village people.	 
Drinking Water Supply	Health, Drinking water & Sanitation	Drinking water distribution through three water tankers in five villages. Supply of drinking water to beneficiaries during social rituals. Drinking water supply to local clubs/villages on festivals	Madandih Radhamadhabpur Harmadih Arekusum Gopalgunj Layabadi	Monthly meeting organized with the Drivers to know the status & constraints and steps taken accordingly for value addition & improvement of services. Beyond our operational area we also take of the demand of Government schools and offices as when required. Through this initiative we have eradicate Drinking water scarcity of nearby village.	 
Solar Light Repairing work in Madandih village	Infrastructure Development	During a meeting with stakeholder in Madandih village they request to us for repair defunct solar light. Those light was installed by us five years ago. In this context, we have done repair work solar light in the month of March.	Madandih	The villagers are very happy and they share that the quality of the lights is very good and villagers regarded our organization for repairing work.	

Project	Segment	Activities	Villages Covered	Expected Outcome	Photo
Road sprinkling services	<i>Environment & Culture</i>	To beat the dust and control air pollution, ECF has been implemented two water sprinkler tankers to spray water outside the plant premises from early morning to evening.	<i>Madandih Gopalgunj Layabadi Harmadih</i>	We could control air pollution in our operation area.	 
Support Neturia Circle Annual Sports	<i>Education</i>	As part of our commitment to community development, we are providing financial assistance to the Neturia Circle Sports Committee for their 41st Annual Sports event. This initiative aims to promote physical well-being and nurture local athletic talent within the community.	<i>Among Primary student of Neturia Block, Purulia.</i>	Every primary school and SSK in the Neturia Block participated in these annual sports.	
Installation of Solar Lights in Purulia-Barakar Road SH-5	<i>Infrastructure Development</i>	As part of our commitment to community infrastructure and environmental sustainability, we have partnered with the Neturia BDO office to install solar street lights on SH-5. This CSR project will improve visibility and road safety for commuters traveling between Purulia and Barakar.	<i>Neturia Block</i>	The Neturia block covers three important state highways to control accidents, The Block Safety Committee has taken the initiative to install solar lights in accident-prone areas. We have supported 03 (three) solar lights in this activity as a partner.	

Project	Segment	Activities	Villages Covered	Expected Outcome	Photo
Sports Gear Distribution Program (Football)	Youth & Sports	To support local youth as the football season begins, we have taken the initiative to organize a sports gear distribution program for nearby clubs, as per our previous practice.	Madandih Harmadih Radhamadhabpur Arekusum Khowar Mekatala Lalgarh Cholaberia Garhpanchokot Dhuluri	50 Football distributed to 25 number nearby Clubs of our operation area. This activity leads the sports development of local youth	 
A Report on Road Safety Awareness Program.	Environment & Culture	Sub-Division Road Safety Committee organized an awareness program among the employees & drivers on 30th December 2025 at our SIPL Plant premises. Our CSR department has been jointly collaborating with the government department to effectively conduct this awareness program.	Among the Employees & Drivers of SIPL, Madandih.	The program successfully educated employees and drivers on the importance of preventing accidents by avoiding speeding, mobile phone use, and drunk driving. By partnering with local administrative and transport authorities, the initiative strengthened the commitment to safer roads and responsible driving habits. This collaboration between the CSR team and government officials resulted in a clearer understanding of safety protocols, aiming to reduce injuries and save lives within the community.	  

ANNEXURE- 8



NOC NO180762

WEST BENGAL POLLUTION CONTROL BOARD

Paribesh Bhawan
10A, Block-LA, Sector-III
Bidhannagar, Kolkata-700106

Memo No. 422-2N-21/2012(E)-PART-I

Dated 18.08.2023

From:
Member Secretary,
West Bengal Pollution Control Board

To: M/s. Shakambhari Ispat & Power Limited,
"Diamond Prestige", 41A, A.J.C. Bose Road, 8th Floor, #801,
Kolkata - 700 017.

Sub: Consent to Establish (NOC) from Environmental Point of View

Ref: 1) Your letter No. Nil Dated 14.08.2023

ii) Environmental Clearance issued by MOEF&CC, GOI vide EC Identification No. EC23AO08WB179534, File No. IA-J-11011/282/2021-IA-II(IND-I) dated 19.07.2023

Dear Sirs,

In response to the application for Consent to Establish (NOC) for proposed ^{expansion} of M/s. Shakambhari Ispat & Power Limited for manufacturing of production of 0.7875 million tons per annum crude steel/stainless steel, 0.214272 million tons per annum Ferro-alloys (maximum) along with allied facilities at Village-Parvatpur, *Mandandih, Radhamadabpur, PO-Bartoria, Tehsil-Raghunathpur, Dist.-Purulia, West Bengal (For details of configuration see annexures).

this is to inform you that this Board hereby grants the Consent to Establish (NOC) from the environmental point of the above subject to the following conditions and special conditions annexed.

1. The quality of sewage and trade effluent to be discharged from your factory shall satisfy the permissible limits as prescribed in IS : 2490 (Pt. I) of 1974, and/or its subsequent amendment and Environment (Protection) Rules 1986.
2. Suitable measures to treat your effluent shall be adopted by you in order to reduce the pollutional load so that the quality of the effluent satisfies the standards mentioned above.
3. You shall have to apply to this Board for its consent to operate and discharge of sewage and trade effluent according to the provisions of the water (Prevention & Control of Pollution) Act, 1974. No sewage or trade effluent shall be discharged by you without prior consent of this Board.
4. All emission from your factory shall conform to the standards as laid by this Board.
5. No. emission shall be permitted without prior approval of this Board and you shall apply to this Board for its consent to operate and atmospheric emission as per provision of the Air (Prevention & Control Pollution) act, 1981.
6. No industrial plant, furnace, flues, chimneys, control equipment, etc. shall be constructed/reconstructed/erected/re-erected without prior approval of this Board.

Signature
18/08/2023
Chief Engineer

W. B. Pollution Control Board
Dept. of Environment, Govt. of W.B.

7. You shall comply with
- Water (Prevention and Control of Pollution) Cess Act, 1977, if applicable.
 - Water (Prevention and Control of Pollution) Cess Act, 1978, if applicable.
 - Environment (Protection) Act, 1986
 - Environment (Protection) Rules, 1986
 - Hazardous Wastes (Management and Handling) Rules, 1989 and Amended Rules, 2000
 - Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and Amended Rules, 2000
 - Manufacture, Use, Import and Storage and Hazardous Micro-Organisms, Genetically Engineered Organisms or Cell Rules, 1989
 - The Public Liability Insurance Act, 1991 and Amended Act, 1992
 - The Public Liability Insurance Rules, 1991 and Amended Rules 1993
 - Biomedical Wastes (Management & Handling) Rules, 1998 and Amended Rules 2000 if applicable.
 - Recycled Plastics Manufacture and Usage Rules 1999, if applicable and
 - Ozone Depleting Substances (Regulation & Control) Rules, 2000, if applicable
8. You will have to abide by any other stipulations as may be prescribed by any authority/local bodies/Government Departments etc.

SPECIAL CONDITION:

See Annexures.

Gross Capital Investment - Rs.320 Crores.

Any violation of the aforesaid conditions shall entail cancellation of this Consent to Establish (NOC)

Yours faithfully,

[Signature] 18/08/2023
 Member Secretary/Chief Engineer
 West Bengal Pollution Control Board (SIM CELL)

Memo No. 422 - 2N-21/2012(E)-PART-I Dtd. 18/08/2023
 Copy forwarded for information to :

- Chief Inspector of Factories, Government of West Bengal, N. S. Building, Kolkata-700 001
- Director of Industries/Director of Cottage & Small Scale Industries, Government of West Bengal, N. S. Building, Kolkata-700 001
- Guard file, West Bengal Pollution Control Board.
- Environmental Engineer, III/Alipur R.O./Howrah R.O./Hooghly R.O./B.R.O./D.R.O./Haldia R.O./S.R.O./Malda R.O./Asansol R.O./WBPC Board.
- Alipore Regional Office
"Minority Bhawan", 5th Floor, 12, Biplabi Kanailal Bhattacharya Sarani, Alipore, Kolkata-700 027
Telefax No. 033-2446-5553
Tel No. 033-2446-5554
- Asansol Regional Office
Kalyanpur Satellite Township Project (KSTP), Dr. B.C. Roy Road, P.O.: Dakshin Dhadka, P.S. Asansol (North), Dist. Paschim Bardhaman, Asansol-713 302
Telefax No. 0341-2996260
0341-2996281
- Barrackpore Regional Office
Panpur More, Kalyani Expressway, Vill. Panpur, P.O. Narayanpur, Dist. 24-Parganas (N), Pin-743 126
Telefax No. 033-2580 0573
- Durgapur Regional Office
Sahid Khudiram Sarani, City Centre, Durgapur, Paschim Bardhaman-713 216.
Tel No. 0343-2546708
Telefax No. (0343) 2544915
- Haldia Regional Office
Mouza : Raghunathchak, PS : Bhabanipur (Formerly Sutahata), PO : Barghasipur Dist. Purba Medinipur, Pin : 721 057
Tel No. 03224-291293/94
- Hooghly Regional Office
Himalaya Bhawan, Delhi Road, Dankuni, Hooghly, Pin : 712 311
Telefax No. 033-2659-0657
- Howrah Regional Office
"Minority Bhawan", 5th Floor, 12, Biplabi Kanailal Bhattacharya Sarani, Alipore, Kolkata-700 027
Tel No. 033-2446-2219/2220
- Kolkata Regional Office
Mani Square, Block No. 8IT, Western Side, 8th floor, 164/1, Manikala Main Road, Kolkata-700 054
Tel No. 033-2320-0059 / 9336288884
- Malda Regional Office
Paribesh Bhawan, Vill.: Ashirampur, P.O.: Mordumpur, P.S.: English Bazar, Malda-732 103
Tel No. 03612-223449
- Saltlake Regional Office
Mani Square, Block No. 8IT, Western Side, 8th floor, 164/1, Manikala Main Road, Kolkata-700 054
Tel No. 2320-0097 / 9330869729
- Siliguri Regional Office
Paribahan Nagar, P.O.: Matigara, Siliguri, Darjeeling, Pin-734 010
Tel No. 0353-257 1115
Telefax No. 0353-257 1113

[Signature] 18/08/2023
 Member Secretary/Chief Engineer,
 West Bengal Pollution Control Board
 (SIM CELL)
 Chief Engineer
 W. B. Pollution Control Board
 Dept. of Environment, Govt. of W.B.

ANNEXURE-I TO NOC SL No. NO180762

Special conditions issued for Expansion of Shakambhari Ispat & Power Limited plant for production of 0.7875 million tons per annum Crude Steel/Stainless Steel, 0.214272 million tons per annum Ferro-Alloys (maximum) along with allied facilities at Village: Parvatpur, Madandih, Radhamadabpur, P.O.: Batoria, Tehsil: Raghunathpur, District: Purulia, West Bengal. (Application no. 4070929)

UNIT CONFIGURATION AND CAPACITY

Plant/Facilities	As per EC granted by MoEFCC on 21.12.2016 & its Amendment on 29.04.2020		Proposed Units/Capacity Enhancement		Total after Expansion	
	Unit	Capacity TPA	Unit	Capacity in TPA	Unit	Capacity in TPA
Pellet Plant with Grinding Facility	1x1870TPD	582,000	Capacity Enhancement	268,000	1x2835TPD	850,000
Producer Gas Plant	-	-	6x4000 Nm ³ /hr	24,000 Nm ³ /hr	6x4000 Nm ³ /hr	24,000 Nm ³ /hr
Sponge Iron Plant	DRI Kiln		Capacity Enhancement of			
	4x100TPD +	128,000	4x100TPD+	30,400 (additional)	4x100TPD+	910,800
	2x350TPD +	224,000	2x350TPD+	53,200 (additional)	2x350TPD+	
	1x600TPD	192,000	1x600TPD	45,600 (additional)	2x600TPD	
		544,000	Additional 1x600TPD	237,600		
Blast Furnace with PCI	Mini Blast Furnace: 1x350m ³ Pig Casting Machine (PCM): 1x1500TPD	249,900	Capacity Enhancement of Mini Blast Furnace: 1x350m ³	166,600 (additional)	Mini Blast Furnace: 1x350m ³ PCM: 1x1500TPD	416,500
Sinter Plant	1x20m ²	198,000	Sinter Plant of changed configuration 1x90m ² will be installed	597,600 (additional)	1x90m ²	795,600
SMS – MS/SS Billets	IF: 9x25T LRF: 1x30T & CCM: 3x6/11	MS Billets 523,950	Capacity enhancement/ Product Modification + 1x25 Ton AOD	263,550 MS/SS Billets (additional)	IF: 9x25T LRF: 1x30T + 1x25 AOD & CCM: 3x6/11m	787,500 MS/SS Billets


 15/05/2023
 Chief Engineer
 W. B. Pollution Control Board
 Deptt. of Environment, Govt. of W.B.

ANNEXURE-I TO NOC SL No. NO180762

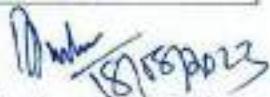
Special conditions issued for Expansion of Shakambhari Ispat & Power Limited plant for production of 0.7875 million tons per annum Crude Steel/Stainless Steel, 0.214272 million tons per annum Ferro-Alloys (maximum) along with allied facilities at Village: Parvatpur, Madandih, Radhamadabpur, P.O.: Bartoria, Tehsil: Raghunathpur, District: Purulia, West Bengal. (Application no. 4070929)

Plant/Facilities	As per EC granted by MoEFCC on 21.12.2016 & its Amendment on 29.04.2020		Proposed Units/Enhanced Capacities		Total after Expansion	
	Unit	Capacity TPA	Unit	Capacity in TPA	Unit	Capacity in TPA
Rolling Mill along with wire drawing facility	1000TPD	MS Long Products 300,000	1000TPD	360,000 MS/SS Long Products	2000TPD	660,000 MS/SS Long Products
Reheating Furnace	--	--	2x40TPH	--	2x40TPH	--
Oxygen Plant	225 TPD	--	--	--	225 TPD	--
Captive Power Plant	AFBC - 36 TPH	8.5 MW	--	--	AFBC - 36 TPH	8.5 MW
	CFBC - 100 TPH	25 MW	--	--	CFBC - 100 TPH	25 MW
	CFBC - 120 TPH	28.5 MW	--	--	CFBC - 120 TPH	28.5 MW
	WHRB @4x100TPD DRI- 40 TPH	8 MW	--	--	WHRB @4x100TPD DRI- 40 TPH	8 MW
	WHRB@2x350TPD DRI- 71 TPH	15 MW	--	--	WHRB @ 2x350TPD DRI-71TPH	15 MW
	WHRB @1x 600TPD DRI-64 TPH	14 MW	--	2 MW	WHRB @ 1x 600TPD DRI- 64 TPH	16 MW
	--	--	WHRB @1x600TPD DRI - 64TPH	16 MW	WHRB @ 1x 600TPD DRI - 64TPH	16 MW
	--	--	BF Gas Based	9 MW	BF Gas Based	9 MW
	Total	AFBC/CFBC-62MW WHRB- 37MW	Total	WHRB-18MW BF Gas Based-9MW	Total	AFBC/CFBC- 62 MW WHRB- 55 MW BF Gas based-9MW
		99 MW		27 MW		126 MW

ANNEXURE-I TO NOC SL No. NO180762

Special conditions issued for Expansion of Shakambhari Ispat & Power Limited plant for production of 0.7875 million tons per annum Crude Steel/Stainless Steel, 0.214272 million tons per annum Ferro-Alloys (maximum) along with allied facilities at Village: Parvatpur, Madandih, Radhamadabpur, P.O.: Bartoria, Tehsil: Raghunathpur, District: Purulia, West Bengal. (Application no. 4070929)

Plant/Facilities	As per EC granted by MoEFCC on 21.12.2016 & its Amendment on 29.04.2020		Proposed Units/Enhanced Capacities		Total after Expansion	
	Unit	Capacity TPA	Unit	Capacity in TPA	Unit	Capacity in TPA
Iron Ore Beneficiation	--	0.63 MTPA	Configuration Change from 0.63MTPA to 1.0 MTPA	0.37 MTPA (additional)	--	1.0 MTPA
Coal Washery		0.74 MTPA	-	-	-	0.74 MTPA
Lime Plant	250TPD	80,000TPA	-	-	250TPD	80,000TPA
Ferro-Alloy Plant with Metal Recovery Plant	4x9MVA SEAF With Metal Recovery Plant	63,150TPA	Capacity Enhancement of 4x9MVA SAF + Additional installation of 4x9MV SAF	Fe-Mn-194,058 or	8x9MVA SAF With Metal Recovery Plant	Fe Mn- 194,058, or
		Fe-Mn or		Si-Mn- 142,848 or		Si-Mn- 142,848 or
		Si-Mn or		Fe-Si -64,282 or		Fe Si -64,282 or
		Fe-Si or		High Carbon		High Carbon Fe-Cr
		High Carbon Ferro Chrome or		Fe-Cr - 135,330 or		135,330 or
		Pig Iron or		Fe-Si-Cr- 88,664, or		Fe-Si-Cr- 88,664, or
		in combination of any		Pig Iron-214,272, or in combination of any		Pig Iron-214,272 or in combination of any
Briquette Plant	--	--	1x 50 TPH	300,000	1x 50 TPH	300,000
Sinter Plant (Ferro Division)	--	--	1x600 TPD	216,000	1x600TPD	216,000


Chief Engineer (EIM Cell)

West Bengal Pollution Control Board

Annexure-II to NOC Sl. No. NO180762

Special conditions issued for Expansion of Shakambhari Ispat & Power Limited plant for production of 0.7875 million tons per annum Crude Steel/Stainless Steel, 0.214272 million tons per annum Ferro-Alloys (maximum) along with allied facilities at Village: Parvatpur, Madandih, Radhamadabpur, P.O.: Bartoria, Tehsil: Raghunathpur, District: Purulia, West Bengal. (Application No. 4070929)

A) Emission: -

Sl. No	Emission Sources	Air Pollution Control System	Stack Height from G.L. (in mts.)
1	Pellet Plant (0.85MTPA)	ESP	50
2	PCI Unit of Pellet Plant	Bag Filter	40
3	Sponge Iron Plant (DRI Kiln-1x600 TPD) followed by WHRB-64TPH (16MW)	ESP	72
4	I. Bin/PSB of (DRI Kiln 1x600 TPD)	Bag Filter & Stack common with I. Bin/PSB of existing DRI Kiln-1x600TPD	30
5	Day Bin (DRI Kiln 1x600 TPD)	Bag Filter & Stack common with Day Bin of existing 2x350 TPD DRI Kilns	30
6	Product House (DRI Kiln 1x600 TPD)	Bag Filter & Stack common with existing Product House of 1x600 & 2x350 TPD DRI Kiln	30
7	Iron Circuit (DRI Kiln 1x600 TPD)	Bag Filter & Stack common with Iron Circuit of 1x600 & 2x350 TPD DRI Kiln	30
8	Coal Circuit (DRI Kiln 1x600 TPD)	Bag Filter & Stack common with Coal Circuit of existing 1x600 TPD DRI Kiln	30
9	Mini Blast Furnace (1x350m ³)	Stack attached with Stoves	45
10	Cast House tapping from MBF	Bag Filter & Stack attached with spark arrestor & dust extraction hood at Cast House	35
11	PCI Unit of Mini Blast Furnace	Bag Filter	40
12	Sinter Plant (1x90m ²)	Head ESP attached with Sinter Machine	50
13	Sinter Plant Breaker & Sinter Screen at Tail end of Sinter M/c	Tail ESP attached Sinter Breaker & Sinter Screen	50
14	AOD Plant (1x25T) at SMS	Bag Filter & Spark Arrestor	35
15	Re-Heating Furnace-1 (1x40TPH)	Recuperator	30
16	Re-Heating Furnace-2(1x40TPH)	Recuperator	30
17	CFBC Boiler-120TPH (28.5MW)	ESP	92
18	CHP of CFBC Boiler (120TPH)	Bag Filter	30
19	Iron Ore Grinding Ball Mill for Iron Ore Beneficiation Plant	Bag Filter	30

W.B.
18/08/2023
Chief Engineer
W. B. Pollution Control Board
Dept. of Environment, Govt. of W.B.

Annexure-II to NOC Sl. No. NO180762

Special conditions issued for Expansion of Shakambhari Ispat & Power Limited plant for production of 0.7875 million tons per annum Crude Steel/Stainless Steel, 0.214272 million tons per annum Ferro-Alloys (maximum) along with allied facilities at Village: Parvatpur, Madandih, Radhamadabpur, P.O.: Bartoria, Tehsil: Raghunathpur, District: Purulia, West Bengal. (Application No. 4070929)

20	Coal Grinding, Screening, Vibro Feeder of Coal Washery Unit	Bag Filter	30
21	Lime Plant	Bag Filter	32
22	Lime Plant's Screen House, Lime Size Unit, Lime delivery building, Material Storage building	Bag Filter	32
23	1x9MVA SAF No.-5	Forced Draft Cooler & Bag Filter	32
24	1x9MVA SAF No.-6	Forced Draft Cooler & Bag Filter	32
25	1x9MVA SAF No.-7	Forced Draft Cooler & Bag Filter	32
26	1x9MVA SAF No.-8	Forced Draft Cooler & Bag Filter	32
27	Sinter Plant (Ferro Division)	Cyclone Separator & Bag Filter	30
28	Briquette Plant (Ferro Division)	Cyclone Separator	30
28	DG Set (1010KVA) 14 Nos.	DG set to be provided with acoustic enclosure	6.5 mts above DG Room

- Stacks should have sampling port, platform and ladder as per the Emission Regulation Part-III of CPCB. Continuous stack monitoring facilities should be provided with sponge iron units, ferro-alloy plant & CPP.
- The emission levels from all emission sources connected with Air Pollution Control devices should be kept below $30\text{mg} / \text{Nm}^3$.
- Standards for sponge iron plant issued by MoEF&CC shall be strictly complied with.
- The National Ambient Air Quality Emission Standards issued by MoEF&CC should be strictly complied with.
- The unit shall not operate DRI kilns without WHRB-ESP operation.
- Dry fog system and water sprinklers to be installed to arrest fugitive emission.
- 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 04 Nos. Continuous Ambient Air Quality Station (CAAQMS) for monitoring AAQ parameters to be installed. All the devices to be connected to WBPCB and CPCB servers.

B) Effluent: -

- Process - Any process effluent generated will be treated in properly designed ETP. Treated effluent to be utilized within the plant premises.
- DM plant reject/softeners backwash water should be taken to neutralization/homogenization tanks and to be utilized within the plant premises for dust suppression, ash conditioning, bed ash & slag cooling etc.
- Cooling water to be recycled.
- Domestic - to be discharged through septic tank to soak-pit within the unit premises. Sewage Treatment Plant of a suitable capacity shall also be installed for the treatment of domestic effluent. Suitable measures shall be adopted for sewage water handling to ensure no contamination of any kind of water body.
- The unit should strictly follow ZLD concept.

W.B.
18/08/2023.
Chief Engineer
W. B. Pollution Control Board
Dept. of Environment, Govt. of W.B.

Annexure-II to NOC Sl. No. NO180762

Special conditions issued for Expansion of Shakambhari Ispat & Power Limited plant for production of 0.7875 million tons per annum Crude Steel/Stainless Steel, 0.214272 million tons per annum Ferro-Alloys (maximum) along with allied facilities at Village: Parvatpur, Madandih, Radhamadabpur, P.O.: Bartoria, Tehsil: Raghunathpur, District: Purulia, West Bengal. (Application No. 4070929)

C) Solid Waste: -

1. Fly ash to be sold to cement manufacturing units/used for abandoned mine filling.
2. Dolo-char to be used in AFBC.
3. Bottom ash to be used for land filling and road making.
4. Induction furnace slag to be used for road making and land filling after metal recovery in slag crusher.
5. Ferro-manganese slag to be utilized for production of Silico-manganese. Silico-manganese slag to be used for road making and land filling.
6. Ferro-chrome slag to be disposed off in an environmentally safe manner.
7. Hazardous Waste to be collected and disposed of as per the Hazardous Wastes (Handling and Trans-boundary Movement) Rules, 2016.

D) General: -

1. Noise Control – Ambient noise & D.G. Set noise level not to exceed the permissible limit.
2. No additional machinery / equipments can be installed without permission from this board.
3. Adequate arrangement for dust suppression in raw material handling section to be provided.
4. At least 33% of the total project area should be under green belt.
5. Rain water harvesting must be done however recharging of harvested rain water is not allowed under any circumstances.
6. The 4th hole extraction system shall be provided in the SEAFs.
7. The conveyor belt for transferring materials to day bins to be covered.
8. Good house-keeping to be maintained.
9. Permission for extracting ground water, if any, must be obtained from the competent authority.
10. Project proponent should not undertake any activity on any portion of land which is not under their possession.
11. Land conversion certificate, if applicable, to be obtained from the competent authority before initiating expansion activity.
12. Conditions laid down in the Environmental Clearance obtained for the expansion project from MoEF&CC issued vide EC Identification No.-EC23A008WB179534 File No.-IA-J-11011/282/2021-IA-II(IND-I) dated 19/07/2023 must be strictly complied with.
13. All statutory licenses/permissions as applicable to be obtained from the competent authorities.
14. This NOC is valid up to 31.08.2030 for setting up the expansion project.

 18/09/2023

Chief Engineer (EIM Cell)
West Bengal Pollution Control Board

Chief Engineer
W. B. Pollution Control Board
Dept. of Environment, Govt. of W.B.

WEST BENGAL POLLUTION CONTROL BOARD

'Paribesh Bhawan'

Bldg. No. - 10A, Block - LA, Sector-III

Salt Lake City, Kolkata-700 098



Consent Letter Number: C0134682

Memo Number: 311- WPCB/Regd./Poll/Cont/82/02

Date: 31/7/2013

Consent to Operate

under

Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974 and
Section 21 of the Air (Prevention and Control of Pollution) Act, 1981

The West Bengal Pollution Control Board (hereinafter referred to as State Board) under the provisions of Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974, as amended and Section 21 of the Air (Prevention and Control of Pollution) Act, 1981, as amended and Rules and Orders made thereunder, hereby grants its consent to:

M/s. Shakambhari Ispat & Power Ltd.

(Address of Regd. office/Head/Office/City Office)

(hereinafter referred to as Applicant) for its unit located at Vill. - Madandih P.O. - Bantonia,
P.S. - Neturia, Dist. - Purulia, 723121

(Detailed address of the manufacturing unit)

for a period from 01-08-2013 to 31-07-2028

to operate the industrial unit and to discharge liquid effluent and to emit gaseous effluent from the premises/land of the industrial unit, in accordance with the conditions as mentioned in the Annexure to this consent letter provided on any day at any instance the quantity and quality of liquid discharge and gaseous emission shall not exceed the permissible limit as specified in the Table I & II of this consent letter and in the Environmental (Protection) Act, 1986.

Breach of the conditions and / or failure to comply with the directions as set out in the Annexure shall render the applicant liable for prosecution under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981.

The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alter the conditions of this consent letter giving one month's notice to the applicant.

For and on behalf of the State Board

(Member Secretary/Chief Engr./ Sr. Env. Engr./ Env. Engr./ Asst. Env. Engr.)



ANNEXURE

Consent to M/s. Shakambhari Ispat & Power Ltd.
 for its unit at Vill. - Madandih, P.O. - Barstonia, P.S. - Neturia,
Dist. - Purulia - 723131

Conditions :

01. This Consent is valid for the manufacture of :-

Sl. No.	Name of major products and by-products	Quantity manufactured per month
01	Sponge Iron	5,44,000 MT/years.
02	Captive Powers	70.5 MW
03	Fe-Mn OR Si-Mn OR Fe-Cr OR Fe-Si OR	63150 MT /year
04	Pig Iron OR In combination of any	
05	M.S Billets	407520 MT / year.
06	TMT BAR & WIRE ROD	3,00,000 MT /year
07	Dolomite	9975 MT/month
08	Ferro Manganese Slag	4735 MT/month
09		
10		
11		
12		

02. The Applicant shall remain responsible for quantity and quality of liquid effluent and air emissions.
03. Daily discharge of industrial liquid effluent shall not exceed KL.
04. Daily discharge of domestic liquid effluent shall not exceed 45 KL.
05. Daily discharge of mixed (industrial & domestic) liquid effluent shall not exceed KL.
06. The Applicant shall discharge liquid effluent to Soak pit (place of discharge)
 through 01 (one) nos. outlets / outfalls.
07. To bring into any altered or new outlet/outfall or to change the place of discharge, the Applicant shall have to inform the Board and obtain prior permission of the Board in this effect.
08. The Applicant shall provide comprehensive facility for treatment of industrial liquid waste and domestic liquid waste (sewage, sullage and liquid effluent generated from canteen), and operate and maintain the same continuously so that the quality of final effluent conforms to the Standard as given in Table-I in page 03.

(Member Secretary/Chief Engr./ Sr. Env. Engr. / Env. Engr. / Asst. Env. Engr.)

Continued.....

Consent to M/s Shakambhari Ispat & Power Ltd⁽³⁾
for its unit at Vill - Madandih, P.O. - Barabaria, P.S. - Neturia,
Dist. - Purulia, - 723121

Table-1

[illegible]

09. The Applicant falls in the Category of the Water (Prevention and Control of Pollution) Cess Act, 1977 and Rules made thereunder and the Applicant shall comply with the provisions of the said Act and Rules made thereunder.

10. **Daily** water consumption for the following purposes should not exceed :-

- | | | | |
|---|---|------|----|
| <ul style="list-style-type: none"> Industrial cooling, spraying in mine pits and boiler feed water
(Water used for gardening should be included in this category of use) | → | 5342 | KL |
| <ul style="list-style-type: none"> Domestic purpose | → | 56 | KL |
| <ul style="list-style-type: none"> Processing whereby water gets polluted and the pollutants are easily biodegradable | → | — | KL |
| <ul style="list-style-type: none"> Processing whereby water gets polluted and the pollutants are not easily biodegradable | → | — | KL |

The *Applicant* shall regularly submit to the Board the Returns of Water Consumption in the prescribed form and pay the Cess as specified under Section 3 of the said Act.

(Member Secretary/Chief Engr./ Sr. Env. Engr. / Env. Engr. / Asst. Env. Engr.)

Continued.....

Consent to M/s. Shakambari Ispat & Powers Ltd.
 for its unit at Vill. - Madandih, P.O. - Baratoria, P.S. - Neturia,
Dist. - Purulia

11. The Applicant shall install suitable device for measuring the volume of water consumed for different purposes as mentioned above giving correct result to the satisfaction of the State Board.
12. All the stacks connected to various sources of emissions must be designated by numbers such as S-1, S-2, S-3, etc., and this must be painted/displayed to facilitate identification.
13. The Applicant shall install comprehensive control system consisting of pollution control equipment as is warranted with reference to generation of air emissions and operate and maintain the same continuously so as to achieve the level of pollutants of the Standard as given in Table-II below :

Please refer to annexure - I

Table-II

Stack No.	Stack height from G.L. (in mts.)	Stack attached to (sources and control system, if any)	Volume Nm ³ /hr.	Velocity of gas emission m/sec	Concentrations of parameters not to exceed				Frequency of emission sampling
					SPM (mg/Nm ³)	CO (%v/v)			
S-1									
S-2									
S-3									
S-4									
S-5									
S-6									
S-7									
S-8									
S-9									
S-10									

(Member Secretary/Chief Engr./ Sr. Env. Engr. / Env. Engr. / Asst. Env. Engr.)

Continued.....

(5)

Consent to M/s. Shakambhari Ispat & Powers Ltd.
 for its unit at Vill. - Madandih, P.O. - Bantoria, P.S. - Neturia,
Dist. - Purulia, - 723121

14. The Applicant shall provide ports in the stack(s) and other necessary permanent facilities such as ladder, platform, etc. for monitoring/sampling the air emissions and the same shall be made available for inspection and use by the State Board's staff as well as State Board's authorised agencies.

15. The Applicant shall observe the following fuel consumption pattern :-

Sl. No	Type of fuel	Quantity consumed per day	Fuel burning operation where the fuel is used
01	Coal	43975 MT/month	DRY KILN
02	COAL	13960 MT/month	Balloon
03	COKE	2895 MT/month	SEAF
04	Steam Coal	1160 MT/month	-
05	Charcoal	5265 MT/month	-

16. The Applicant shall maintain the generation and treatment/disposal of non-hazardous solid waste as specified below :- Please ref. to annexure - II

Type of waste	Quantity	Treatment	Disposal

17. The Applicant shall take adequate measures for control of noise levels from its own sources within the premises within the limit given below :-

Time	Limit in dB(A) L_{eq}
Day Time (06 a.m. to 09 p.m.)	75
Night Time (09 p.m. to 06 a.m.)	70

18. The Applicant shall at all times maintain good house-keeping, proper working order, and operate efficiently for control of pollution from all sources so as not to cause nuisance to surrounding areas/inhabitants and to achieve compliance with the terms and conditions of the consent.

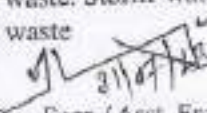
19. The Applicant shall bring about at least 33% of the available open land under the green coverage / plantation.

20. The Applicant shall provide for an alternate electric power source sufficient to operate all pollution control facilities installed by the Applicant to maintain compliance with the terms and conditions of the consent. In absence of such an alternate electric power source, the Applicant shall stop, reduce or otherwise control production to abide by the terms and conditions of the Consent regarding pollution level.

21. The Applicant shall install a separate energy meter showing the consumption of energy for operation of pollution control devices.

22. The Applicant shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises.

23. The Applicant shall provide drainage system for conveying industrial and domestic liquid waste. Storm-water drain shall be kept separate from the drainage system meant for industrial and domestic liquid waste


 (Member Secretary/Chief Engr./ Sr. Env. Engr./ Env. Engr./ Asst. Env. Engr.)

Continued.....

Consent to M/s. Shakambhari Ispat & Power Ltd.
 for its unit at Vill. - Madandih, P.O. - Bantonia, P.S. - Neturia,
Dist. - Purulia, 723121

24. The Applicant shall maintain a separate register showing consumption of chemicals used in pollution control systems.
25. The Applicant shall get the samples of hazardous wastes/leachates analysed at least once in from the laboratory recognised of the West Bengal Pollution Control Board and ensure that they conform to the limits stipulated. Test reports shall be sent to the Board.
26. The Applicant shall provide adequate and safe facility for collection of air, waste water and solid waste samples by the State Board's staff as well as State Board's authorised agencies.
27. The Applicant shall submit to the State Board by the 30th September of every year the Environmental Statement Report for the financial year ending 31st March of the current year in the prescribed form (Form -V) as required under the provisions of rule 14 of the Environment (Protection) [Second Amendment] rules, 1992.
28. The Applicant shall allow the Officers of the State Board to enter into the applicant's premises at any reasonable time to inspect the pollution control systems as well as monitoring and measuring devices in connection with prevention & control of pollution.
29. The Applicant shall maintain an Inspection Book in the factory premises which shall be made available to Officers & employees of the State Board for inspection, review and to write down any direction or observation as is deemed necessary during the inspection from time to time.
30. The Application shall furnish to the State Board all information in respect of quality, quantity, rate of discharge, place of discharge of liquid effluent and air emissions.
31. The Applicant shall maintain adequate number of qualified and trained personnel among his staff for proper maintenance and operation of the effluent treatment and / or emission control devices and for overall environment management of the industry.
32. The Applicant shall have to make registration for the use of groundwater if any, with Central Ground Water Authority.
33. The Applicant shall intimate to the State Board immediately of any occurrence or apprehension of occurrence of discharge of any poisonous, noxious or pollutants in excess of quality as well as quality as mentioned earlier to any receiving water body/receiving system or to atmosphere owing to accident or other unforeseen incident/event including natural disaster. The Applicant Shall (i) take all steps adequate to prevent such accident discharge/release of poisonous, noxious or pollutants and to limit their consequences to persons and the environment, (ii) provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety and mitigate the accidental release of poisonous noxious or pollutants to the environment.
34. The Applicant shall make an application to the State Board in the prescribed form for renewal of the consent at least 60 (sixty) days before the date of expiry of this Consent.
35. The Applicant shall not make any alternation/modification/expansion in the existing manufacturing process and equipment as well as the pollution control system without prior approval of the Board.
36. The Applicant shall comply with the conditions as laid down in the Manufacture, Storage and Import of hazardous Chemicals Rules, 1989 and Hazardous Wastes (Management & Handling) Rules, 1989.

Additional Conditions

(Member Secretary/Chief Engr./ Sr. Env. Engr./ Env. Engr. / Asst. Env. Engr.)

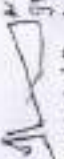
Annexure - II to CTO No. CO 134682

Special Conditions to M/s. Shakambari Ispat & Power Ltd., Vill - Madandih, PO - Bartoria, PS - Neturia, Dist. - Purulia, Pin - 723 121.

Table-II

Stack No.	Stack height from G.L. (in mts.)	Stack Attached to (sources and control system, if any)	Volume Nm ³ /hr	Velocity of gas emission m/sec	Concentration of parameters not to exceed			Frequency of emission sampling
					PM (mg/Nm ³)	CO (%v/v)		
1	35.0 m	2x100 TPD DRI Kiln (1 & 2) followed by separate ESP and 2x10 TPH WHRB.	-	-	100	1	-	Quarterly
2	35.0 m	2x100 TPD DRI Kiln (3 & 4) followed by separate ESP and 2x10 TPH WHRB.	-	-	100	1	-	Quarterly
3	30.0 m	Bag Filter for Iron Circuit & Day Bin for 4x100 TPD DRI Kiln 1, 2, 3 & 4.	-	-	50	-	-	Quarterly
4	30.0 m	Bag Filter for Coal Circuit for 4x100 TPD DRI Kiln 1, 2, 3 & 4	-	-	50	-	-	Quarterly
5	30.0 m	Bag Filter for 1. Bin & Product House for 4x100 TPD DRI Kiln 1, 2, 3 & 4	-	-	50	-	-	Quarterly
6	72.0 m	2x350 TPD DRI (Kiln No. 5 & 6) followed by separate ESP and 2x35.5 TPH WHRB	-	-	50	-	-	Quarterly
7	72.0 m	1x600 TPD DRI (Kiln No.7) followed by ESP and 1x64 TPH WHRB	-	-	50	-	-	Quarterly
8	30.0 m	Bag Filter for 1. Bin/PSB of DRI Kiln 2x350 TPD	-	-	50	-	-	Quarterly
9	30.0 m	Bag Filter for 1. Bin/PSB of DRI Kiln 1x600 TPD	-	-	50	-	-	Quarterly
10	30.0 m	Bag Filter common for Day Bin of DRI Kiln 2x350 TPD & DRI 1x600 TPD	-	-	50	-	-	Quarterly
11	30.0 m	Bag Filter common for Iron Circuit of DRI Kiln 2x350TPD & DRI 1x600 TPD (Kiln 5, 6 & 7)	-	-	50	-	-	Quarterly
12	30.0m	Bag Filter for Coal Circuit of DRI Kiln 2x350 TPD	-	-	50	-	-	Quarterly
13	30.0 m	Bag Filter for Coal Circuit of DRI Kiln 1x600 TPD	-	-	50	-	-	Quarterly

14.	30.0 m	Bag Filter common for Product House of DRI Kiln 2x350 TPD & DRI 1x600TPD	-	-	-	50	-	-	Quarterly
15.	30.0 m	2x40t Induction Furnace with three (03) nos. of Bag Filters Hoppers	-	-	-	50	1	-	Quarterly
16.	32.0 m	FDC & Bag filter (SAF-I, 9 MVA)	-	-	-	50	1	-	Quarterly
17.	32.0 m	FDC & Bag filter (SAF-II, 9 MVA)	-	-	-	50	1	-	Quarterly
18.	32.0 m	FDC & Bag filter (SAF-III, 9 MVA)	-	-	-	50	1	-	Quarterly
19.	32.0 m	FDC & Bag filter (SAF-IV, 9 MVA)	-	-	-	50	1	-	Quarterly
20.	60.0 m	ESP of AFBC Boiler (36TPH)	-	-	-	30	-	-	Quarterly
21.	30.0 m	Bag Filter of CHP for AFBC Boiler	-	-	-	50	-	-	Quarterly
22.	92.0 m	ESP of CFBC Boiler (100TPH)	-	-	-	30	-	-	Quarterly
23.	30.0 m	Bag Filter of CHP for CFBC Boiler	-	-	-	50	-	-	Quarterly


 Environmental Engineer
 Asansol Regional Office

Annexure - III to CTO No. CO 134682

Special Conditions to M/s. Shakambari Ispat & Power Ltd., Vill - Madandih, PO - Bartoria, PS - Neturia, Dist. - Purulia, Pin - 723 121.

Type of Waste	Quantity (TPM)	Treatment	Disposal
IF Bag Filter Dust	680	-	Shall be used for landfilling
MS scale from CCM from SMS	340	-	Shall be reused in induction furnace/shall be used for producing Fe-Si or Fe-Si-Cr.
IF Slag	4585	-	Shall be used as aggregates for landfilling/road making after metal recovery
End Cuts/Mis roll from Rolling Mill	845	-	Shall be reused in IF
Mill Scale from Rolling Mills	196	-	Shall be used in IF/provided to recyclers
Dolochar from DRI	9975	-	Shall be used for captive power generation if AFBC/CFBC boilers
Wet Scrubber Sludge from DRI	450	-	Shall be used in CPP for power generation.
Bag Filter Dust from DRI	2950	-	Coal Dust shall be used in CPP and Iron dust shall be provided to the pellet plant
Bottom ash from CFBC & AFBC boiler	3800	-	Shall be used for land filling/provided to brick manufacturing units
Fly-ash/ESP dust from CFBC, AFBC & DRI	18000	-	Shall be provided bricks & cement manufacturing units/used for abandoned mines filling.
From Ferro Alloys division: Fe-Mn Slag OR	4740	-	Shall be used for the production of Si-Mn.
Si-Mn Slag OR	4475	-	Shall be used for construction of roads or filling of low-lying area
Fe-Si Slag OR	265	-	Shall be used in Ind. Furnace
Fe-Cr Slag OR	4740	-	Slag shall be further processed in a grinding and Metal Recovery Plant and shall be used for construction purposes after the TCLP test
Pig Iron Slag	2630	-	Shall be sold to cement manufacturers

Type of Waste	Quantity (TPM)	Treatment	Disposal
Bag Filter Dust from Ferro Division	265		Shall be recycled in process/ provided for sintering, Briquetting, in Cement plant & concreting according to quality of dust

 31/07/23
 Environmental Engineer
 Asansol Regional Office



Government of West Bengal

This document having UDIN **24-G-GA000004-C-1714139149183** has been created by **WEST BENGAL POLLUTION CONTROL BOARD** with authorised person's Aadhaar no XXXXXXXX9477 on **07:15PM, April 26, 2024**.

This document is available at UDIN platform till 07:15PM, April 26, 2029.



Gibance Mukherjee

Authorised Signatory
(E-signed)
Department of IT&E



WEST BENGAL POLLUTION CONTROL BOARD
Paribesh Bhawan, 10A, Block LA, Sector III
Salt Lake City, Bidhan Nagar, Kolkata – 700 106, INDIA
Website : www.wbpcb.gov.in, e-mail : wbpcbnet@wbpcb.gov.in

Category of the Industry : RED

Application Type: CTO

CTO No.: WBPCB/4148205/2024

Date : 26/04/2024

Consent to Operate (CTO) under Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974 as amended and Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended.

Reference: Application No.: 4148205

The West Bengal Pollution Control Board (hereinafter referred to as State Board) under the provisions of Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974 as amended and Section 21 of the Air (Prevention and control of Pollution) Act, 1981 as amended, and Rules and Orders made thereunder hereby grants Consent to **SHAKAMBHARI ISPAT & POWER LTD.** (hereinafter referred to as Applicant) for its unit located at **Vill-Madandih, PO-Bartoria, PS-Neturia, Dist-Purulia, Pin-723121** for the period from **26/04/2024** to **31/07/2028** to operate the industrial unit/project and to discharge liquid effluent and gaseous emission from the premises / land of the industrial unit/project, in accordance with the conditions as mentioned below, provided that on any day at any instance the quantity and quality of liquid discharge and gaseous emission shall not exceed the permissible limit as specified in this consent letter and in the Environment (Protection) Act, 1986 and Rules thereunder, as amended.

Breach of the conditions and / or failure to comply with the directions as mentioned below shall render the industry/project liable for prosecution under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 as amended and Section 21 of the Air (Prevention and control of Pollution) Act, 1981 as amended.

The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alter the conditions of this consent letter giving one month's notice to the industry.

Conditions :

- 1 This Consent is valid for the following activities :

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WBPCB/4148205/2024

Page1



Sl.No	Name of Activity/Products/By-products	Production Capacity (Per Month)
1	Production from existing 4x9MVA SAF by Capacity Enhancement/Product Modification: Fe-Mn OR	97029 Metric Tonnes/Year
2	Si-Mn OR	71424 Metric Tonnes/Year
3	Rolling Mill with wire drawing facility 1000TPD (New Installation)	360000 Metric Tonnes/Year
4	Additional Production of MS Billet from Existing 7x25T Induction Furnace by Capacity Enhancement	204980 Metric Tonnes/Year
5	Dolochar (By product)	79200 Metric Tonnes/Year
6	Fe-Mn Slag (By product)	87325 Metric Tonnes/Year
7	Total Additional Sponge Iron Production by Capacity Enhancement of Existing DRI Kilns: 30400 TPA from 1x400TPD, 53200 TPA from 2x350TPD and 45600 TPA from 1x600TPD	129200 Metric Tonnes/Year
8	Sponge Iron from DRI Kiln 1x600TPD (New Installation)	237600 Metric Tonnes/Year
9	MS Billet Production from 2x25T Induction Furnace (New Installation)	175000 Metric Tonnes/Year
10	High Carbon Ferro Chrome OR	67665 Metric Tonnes/Year
11	Ferro Silico Chrome OR	44332 Metric Tonnes/Year
12	Fe-Si OR	32141 Metric Tonnes/Year
13	Pig Iron or in combination of any	107136 Metric Tonnes/Year
14	Captive Power Generation from 64 TPH WHRB attached with 1x600TP DDRI Kiln (New Installation)	16 Megawatt
15	Additional Captive Power Generation of 01MW from 64TPH WHRB attached with existing DRI Kiln 1x600TPD	01 Megawatt

- 2
- The industry shall remain responsible for quantity and quality of liquid effluent and air emission.
- 3
- Daily waste water generation and discharge shall not exceed :

No. of outlets	Source of Waste Water	Quantity in Kilo Liters/day	Place of discharge
	Process	Recycle & Reuse after treatment in ETP & Neutralization/Homogenization in Catch Pits	No effluent shall be discharged outside the factory premises

- 4
- To bring into any altered or new outlet / outfall or to change the place of discharge, the industry shall have to inform the Board and obtain prior permission of the Board in this effect.
- 5
- The industry shall provide comprehensive facility for treatment of industrial liquid waste and domestic liquid waste (sewage, sullage and liquid effluent generated from canteen), and operate and maintain the same continuously so that the quality of final effluent conforms to the Standard as given below:

Outlet No.	Nature of effluent	Parameters and standard			Frequency of sampling
		Parameters	Standards	Unit	

Provisions shall be made to install sensor-based Water Quality monitoring system and flow meter to share the information with the state board on a Real Time basis.

- 6
- Daily water consumption for the following purposes shall not exceed

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SL NO.	Purpose of Water Use	Quantity (KL/Day)
1.	Domestic	14.0
2.	Cooling	900.0
3.	Boiler	460.0
4.	Others(Dust Suppression)	140.0

- 7
- The Industry shall install suitable digital device for measuring the volume of water consumed for different purposes as mentioned above giving correct result to the satisfaction of the State Board. The device shall be able to provide information to disseminate the quantity on a real time basis.
- 8
- All the stacks connected to various sources of emissions must be designated by numbers.
- 9
- The industry shall install comprehensive pollution control equipment and operate and maintain the same to conform to the standard as given below:



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Stack height from ground level (m)	Stack attached to emission sources	Capacity of emission source	Cons up-Unit	Fuel details		Cont rol syste m(if any)	Concentrations of parameters not to exceed							Freq uency of samp ling	Rem arks
				Fuel used	Quan tity		PM(mg/N m3)	CO(%)	Acid Mist(mg/N m3)	Pb(m g/Nm 3)	SO2(mg/N m3)	NOX (mg/ Nm3)	Othe rs		
30	Induct ion furnac e	25	Metri c Tonne	Electr icity	0 Metri c Tonne s/Day		30	1	-	-	-	-	-	Quart erly	Bag Filter Com mon for 2x25T Induct ion Furna ce & 1x30T LRF
30	Fugiti ve Emmi ssion	2000	Metri c Tonne s/Day		0 Metri c Tonne s/Day		30	-	-	-	-	-	--	Quart erly	Bag Filter comm on for I.Bin/ PSB of DRI Kiln 2x600 TPD
30	Fugiti ve Emmi ssion	5000	Metri c Tonne s/Day		0 Metri c Tonne s/Day		30	-	-	-	-	-	-	Quart erly	Bag Filter comm on for Produ ct House of DRI Kilns 2x350 TPD & 2x600 TPD
30	Fugiti ve Emmi ssion	4500	Metri c Tonne s/Day		0 Metri c Tonne s/Day		30	-	-	-	-	-	-	Quart erly	Bag Filter comm on for Iron Circui t of DRI Kiln 2x350 TPD & DRI 2x600 TPD

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30	Fugitive Emission	4000	Metric Tonnes/Day		0 Metric Tonnes/Day		30	-	-	-	-	-	-	Quarterly	Bag Filter common for Coal Circuit of DRI Kiln 2x600 TPD
30	Fugitive Emission	1200	Metric Tonnes/Day		0 Metric Tonnes/Day		30	-	-	-	-	-	-	Quarterly	Bag Filter common with Dolomite handling system for DRI 2x350 TPD & DRI 2x600 TPD
30	Fugitive Emission	4000	Metric Tonnes/Day		0.8 Metric Tonnes/Day		30	-	-	-	-	-	-	Quarterly	Bag Filter common with Day Bin for DRI Kiln 1x350 TPD & DRI 1x600 TPD
72	Kilns	600	Metric Tonnes/Day	Coal	0.8 Metric Tonnes/Day		30	1	-	-	-	-	-	Quarterly	RCC stack attached with ESP for 1x64 TPH WHR B of 1x600 TPD DRI (Kiln No 8)
11	DG Set	1010	KVA	HSD	0.8 Metric Tonnes/Day		150	1	-	-	-	-	-	Yearly	5X10 10 KVA DG Sets

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9	DG Set	550	KVA	HSD	0.8 Metri c Tonnes s/Day		150	1	-	-	-	-	-	Yearl y	1x550 KVA DG Set
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- 10
- The industry shall provide ports in the stack(s) and other necessary permanent facilities such as ladder, platform etc. for monitoring / sampling the air emissions and the same shall be made available for inspection and use by the State Board’s staff as well as State Board’s authorized agencies.
- 11
- Waste generation, treatment and disposal shall be as specified below :

S.No	Description of Waste	Quantity	Treatment and Disposal
1	IF Bag Filter Dust	635 Metric Tonnes/Month	Shall be used for land filling
2	MS scale from CCM from SMS	325 Metric Tonnes/Month	Shall be reused in induction furnace/shall be used for production of Fe-Si or Fe-Si-Cr.
3	IF & LRF Salg	4730 Metric Tonnes/Month	Shall be used as aggregates for land filling/road making after metal recovery
4	Mill Scale from Rolling Mills	234 Metric Tonnes/Month	Shall be used in IF/provided to recyclers
5	End Cuts/Mis roll from Rolling Mill	965 Metric Tonnes/Month	Shall be used in IF
6	Dolochar from DRI	7200 Metric Tonnes/Month	Shall be used for captive power generation if AFBC/CFBC boilers
7	Wet Scrapper Sludge from DRI	295 Metric Tonnes/Month	Shall be used in CPP for power generation.
8	Bag Filter Dust from DRI	2230 Metric Tonnes/Month	Coal Dust shall be used in CPP and Iron dust shall be provided to pellet plant
9	Si-Mn Slag OR	5204 Metric Tonnes/Month	Shall be used for construction of roads or filling of low-lying area
10	Fe-Si Slag OR	138 Metric Tonnes/Month	Shall be used in Ind. Furnace
11	Fe-Cr Slag OR	5220 Metric Tonnes/Month	Slag shall be further processed in grinding and Metal Recovery Plant and shall be used for construction purpose after TCLP test
12	Fe-Si-Cr Slag OR	190 Metric Tonnes/Month	Shall be used in cement manufacturing industries as a raw material as well as for construction and road filling material after undergoing TCLP Test
13	Pig Iron Slag or in combination of any	4592 Metric Tonnes/Month	Shall be sold to cement manufacturers
14	Fe-Mn Slag OR	7485 Metric Tonnes/Month	Shall be used for production of Si-Mn.
15	Bag Filter Dust from Ferro Division	450 Metric Tonnes/Month	Shall be recycled in process/ provided for sintering, Briquetting, in Cement plant & concreting according to quality of dust

The Industry shall obtain Authorisation for waste and also register for EPR wherever applicable.



- 12 The industry shall take adequate measures for control of noise level from its own sources within the premises within the limit given below :

Time	Limit in dB (A) Leq
Day time (06 a.m. to 10 p.m.)	65
Night time (10 p.m. to 06 a.m.)	55

Noise barriers should be installed if the Noise Level is found to be exceeding the desired levels.

- 13 The industry shall at all times maintain good house-keeping and control pollution (including fugitive emissions) from all sources to maintain clean environment in & around factory premises and in surrounding areas.
- 14 The Industry shall bring about at least 33% of the total land area under the tree cover.
- 15 The Industry shall provide sufficient alternate electric power source like Green DG or Storage Battery System etc. to operate all pollution control facilities. In absence of such alternate power source, the production shall be stopped/controlled to conform to the conditions of the Consent.
- 16 The industry shall install a separate energy meter showing the consumption of energy for operation of pollution control devices and shall install suitable device for measuring the volume of water consumed for different purposes as mentioned in Sl.No. 3.
- 17 The Industry shall provide drainage system for discharge of industrial and domestic effluent and a separate drainage system for storm-water.
- 18 The industry shall maintain a separate register showing consumption of chemicals used in pollution control systems.
- 19 The Industry shall get the samples of hazardous wastes / leachates analysed at least once in a year from a laboratory recognised by the West Bengal Pollution Control Board and ensure that they conform to the limits stipulated. Test reports shall be sent to the Board.
- 20 The Industry shall submit the Environmental Statement Report for the financial year ending 31st March of the current year in the prescribed form (Form V) as required under the provisions of Rule 14 of the Environment (Protection) [Second Amendment] Rules 1992 by 30th September of every year, to the WBPCB.
- 21 The Industry shall allow the officers of the State Board to enter into the premises of the unit at any reasonable time to inspect the pollution control systems and shall provide adequate and safe facility for collection of air, wastewater and solid waste samples for monitoring by the State Board as well as by authorized agencies of the State Board, as and when required by them.
- 22 The industry shall maintain an Inspection Book in the factory premises which shall be made available to inspecting officers of the State Board for inspection, review and to write down any direction or observation as is deemed necessary during the inspection.
- 23 The Industry shall furnish to the State Board all information in respect of quality, quantity, rate of discharge, place of discharge of liquid effluent and air emission.
- 24 The Industry shall maintain adequate number of qualified and trained personnel among its staff for proper maintenance and operation of the effluent treatment and/or emission control devices and for overall environment management of the industry.
- 25 The Industry shall have to make registration for the use of groundwater if any, with State Water Investigation Directorate (SWID).

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- 26 The Industry shall intimate to the State Board immediately of any occurrence or apprehension of occurrence of discharge of any poisonous, noxious or pollutants in excess of quality as well as quantity as mentioned earlier to any receiving water body/receiving system or to atmosphere owing to accident or other unforeseen incident/event including natural disaster. The Applicant shall (i) take all steps adequate to prevent such accident discharge / release of poisonous, noxious or pollutants and to limit their consequences to persons and the environment, (ii) provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety and mitigate the accidental release of poisonous noxious or pollutants to the environment.
- 27 If the Industry is using Diesel Generator set or generating any other hazardous waste, it should install a Digital Display Board to discriminate all information as stipulated in this regard.
- 28 The industry shall make an application to the State Board in the prescribed form for renewal of the consent at least 120 (one hundred & twenty) days before the date of expiry of this Consent.
- 29 The industry shall not make any alteration / expansion / modification in the existing manufacturing process and equipment, pollution control system and shall not alter or bring in any new outlet/outfall or stack or change the place of discharge, without prior approval of the Board.
- 30 The industry shall comply with all applicable Environmental Acts and Rules.
- 31 The Industry shall comply with the provisions of relevant Waste Management Rules and also submit Annual Returns / Manifests on regular basis.
- 32 Concealing factual data or submission of false or fabricated data/information may result in revocation of Consent to Operate and attract action under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981.

Special Conditions:

- 1.The unit shall strictly adhere to the conditions imposed in the Environmental Clearance issued by MoEF&CC,GoI dt. 19.07.2023 and Consent to Establish issued by the State Board dt. 18.08.2023.
- 2.The emission standards have been prescribed as per the condition imposed in the Consent to Establish issued by the State Board vide memo no.422-2N-21/2012(E)-Part-I dt. 18.08.2023.
- 3.The ferro alloys production quantity of 63150 TPA as mentioned in the Consent to Operate issued by the State Board vide certificate no. CO134682 dt.31.07.2023 is replaced by the quantities of different ferro alloys as mentioned in this Consent to Operate.

Any violation of the aforesaid conditions shall entail cancellation of this Consent for Operate.

For and on behalf of West Bengal Pollution Control Board

R. Sinha

26/04/2024

**Senior Environmental Engineer
Operation & Execution Cell**

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Government of West Bengal

This document having UDIN **24-G-GA000004-C-1720784686174** has been created by **WEST BENGAL POLLUTION CONTROL BOARD** with authorised person's Aadhaar no XXXXXXXX9477 on **05:14PM, July 12, 2024**.

This document is available at UDIN platform till 05:14PM, July 12, 2029.



Gibance Mukherjee

Authorised Signatory
(E-signed)
Department of IT&E

The document is downloaded from <https://udin.wb.gov.in/>



WEST BENGAL POLLUTION CONTROL BOARD
Paribesh Bhawan, 10A, Block LA, Sector III
Salt Lake City, Bidhan Nagar, Kolkata – 700 106, INDIA
 Website : www.wbpcb.gov.in, e-mail : [wbpcbnet@wbpcb.gov.in](mailto:wbp cbnet@wbpcb.gov.in)

Category of the Industry : RED

Application Type: CTO

CTO No.: WBPCB/5166172/2024

Date : 12/07/2024

Consent to Operate (CTO) under Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974 as amended and Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended.

Reference: Application No.: 5166172

The West Bengal Pollution Control Board (hereinafter referred to as State Board) under the provisions of Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974 as amended and Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended, and Rules and Orders made thereunder hereby grants Consent to **SHAKAMBHARI ISPAT & POWER LTD.** (hereinafter referred to as Applicant) for its unit located at **Vill-Madandih, PO-Bartoria, PS-Neturia, Dist-Purulia, Pin-723121** for the period from **12/07/2024** to **31/07/2028** to operate the industrial unit/project and to discharge liquid effluent and gaseous emission from the premises / land of the industrial unit/project, in accordance with the conditions as mentioned below, provided that on any day at any instance the quantity and quality of liquid discharge and gaseous emission shall not exceed the permissible limit as specified in this consent letter and in the Environment (Protection) Act, 1986 and Rules thereunder, as amended.

Breach of the conditions and / or failure to comply with the directions as mentioned below shall render the industry/project liable for prosecution under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 as amended and Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended.

The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alter the conditions of this consent letter giving one month's notice to the industry.

Conditions :

- 1 This Consent is valid for the following activities :

Sl.No	Name of Activity/Products/By-products	Production Capacity (Per Month)
1	Si-Mn OR	35562 Metric Tonnes/Year
2	Fe-Mn OR	48515 Metric Tonnes/Year
3	Fe-Si OR	16071 Metric Tonnes/Year
4	High Carbon Ferro Chrome (HCFC) OR	33833 Metric Tonnes/Year
5	Fe-Si-Cr OR	22166 Metric Tonnes/Year
6	Pig Iron OR in combination of any	53054 Metric Tonnes/Year
7	Fe-Mn Slag (By product)	43663 Metric Tonnes/Year
8	Metal Recovery from 1x25TPH Metal Recovery Plant	25 Metric Tonnes/Hour

- 2 The industry shall remain responsible for quantity and quality of liquid effluent and air emission.

- 3 Daily waste water generation and discharge shall not exceed :

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No. of outlets	Source of Waste Water	Quantity in Kilo Liters/day	Place of discharge
No industrial waste water shall be discharged outside the factory premises	Waste water from cooling tower blowdown and softener backwash	56	Zero Liquid Discharge shall be maintained by recycle & reuse practices

- 4
- To bring into any altered or new outlet / outfall or to change the place of discharge, the industry shall have to inform the Board and obtain prior permission of the Board in this effect.
- 5
- The industry shall provide comprehensive facility for treatment of industrial liquid waste and domestic liquid waste (sewage, sullage and liquid effluent generated from canteen), and operate and maintain the same continuously so that the quality of final effluent conforms to the Standard as given below:

Outlet No.	Nature of effluent	Parameters and standard			Frequency of sampling
		Parameters	Standards	Unit	

Provisions shall be made to install sensor-based Water Quality monitoring system and flow meter to share the information with the state board on a Real Time basis.

- 6
- Daily water consumption for the following purposes shall not exceed

SL NO.	Purpose of Water Use	Quantity (KL/Day)
1.	Domestic	3.0
2.	Cooling	200.0
3.	Others(Dust Suppression)	56.0

- 7
- The Industry shall install suitable digital device for measuring the volume of water consumed for different purposes as mentioned above giving correct result to the satisfaction of the State Board. The device shall be able to provide information to disseminate the quantity on a real time basis.
- 8
- All the stacks connected to various sources of emissions must be designated by numbers.
- 9
- The industry shall install comprehensive pollution control equipment and operate and maintain the same to conform to the standard as given below:

Stack height from ground level (m)	Stack attached to emission sources	Capacity of emission source	Cons up-Unit	Fuel details		Control system(if any)	Concentrations of parameters not to exceed							Frequency of sampling	Remarks
				Fuel used	Quantity		PM(mg/N m3)	CO(%)	Acid Mist(mg/N m3)	Pb(mg/Nm 3)	SO2(mg/N m3)	NOX (mg/ Nm3)	Others		
32	Electric arc furnace	267750	Cubic Meter s/Hour	Electricity	7.2 Mega Watt Hour	Bag Filter	30							Quarterly	MS Stack attached with 1x9M VA SEAF
32	Electric arc furnace	267750	Cubic Meter s/Hour	Electricity	7.2 Mega Watt Hour	Bag Filter	30							Quarterly	MS Stack attached with 1x9M VA SEAF

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- 10 The industry shall provide ports in the stack(s) and other necessary permanent facilities such as ladder, platform etc. for monitoring / sampling the air emissions and the same shall be made available for inspection and use by the State Board's staff as well as State Board's authorized agencies.
- 11 Waste generation, treatment and disposal shall be as specified below :

S.No	Description of Waste	Quantity	Treatment and Disposal
1	Fe-Mn Slag OR	43663 Metric Tonnes/Year	Shall be used for the production of Si-Mn.
2	Si-Mn Slag OR	30355 Metric Tonnes/Year	Shall be used as aggregates for land filling/road making
3	Fe-Cr Slag OR	30449 Metric Tonnes/Year	Slag shall be further processed in grinding and Metal Recovery Plant and shall be used for construction purpose after TCLP test.
4	Fe-Si Slag OR	804 Metric Tonnes/Year	Fe-Si Slag will be provided to cement manufacturing industries as a raw material & used for medium carbon silico manganese production purpose.
5	Fe-Si-Cr Slag OR	1108 Metric Tonnes/Year	This slag will be used in cement manufacturing industries as a raw material as well as for construction and Road filling material after undergoing TCLP Test.
6	Pig Iron Slag OR in combination of any	26784 Metric Tonnes/Year	Pig Iron Slag will be sold to cement manufacturing industries as a raw material.
7	Bag Filter dust from SAF (Average)	690 Metric Tonnes/Year	Shall be recycled in process/provided to Sintering, Briquetting units, to Cement plant & concreting according to quality of dust.

The Industry shall obtain Authorisation for waste and also register for EPR wherever applicable.

- 12 The industry shall take adequate measures for control of noise level from its own sources within the premises within the limit given below :

Time	Limit in dB (A) Leq
Day time (06 a.m. to 10 p.m.)	65
Night time (10 p.m. to 06 a.m.)	55

Noise barriers should be installed if the Noise Level is found to be exceeding the desired levels.

- 13 The industry shall at all times maintain good house-keeping and control pollution (including fugitive emissions) from all sources to maintain clean environment in & around factory premises and in surrounding areas.
- 14 The Industry shall bring about at least 33% of the total land area under the tree cover.
- 15 The Industry shall provide sufficient alternate electric power source like Green DG or Storage Battery System etc. to operate all pollution control facilities. In absence of such alternate power source, the production shall be stopped/controlled to conform to the conditions of the Consent.
- 16 The industry shall install a separate energy meter showing the consumption of energy for operation of pollution control devices and shall install suitable device for measuring the volume of water consumed for different purposes as mentioned in Sl.No. 3.

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- 17 The Industry shall provide drainage system for discharge of industrial and domestic effluent and a separate drainage system for storm-water.
- 18 The industry shall maintain a separate register showing consumption of chemicals used in pollution control systems.
- 19 The Industry shall get the samples of hazardous wastes / leachates analysed at least once in a year from a laboratory recognised by the West Bengal Pollution Control Board and ensure that they conform to the limits stipulated. Test reports shall be sent to the Board.
- 20 The Industry shall submit the Environmental Statement Report for the financial year ending 31st March of the current year in the prescribed form (Form V) as required under the provisions of Rule 14 of the Environment (Protection) [Second Amendment] Rules 1992 by 30th September of every year, to the WBPCB.
- 21 The Industry shall allow the officers of the State Board to enter into the premises of the unit at any reasonable time to inspect the pollution control systems and shall provide adequate and safe facility for collection of air, wastewater and solid waste samples for monitoring by the State Board as well as by authorized agencies of the State Board, as and when required by them.
- 22 The industry shall maintain an Inspection Book in the factory premises which shall be made available to inspecting officers of the State Board for inspection, review and to write down any direction or observation as is deemed necessary during the inspection.
- 23 The Industry shall furnish to the State Board all information in respect of quality, quantity, rate of discharge, place of discharge of liquid effluent and air emission.
- 24 The Industry shall maintain adequate number of qualified and trained personnel among its staff for proper maintenance and operation of the effluent treatment and/or emission control devices and for overall environment management of the industry.
- 25 The Industry shall have to make registration for the use of groundwater if any, with State Water Investigation Directorate (SWID).
- 26 The Industry shall intimate to the State Board immediately of any occurrence or apprehension of occurrence of discharge of any poisonous, noxious or pollutants in excess of quality as well as quantity as mentioned earlier to any receiving water body/receiving system or to atmosphere owing to accident or other unforeseen incident/event including natural disaster. The Applicant shall (i) take all steps adequate to prevent such accident discharge / release of poisonous, noxious or pollutants and to limit their consequences to persons and the environment, (ii) provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety and mitigate the accidental release of poisonous noxious or pollutants to the environment.
- 27 If the Industry is using Diesel Generator set or generating any other hazardous waste, it should install a Digital Display Board to discriminate all information as stipulated in this regard.
- 28 The industry shall make an application to the State Board in the prescribed form for renewal of the consent at least 120 (one hundred & twenty) days before the date of expiry of this Consent.
- 29 The industry shall not make any alteration / expansion / modification in the existing manufacturing process and equipment, pollution control system and shall not alter or bring in any new outlet/outfall or stack or change the place of discharge, without prior approval of the Board.
- 30 The industry shall comply with all applicable Environmental Acts and Rules.
- 31 The Industry shall comply with the provisions of relevant Waste Management Rules and also submit Annual Returns / Manifests on regular basis.
- 32 Concealing factual data or submission of false or fabricated data/information may result in revocation of Consent to Operate and attract action under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981.

Special Conditions:

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- 1.The unit shall strictly adhere to the conditions imposed in the Environmental Clearance(EC) issued by MoEF&CC,GoI dt. 19.07.2023 and Consent to Establish (CTE) issued by the State Board dt. 18.08.2023.
- 2.The emission standards have been prescribed as per the condition imposed in the Consent to Establish issued by the State Board vide memo no.422-2N-21/2012(E)-Part-I dt. 18.08.2023.

Any violation of the aforesaid conditions shall entail cancellation of this Consent for Operate.

For and on behalf of West Bengal Pollution Control Board

R. Sinha

12/07/2024

**Senior Environmental Engineer
Operation & Execution Cell**



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ANNEXURE- 9



ENVIROCHECK

Recognised by MoEF & CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017) & NABET (CERTIFICATE NO. - NABET/EIA/2326/IA 0117)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/I
			Report ID No.	:	ENV/08/Feb./TR(A)/I/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	Rotary Kiln No.1 & 2 attached to common stack
Shape of Stack	:	Circular
Materials of Construction	:	M.S.
Capacity	:	100 TPD/each
Emission Due to	:	Combustion of Coal and Reduction of Fe-Ore
Fuel Used	:	Coal
Working Fuel Consumption	:	5.0 MT/hr./Kiln
Pollution Control Device	:	W.H.R.B with E.S.P.
		Permanent Platform & Ladder
		Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	137.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	11.63
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	93567.50
5.	Sulfur dioxide	mg/Nm ³	IS 11255 (Part 2)	408.89
6.	Oxides of Nitrogen	mg/Nm ³	IS 11255 (Part 7)	209.98
7.	Carbon dioxide by ORSAT App	%	IS 13270	10.8
8.	Carbon Monoxide	%	IS 13270	<1.0
9.	a) Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	23.84
	b) Particulate Matter (at 12% CO ₂)	mg/Nm ³		26.48
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 { 033-25792891/25497490, Fax : 033-25289141
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Branch Office : • Siliguri • Haldia • Durgapur • Dhanbad • Gangtok • Port Blair • Dehradun • New Delhi
Overseas : • UAE • Qatar • Netherlands



ENVIROCHECK

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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/II
			Report ID No.	:	ENV/08/Feb./TR(A)/II/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	Rotary Kiln No.3 & 4 attached with common stack
Shape of Stack	:	Circular
Materials of Construction	:	M.S.
Capacity	:	100 TPD/each
Emission Due to	:	Combustion of Coal and Reduction of Fe-Ore
Fuel Used	:	Coal
Working Fuel Consumption	:	5.0 MT/hr./Kiln
Pollution Control Device	:	W.H.R.B with E.S.P.
		Height of Stack (mtr.) (from G. L.) : 35.0
		Stack I.D. at sampling point (mtr.) : 2.0
		Height of sampling port (mtr.) (from G.L.) : 15.0
		Permanent Platform & Ladder : Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	140.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	11.68
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	93353.32
5.	Sulfur dioxide	mg/Nm ³	IS 11255 (Part 2)	382.60
6.	Oxides of Nitrogen	mg/Nm ³	IS 11255 (Part 7)	216.76
7.	Carbon dioxide by ORSAT App	%	IS 13270	10.6
8.	Carbon Monoxide	%	IS 13270	<1.0
9.	a) Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	25.17
	b) Particulate Matter (at 12% CO ₂)	mg/Nm ³		28.50
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 { 033-25792891/25497490, Fax : 033-25299141
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Branch Office : Siliguri • Haldia • Durgapur • Dhanbad • Gangtok • Port Blair • Dehradun • New Delhi
Overseas : UAE • Qatar • Netherlands



ENVIROCHECK

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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/III
			Report ID No.	:	ENV/08/Feb./TR(A)/III/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	Rotary Kiln No.5 & 6 attached with common stack
Shape of Stack	:	Circular
Materials of Construction	:	M.S.
Capacity	:	350 TPD (each)
Emission Due to	:	Combustion of Coal and Reduction of Fe-Ore
Fuel Used	:	Coal
Working Fuel Consumption	:	13 TPH/each
Pollution Control Device	:	W.H.R.B with E.S.P.
	:	Permanent Platform & Ladder
	:	Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	173.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	12.88
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	160012.3
5.	Sulfur dioxide	mg/Nm ³	IS 11255 (Part 2)	381.81
6.	Oxides of Nitrogen	mg/Nm ³	IS 11255 (Part 7)	210.41
7.	Carbon dioxide by ORSAT App	%	IS 13270	11.2
8.	Carbon Monoxide	%	IS 13270	<1.0
9.	a) Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	21.94
	b) Particulate Matter (at 12% CO ₂)	mg/Nm ³		23.50
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :


(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :


(Dr. Ajoy Paul)
(Quality Manager)

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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/IV
			Report ID No.	:	ENV/08/Feb./TR(A)/IV/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	Rotary Kiln (No.7)
Shape of Stack	:	Circular
Materials of Construction	:	M.S.
Capacity	:	600 TPD
Emission Due to	:	Combustion of Coal and Reduction of Fe-Ore
Fuel Used	:	Coal
Working Fuel Consumption	:	24.6 TPH
Pollution Control Device	:	W.H.R.B with E.S.P.
		Permanent Platform & Ladder
	:	Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	173.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	20.32
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	177044.3
5.	Sulfur dioxide	mg/Nm ³	IS 11255 (Part 2)	406.15
6.	Oxides of Nitrogen	mg/Nm ³	IS 11255 (Part 7)	201.10
7.	Carbon dioxide by ORSAT App	%	IS 13270	11.4
8.	Carbon Monoxide	%	IS 13270	<1.0
9.	a) Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	24.10
	b) Particulate Matter (at 12% CO ₂)	mg/Nm ³		25.36
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

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(Jr. Chemist)

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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/V
			Report ID No.	:	ENV/08/Feb./TR(A)/V/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	Rotary Kiln (No.8)
Shape of Stack	:	Circular
Materials of Construction	:	M.S.
Capacity	:	600 TPD
Emission Due to	:	Combustion of Coal and Reduction of Fe-Ore
Fuel Used	:	Coal
Working Fuel Consumption	:	24.4 TPH
Pollution Control Device	:	W.H.R.B with E.S.P.
		Permanent Platform & Ladder
	:	Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	176.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	19.71
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	170442.91
5.	Sulfur dioxide	mg/Nm ³	IS 11255 (Part 2)	382.60
6.	Oxides of Nitrogen	mg/Nm ³	IS 11255 (Part 7)	216.76
7.	Carbon dioxide by ORSAT App	%	IS 13270	11.2
8.	Carbon Monoxide	%	IS 13270	<1.0
9.	a) Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	24.35
	b) Particulate Matter (at 12% CO ₂)	mg/Nm ³		26.08
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

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(Jr. Chemist)

Authorised Signatory :

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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/VI
			Report ID No.	:	ENV/08/Feb./TR(A)/VI/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	Product House of DRI (100 TPD)
Shape of Stack	:	Circular
Materials of Construction	:	M.S.
Capacity	:	100 TPD
Emission Due to	:	Process Activity
Fuel Used	:	N.A.
Working Fuel Consumption	:	Nil
Pollution Control Device	:	Bag Filter
		Height of Stack (mtr.) (from G. L.) : 30.0
		Stack I.D. at sampling point (mtr.) : 0.8
		Height of sampling port (mtr.) (from G.L.) : 13.0
		Permanent Platform & Ladder : Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	38.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	9.63
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	16748.44
5.	Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	19.19
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

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(Jr. Chemist)

Authorised Signatory :

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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	05.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/VII
			Report ID No.	:	ENV/08/Feb./TR(A)/VII/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	SEAF (No. 01)			
Shape of Stack	:	Circular	Height of Stack (mtr.) (from G. L.)	:	32.0
Materials of Construction	:	M.S.	Stack I.D. at sampling point (mtr.)	:	1.80
Capacity	:	9.0 MVA	Height of sampling port (mtr.) (from G.L.)	:	22.0
Emission Due to	:	Reduction of Mn-Ore			
Fuel Used	:	N.A. (Electrically Operated)	Permanent Platform & Ladder	:	Yes
Working Fuel Consumption	:	Nil			
Pollution Control Device	:	F.D. Cooler & Pulse Jet Bag Filter			

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.		RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	:	73.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	:	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	:	8.99
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	:	71122.82
5.	Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	:	21.45
Remarks : Result relates only to the sample submitted.					

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

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(Dr. Ajoy Paul)
(Quality Manager)

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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	05.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/VIII
			Report ID No.	:	ENV/08/Feb./TR(A)/VIII/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	SEAF (No. 02)		
Shape of Stack	:	Circular	Height of Stack (mtr.) (from G. L.)	: 32.0
Materials of Construction	:	M.S.	Stack I.D. at sampling point (mtr.)	: 1.80
Capacity	:	9.0 MVA	Height of sampling port (mtr.) (from G.L.)	: 22.0
Emission Due to	:	Reduction of Mn-Ore		
Fuel Used	:	N.A. (Electrically Operated)	Permanent Platform & Ladder	: Yes
Working Fuel Consumption	:	Nil		
Pollution Control Device	:	F.D. Cooler & Pulse Jet Bag Filter		

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	: 75.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	: 763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	: 9.41
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	: 74014.82
5.	Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	: 18.28
Remarks : Result relates only to the sample submitted.				

Reviewed By :

Tanushree Malik
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(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	05.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/IX
			Report ID No.	:	ENV/08/Feb./TR(A)/IX/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	SEAF (No. 03)
Shape of Stack	:	Circular
Materials of Construction	:	M.S.
Capacity	:	9.0 MVA
Emission Due to	:	Reduction of Mn-Ore
Fuel Used	:	N.A. (Electrically Operated)
Working Fuel Consumption	:	Nil
Pollution Control Device	:	F.D. Cooler & Pulse Jet Bag Filter
		Height of Stack (mtr.) (from G. L.) : 32.0
		Stack I.D. at sampling point (mtr.) : 1.80
		Height of sampling port (mtr.) (from G.L.) : 22.0
		Permanent Platform & Ladder : Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	78.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	9.84
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	76742.54
5.	Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	23.11
Remarks : Result relates only to the sample submitted.				

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	05.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/X
			Report ID No.	:	ENV/08/Feb./TR(A)/X/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	SEAF (No. 04)
Shape of Stack	:	Circular
Materials of Construction	:	M.S.
Capacity	:	9.0 MVA
Emission Due to	:	Reduction of Mn-Ore
Fuel Used	:	N.A. (Electrically Operated)
Working Fuel Consumption	:	Nil
Pollution Control Device	:	F.D. Cooler & Pulse Jet Bag Filter
		Height of Stack (mtr.) (from G. L.) : 32.0
		Stack I.D. at sampling point (mtr.) : 1.80
		Height of sampling port (mtr.) (from G.L.) : 22.0
		Permanent Platform & Ladder : Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	76.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	10.53
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	82598.83
5.	Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	24.10
Remarks : Result relates only to the sample submitted.				

Reviewed By :

Tanushree Malik
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Authorised Signatory :

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(Dr. Ajoy Paul)
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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	05.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XI
			Report ID No.	:	ENV/08/Feb./TR(A)/XI/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	SEAF (No. 05)			
Shape of Stack	:	Circular	Height of Stack (mtr.) (from G. L.)	:	32.0
Materials of Construction	:	M.S.	Stack I.D. at sampling point (mtr.)	:	2.23
Capacity	:	9.0 MVA	Height of sampling port (mtr.) (from G.L.)	:	17.67
Emission Due to	:	Reduction of Mn-Ore			
Fuel Used	:	N.A. (Electrically Operated)	Permanent Platform & Ladder	:	Yes
Working Fuel Consumption	:	Nil			
Pollution Control Device	:	F.D. Cooler & Pulse Jet Bag Filter			

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.		RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	:	96.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	:	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	:	9.27
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	:	105587.22
5.	Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	:	21.81
Remarks : Result relates only to the sample submitted.					

Reviewed By :

Tanushree Malik
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Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	05.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XII
			Report ID No.	:	ENV/08/Feb./TR(A)/XII/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	SEAF (No. 06)
Shape of Stack	:	Circular
Materials of Construction	:	M.S.
Capacity	:	9.0 MVA
Emission Due to	:	Reduction of Mn-Ore
Fuel Used	:	N.A. (Electrically Operated)
Working Fuel Consumption	:	Nil
Pollution Control Device	:	F.D. Cooler & Pulse Jet Bag Filter
		Height of Stack (mtr.) (from G. L.) : 32.0
		Stack I.D. at sampling point (mtr.) : 2.23
		Height of sampling port (mtr.) (from G.L.) : 17.67
		Permanent Platform & Ladder : Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	93.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	9.65
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	110810.64
5.	Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	26.14
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	04.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XIII
			Report ID No.	:	ENV/08/Feb./TR(A)/XIII/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	CFBC Boiler
Shape of Stack	:	Circular
Materials of Construction	:	M.S.
Capacity	:	100 TPH
Emission Due to	:	Combustion of Coal & Dolochar
Fuel Used	:	Coal & Dolochar
Working Fuel Consumption	:	22 Ton/hr.
Pollution Control Device	:	E.S.P.
		Permanent Platform & Ladder
		Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	123.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	9.47
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	133921.04
5.	a) Sulfur dioxide	mg/Nm ³	IS 11255 (Part 2)	72.55
	b) Sulfur dioxide (at 6% O ₂)	mg/Nm ³		87.75
6.	a) Oxides of Nitrogen	mg/Nm ³	IS 11255 (Part 7)	65.78
	b) Oxides of Nitrogen (at 6% O ₂)	mg/Nm ³		79.56
7.	Carbon dioxide by ORSAT App	%	IS 13270	10.6
8.	O ₂ by Orsat	%	USEPA Method 3	8.6
9.	Carbon Monoxide	%	IS 13270	<1.0
10.	a) Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	20.53
	b) Particulate Matter (at 6% O ₂)	mg/Nm ³		24.83
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

Tanushree Malik

(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul

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(Quality Manager)

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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	05.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XIV
			Report ID No.	:	ENV/08/Feb./TR(A)/XIV/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	Induction Furnace (25 MT x 9 Furnace)
Shape of Stack	:	Circular
Materials of Construction	:	M.S.
Capacity	:	25 MT/each
Emission Due to	:	Melting of Pig Iron, Sponge Iron & Scrap
Fuel Used	:	N.A. (Electrically Operated)
Working Fuel Consumption	:	Nil
Pollution Control Device	:	Bag Filter
		Height of Stack (mtr.) (from G. L.) : 30.0
		Stack I.D. at sampling point (mtr.) : 1.0
		Height of sampling port (mtr.) (from G.L.) : 19.0
		Permanent Platform & Ladder : Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	78.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	14.48
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	34839.88
5.	Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	16.24
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

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TEST REPORT

FORMAT NO : ENV/FM/38

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Plant
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121	Sampling date	:	07.02.2026
			Date of received	:	09.02.2026
			Date (s) of analysis	:	09.02.2026 – 10.02.2026
			Date of Issue	:	12.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/02	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Stack Emission
Sample Condition	:	Sealed	Sample ID No.	:	ENV/08/Feb./A/XV
			Report ID No.	:	ENV/08/Feb./TR(A)/XV/25-26
Sample Testing Location	:	Permanent Testing			

A. GENERAL INFORMATION ABOUT STACK PROVIDED BY THE INDUSTRY

Stack Attached to	:	AFBC Boiler
Shape of Stack	:	Circular
Materials of Construction	:	M.S.
Capacity	:	36 TPH
Emission Due to	:	Combustion of Coal & Dolochar
Fuel Used	:	Coal & Dolochar
Working Fuel Consumption	:	Coal – 8.0 MT/hr. & Dolochar – 8.0 MT/hr.
Pollution Control Device	:	E.S.P.
		Permanent Platform & Ladder
	:	Yes

B. RESULTS

SL. NO.	PARAMETERS	UNIT	METHOD NO.	RESULTS
1.	Flue Gas Temperature	°C	IS 11255 (Part 1)	121.0
2.	Barometric Pressure	mm of Hg.	IS 11255 (Part 1)	763.0
3.	Velocity of Gas flow	m/s	IS 11255 (Part 1)	14.27
4.	Quantity of Gas flow	Nm ³ /hr.	IS 11255 (Part 1)	132068.43
5.	a) Sulfur dioxide	mg/Nm ³	IS 11255 (Part 2)	344.84
	b) Sulfur dioxide (at 6% O ₂)	mg/Nm ³		410.50
6.	a) Oxides of Nitrogen	mg/Nm ³	IS 11255 (Part 7)	181.62
	b) Oxides of Nitrogen (at 6% O ₂)	mg/Nm ³		216.20
7.	Carbon dioxide by ORSAT App	%	IS 13270	10.2
8.	O ₂ by Orsat	%	USEPA Method 3	8.4
9.	Carbon Monoxide	%	IS 13270	<1.0
10.	a) Particulate Matter	mg/Nm ³	IS 11255 (Part 1)	15.27
	b) Particulate Matter (at 6% O ₂)	mg/Nm ³		18.17
Remarks	:	Result relates only to the sample submitted.		

Reviewed By :


(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :


(Dr. Ajoy Paul)
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ANNEXURE-10

TARPAULIN COVERED TRANSPORTING VEHICLES



ANNEXURE-11

Table - 22

FORM-30

Register containing particulars of monitoring of working environment required under section 7-A(2)(e) of the Act.

Name of the Plant : M/s. Shakambhari Ispat & Power Ltd.,

Address : Vill- Madandih, P.O.- Bartoria, Dist: Furukh, W. B-723121.

Particulars of sampling :

Location/ Operation monitored	Identified contaminant	Date & Time of Monitoring	Airborne Contamination			TWA Concentration (as given in Second Schedule)	Sampling instrument used	Number of workers exposed at the location being monitored		Remarks	Signature of person taking samples	Name (in block letters)
			No. of samples	Range	Average			Continuous Exposure	Short term Exposure			
Tapping Yard Furnace - 2 (Ferro Alloy)	Silica, SiO ₂ (Quartz, in terms of respirable dust)	07/05/2024, 8:30 A.M.	3	Respirable Dust in mg/m ³	1.439	10.0 mg/m ³ [% Respirable Quartz + 2]	See Annex-1	3	3	Below PEL		S. BAIDYA
					1.401							
					1.376							
				% Respirable Quartz	1.13							
					1.09							
					1.04							

* PEL – Permissible Exposure Limit

(J. DEY)
Authorized Signatory

Table - 23

FORM-30

Register containing particulars of monitoring of working environment required under section 7-A(2)(e) of the Act.

Name of the Plant : M/s. Shakambhari Ispat & Power Ltd.,
 Address : Vill- Madaedih, P.O.- Bartaola, Dist: Purulia, W.B-723121.

Particulars of sampling :

Location/ Operation monitored	Identified contaminant	Date & Time of Monitoring	Airborne Contamination			TWA Concentration (as given in Second Schedule)	Sampling Instrument used	Number of workers exposed at the location being monitored		Remarks	Signature of person taking samples	Name (in block letters)
			No. of samples	Range	Average			Continuous Exposure	Short term Exposure			
Metal Breaking Yard - 1 (Ferro Alloy)	Silica, SiO ₂ (Quartz, in terms of respirable dust)	07/05/2024, 4:40 P.M.	3	Respirable Dust in mg/m ³	0.694	10.0 mg/m ³ (% Respirable Quartz + 2)	See Annex-1	10	0	Below PEL	<i>Baidya</i>	S.BAIDYA
					0.668							
					0.586							
				% Respirable Quartz	1.59							
					1.47							
					1.36							

* PEL - Permissible Exposure Limit

*J. Dey*(J. DEY)
Authorized Signatory

Table - 24

FORM-30

Register containing particulars of monitoring of working environment required under section 7-A(2)(e) of the Act.

Name of the Plant : M/s. Shakambhari Ispat & Power Ltd.,
 Address : Vill- Madandih, P.O.- Batoria, Dist: Purulia, W.B-723121.

Particulars of sampling :

Location/ Operation monitored	Identified contaminant	Date & Time of Monitoring	Airborne Contamination			TWA Concentration (as given in Second Schedule)	Sampling Instrument used	Number of workers exposed at the location being monitored		Remarks	Signature of person taking samples	Name (in block letters)
			No. of samples	Range	Average			Continuous Exposure	Short term Exposure			
Metal Breaking Yard - 3 (Ferro Alloy)	Silica, SiO ₂ (Quartz, in terms of respirable dust)	08/05/2024, 9:25 A.M.	3	Respirable Dust in mg/m ³	0.611	10.0 mg/m ³ (% Respirable Quartz + 2)	See Annex-1	10	0	Below PEL	<i>Baidya</i>	S.BAIDYA
					0.563							
					0.529							
				% Respirable Quartz	1.53							
					1.41							
					1.29							

* PEL = Permissible Exposure Limit



(J. DEY)
 Authorized Signatory

Table - 25

FORM-30

Register containing particulars of monitoring of working environment required under section 7-A(2)(e) of the Act.

Name of the Plant : M/s. Shakambhari Ispat & Power Ltd.,

Address : Vill- Madandih, P.O.- Bartoria, Dist: Purulia, W.B-723121.

Particulars of sampling :

Location/ Operation monitored	Identified contaminant	Date & Time of Monitoring	Airborne Contamination			TWA Concentration (as given in Second Schedule)	Sampling Instrument used	Number of workers exposed at the location being monitored		Remarks	Signature of person taking samples	Name (in block letters)
			No. of samples	Range	Average			Continuous Exposure	Short term Exposure			
Slag Crasher Area (Ferro-Alloy)	Silica, SiO ₂ (Quartz, in terms of respirable dust)	08/05/2024, 9:40 A.M.	3	Respirable Dust in mg/m ³	0.549	10.0 mg/m ³ (% Respirable Quartz + 2)	See Annex-1	2	4	Below PEL		S.BAIDYA
					0.512							
					0.581							
				% Respirable Quartz	1.31							
					1.29							
					1.01							

* PEL - Permissible Exposure Limit



J. Day
(J. DEY)
Authorized Signatory

Table - 26

FORM-30

Register containing particulars of monitoring of working environment required under section 7-A(2)(e) of the Act.

Name of the Plant : M/s. Shakambhari Ispat & Power Ltd.,

Address : Vill- Madandih, P.O.- Bartoria, Dist: Purulia, W.B-723121.

Particulars of sampling :

Location/ Operation monitored	Identified contaminant	Date & Time of Monitoring	Airborne Contamination			TWA Concentration (as given in Second Schedule)	Sampling Instrument used	Number of workers exposed at the location being monitored		Remarks	Signature of person taking samples	Name (in block letters)	
			No. of samples	Range	Average			Continuous Exposure	Short term Exposure				
Control Room -1 & 2 (1st floor) (Ferro Alloy)	Silica, SiO ₂ (Quartz, in terms of respirable dust)	10/05/2024, 9:20 A.M.	3	Respirable Dust in mg/m ³	0.459	0.401	10.0 mg/m ³ [% Respirable Quartz + 2]	See Annex-1	1	2	Below PEL		S. BAIDYA
					0.378								
					0.365								
				% Respirable Quartz	0.85	0.767							
					0.79								
					0.66								

* PEL - Permissible Exposure Limit




(J. DEY)
Authorized Signatory

ANNEXURE- 12A



ENVIROCHECK

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FORMAT NO. ENV/FM/55

TEST REPORT

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)	Type of Industry	:	Steel & Power Unit
Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist – Purulia, (WB)– 723121	Sampling Date	:	05.02.2026
			Date of Received	:	09.02.2026
			Date(s) of Analysis	:	09.02.2026 – 18.02.2026
			Date of Issue	:	20.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/04	Deviation from the Sampling Method and Plan	:	No
Location	:	Tube Well of Madandih Village	Sample Condition	:	Sealed
			Sample ID No.	:	ENV/05/Feb./SCGW/I
Report ID No.	:	ENV/05/Feb./TR(SCGW)/I/25-26	Testing Location	:	Permanent Testing

PARAMETERS		METHOD	UNIT	RESULTS
1.	Colour	IS 3025 Part 4	Hazen	1.0
2.	Odour	IS 3025 Part 5	--	Agreeable
3.	pH	IS 3025 Part 11	--	6.72
4.	Taste	IS 3025 Part 7	--	Agreeable
5.	Turbidity	IS 3025 Part 10	NTU	1.80
6.	Total Dissolved Solids	IS 3025 Part 16	mg./l	460.0
7.	Calcium	IS 3025 Part 40	mg./l	20.40
8.	Chloride	IS 3025 Part 32	mg./l	46.99
9.	Iron	IS 3025 Part 65	mg./l	0.60
10.	Magnesium	IS 3025 Part 65	mg./l	10.56
11.	Nitrate	IS 3025 Part 34 Sec 1	mg./l	2.60
12.	Sulfate	IS 3025 Part 24 Sec 1	mg./l	54.50
13.	Total Alkalinity	IS 3025 Part 23	mg./l	90.0
14.	Total Hardness	IS 3025 Part 21	mg./l	110.0
15.	Arsenic	IS 3025 Part 65	mg./l	<0.0014
16.	Chromium	IS 3025 Part 65	mg./l	<0.00001
17.	Boron	IS 3025 Part 65	mg./l	<0.0085

Remarks : a) Sample collected by Envirocheck and sent to lab for testing in sealed condition.

b) Result relates only to the sample submitted.

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

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FORMAT NO. ENV/FM/55

TEST REPORT

Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit - Madandih)	Type of Industry	:	Steel & Power Unit
Address	:	Vill. - Madandih, P.O. - Bartoria, P.S. - Neturia, Dist - Purulia, (WB)- 723121	Sampling Date	:	05.02.2026
			Date of Received	:	09.02.2026
			Date(s) of Analysis	:	09.02.2026 - 18.02.2026
			Date of Issue	:	20.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/04	Deviation from the Sampling Method and Plan	:	No
Location	:	Tube Well of Erakusum Village	Sample Condition	:	Sealed
			Sample ID No.	:	ENV/05/Feb./SCGW/II
Report ID No.	:	ENV/05/Feb./TR(SCGW)/II/25-26	Testing Location	:	Permanent Testing

PARAMETERS	METHOD	UNIT	RESULTS
1. Colour	IS 3025 Part 4	Hazen	1.0
2. Odour	IS 3025 Part 5	--	Agreeable
3. pH	IS 3025 Part 11	--	7.80
4. Taste	IS 3025 Part 7	--	Agreeable
5. Turbidity	IS 3025 Part 10	NTU	1.60
6. Total Dissolved Solids	IS 3025 Part 16	mg./l	440.0
7. Calcium	IS 3025 Part 40	mg./l	20.0
8. Chloride	IS 3025 Part 32	mg./l	46.50
9. Iron	IS 3025 Part 65	mg./l	0.50
10. Magnesium	IS 3025 Part 65	mg./l	9.60
11. Nitrate	IS 3025 Part 34 Sec 1	mg./l	6.50
12. Sulphate	IS 3025 Part 24 Sec 1	mg./l	46.50
13. Total Alkalinity	IS 3025 Part 23	mg./l	80.0
14. Total Hardness	IS 3025 Part 21	mg./l	90.0
15. Arsenic	IS 3025 Part 65	mg./l	<0.00014
16. Chromium	IS 3025 Part 65	mg./l	<0.0001
17. Boron	IS 3025 Part 65	mg./l	<0.0085

Remarks : a) Sample collected by Envirocheck and sent to lab for testing in sealed condition.

b) Result relates only to the sample submitted.

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

<End of Report>

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 [033-25792891/25497490, Fax : 033-25289141
Laboratory : 189,190,192,186 & 51 Rastraguru Avenue, Kolkata - 700028 [033-25792889
Email : info@envirocheck.in/envirocheck50@gmail.com / Website : www.envirocheck.in
Branch Office : Siliguri • Haldia • Durgapur • Dhanbad • Gangtok • Port Blair • Dehradun • New Delhi
Overseas : UAE • Qatar • Netherlands

ANNEXURE- 12B



ENVIROCHECK

Recognised by MoEF & CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017) & NABET (CERTIFICATE NO. - NABET/EIA/2326/IA 0117)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



FORMAT NO. ENV/FM/40

TEST REPORT

Name of the Client	:	Shakambhari Ispat & Power Ltd.	Type of Industry	:	Steel & Power Unit
Address	:	Vill. - Madandih, P.O. - Bartoria, P.S. - Neturia, Dist - Purulia, (WB)- 723121	Sampling Date	:	05.02.2026
			Date of Received	:	09.02.2026
			Date(s) of Analysis	:	09.02.2026 - 12.02.2026
			Date of Issue	:	14.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/03	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Industrial Effluent Water (Grab)
Location	:	Recycling Water of D. M. Plant	Sample Condition	:	Sealed
			Sample ID No.	:	ENV/13/Feb./W/I
Report ID No.	:	ENV/13/Feb./TR(W)/I/25-26	Testing Location	:	Permanent Testing

SL. NO.	PARAMETERS	TEST METHOD	UNIT	RESULTS	LIMIT
1.	pH	IS 3025 Part 11	-	6.87	5.5 - 9.0
2.	Total Suspended Solids	IS 3025 Part 17	mg/l	14.6	100.0
3.	Oil & Grease	IS 3025 Part 39	mg/l	<4.0	10.0
4.	Chemical Oxygen Demand	IS 3025 Part 58	mg/l	19.36	250.0
5.	Biochemical Oxygen Demand	IS 3025 Part 44	mg/l	<2.0	30.0

Remarks : a) Limit value as per Schedule VI inserted by Rule 2(d) of the Environment (Protection) Second Amendment Rules, 1993 notified vide G.S.R. 422(E) dated 19.05.1993, published in the Gazette No. 174 dated 19.05.1993.

b) Result relates only to the sample submitted.

c) Sample collected by Envirocheck and sent lab for testing in sealed condition.

Reviewed By :

Shrabani Chatterjee
(Shrabani Chatterjee)
(Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 { 033-25792891/25497490, Fax : 033-25289141
Laboratory : 189,190,192,186 & 51 Rastraguru Avenue, Kolkata - 700028 { 033-25792889
Email : info@envirocheck.in/envirocheck50@gmail.com / Website : www.envirocheck.in
Branch Office : Siliguri - Haldia - Durgapur - Dhanbad - Gangtok - Port Blair - Dehradun - New Delhi
Overseas : UAE - Qatar - Netherlands



ENVIROCHECK

Recognised by MoEF & CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017) & NABET (CERTIFICATE NO. - NABET/EIA/2326/IA 0117)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001 : 2018



FORMAT NO. ENV/FM/40

TEST REPORT

Name of the Client	:	Shakambhari Ispat & Power Ltd.	Type of Industry	:	Steel & Power Unit
Address	:	Vill. - Madandih, P.O. - Bartoria, P.S. - Neturia, Dist - Purulia, (WB)- 723121	Sampling Date	:	05.02.2026
			Date of Received	:	09.02.2026
			Date(s) of Analysis	:	09.02.2026 - 12.02.2026
			Date of Issue	:	14.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/03	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Industrial Effluent Water (Grab)
Location	:	E.T.P Outlet	Sample Condition	:	Sealed
			Sample ID No.	:	ENV/13/Feb./W/III
Report No.	:	ENV/13/Feb./TR(W)/III/25-26	Testing Location	:	Permanent Testing

SL. NO.	PARAMETERS	TEST METHOD	UNIT	RESULTS	LIMIT
1.	pH	IS 3025 Part 11	-	7.16	5.5 - 9.0
2.	Total Suspended Solids	IS 3025 Part 17	mg/l	20.8	100.0
3.	Oil & Grease	IS 3025 Part 39	mg/l	4.6	10.0
4.	Chemical Oxygen Demand	IS 3025 Part 58	mg/l	96.8	250.0
5.	Biochemical Oxygen Demand	IS 3025 Part 44	mg/l	8.0	30.0

Remarks : a) Limit value as per Schedule VI inserted by Rule 2(d) of the Environment (Protection) Second Amendment Rules, 1993 notified vide G.S.R. 422(E) dated 19.05.1993, published in the Gazette No. 174 dated 19.05.1993.

b) Result relates only to the sample submitted.

c) Sample collected by Envirocheck and sent lab for testing in sealed condition.

Reviewed By :

Tanushree Malik
(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul
(Dr. Ajoy Paul)
(Quality Manager)

<End of Report>

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 [033-25792891/25497490, Fax : 033-25299141
Laboratory : 189,190,192,186 & 51 Rastraguru Avenue, Kolkata - 700028 [033-25792889
Email : info@envirocheck.in/envirocheck50@gmail.com / Website : www.envirocheck.in
Branch Office : Siliguri • Haldia • Durgapur • Dhanbad • Gangtok • Port Blair • Dehradun • New Delhi
Overseas : UAE • Qatar • Netherlands

ANNEXURE- 12C



ENVIROCHECK

Recognised by MoEF & CC, WBPCB & JSPCB
Accredited by NABL (ISO/IEC 17025:2017) & NABET (CERTIFICATE NO. - NABET/EIA/2326/IA 0117)
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



FORMAT NO. ENV/FM/40

TEST REPORT

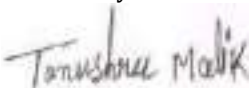
Name of the Client	:	Shakambhari Ispat & Power Ltd. (Unit - Madandih)	Type of Industry	:	Steel & Power Unit
Address	:	Vill. - Madandih, P.O. - Bartoria, P.S. - Neturia, Dist - Purulia, (WB)- 723121	Sampling Date	:	05.02.2026
			Date of Received	:	09.02.2026
			Date(s) of Analysis	:	09.02.2026 - 16.02.2026
			Date of Issue	:	18.02.2026
Sampling Plan & Procedure	:	ENV/SOP/01/03	Deviation from the Sampling Method and Plan	:	No
			Type of Sample	:	Surface Water
Location	:	Pond of Madandih Village	Sample Condition	:	Sealed
			Sample ID No.	:	ENV/12/Feb./W/I
Report ID No.	:	ENV/12/Feb./TR(W)/1/25-26	Testing Location	:	Permanent Testing

SL. NO.	PARAMETERS	TEST METHOD	UNIT	RESULTS
1.	pH	IS 3025 Part 11	-	7.12
2.	Total Suspended Solids	IS 3025 Part 17	mg/l	24.67
3.	Total Dissolved Solids	IS 3025 Part 16	mg/l	368.0
4.	Dissolved Oxygen	IS 3025 Part 38	mg/l	6.3
5.	Chemical Oxygen Demand	IS 3025 Part 58	mg/l	29.04
6.	Biochemical Oxygen Demand	IS 3025 Part 44	mg/l	7.0
7.	Oil & Grease	IS 3025 Part 39	mg/l	<1.0
8.	Residual Chlorine	IS 3025 Part 26	mg/l	<0.04
9.	Chloride	IS 3025 Part 32	mg/l	26.77
10.	Iron	IS 3025 Part 65	mg/l	0.13
11.	Arsenic	IS 3025 Part 65	mg/l	<0.0014
12.	Lead	IS 3025 Part 65	mg/l	<0.001
13.	Mercury	IS 3025 Part 65	mg/l	<0.0012
14.	Copper	IS 3025 Part 65	mg/l	<0.002
15.	Zinc	IS 3025 Part 65	mg/l	0.11
16.	Total Chromium	IS 3025 Part 65	mg/l	<0.00001

Remarks : a) Sample collected by Envirocheck and sent to lab for testing in sealed condition.

b) Result relates only to the sample tested.

Reviewed By :


(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :


(Dr. Ajoy Paul)
(Quality Manager)

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 { 033-25792891/25497490, Fax : 033-25299141
Laboratory : 189,190,192,186 & 51 Rastraguru Avenue, Kolkata - 700028 { 033-25792889
Email : info@envirocheck.in/envirocheck50@gmail.com / Website : www.envirocheck.in
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ENVIROCHECK

Recognised by MoEF & CC, WBPCB & JSPCB

Accredited by NABL (ISO/IEC 17025:2017) & NABET (CERTIFICATE NO. - NABET/EIA/2326/IA 0117)

Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



FORMAT NO. ENV/FM/40

TEST REPORT

Name of the Client		:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)			Type of Industry		:	Steel & Power Unit			
Address		:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist – Purulia, (WB)– 723121			Sampling Date		:	05.02.2026			
						Date of Received		:	09.02.2026			
						Date(s) of Analysis		:	09.02.2026 – 16.02.2026			
						Date of Issue		:	18.02.2026			
Sampling Plan & Procedure		:	ENV/SOP/01/03		Deviation from the Sampling Method and Plan		:	No	Type of Sample		:	Surface Water
Location		:	Pond of Erakusum Village		Sample Condition		:	Sealed	Sample ID No.		:	ENV/12/Feb./W/II
Report ID No.		:	ENV/12/Feb./TR(W)/II/25-26				Testing Location		:	Permanent Testing		

SL. NO.	PARAMETERS	TEST METHOD	UNIT	RESULTS
1.	pH	IS 3025 Part 11	-	7.26
2.	Total Suspended Solids	IS 3025 Part 17	mg/l	28.22
3.	Total Dissolved Solids	IS 3025 Part 16	mg/l	396.0
4.	Dissolved Oxygen	IS 3025 Part 38	mg/l	5.8
5.	Chemical Oxygen Demand	IS 3025 Part 58	mg/l	19.36
6.	Biochemical Oxygen Demand	IS 3025 Part 44	mg/l	6.0
7.	Oil & Grease	IS 3025 Part 39	mg/l	<1.0
8.	Residual Chlorine	IS 3025 Part 26	mg/l	<0.04
9.	Chloride	IS 3025 Part 32	mg/l	37.2
10.	Iron	IS 3025 Part 65	mg/l	0.12
11.	Arsenic	IS 3025 Part 65	mg/l	<0.0014
12.	Lead	IS 3025 Part 65	mg/l	<0.001
13.	Mercury	IS 3025 Part 65	mg/l	<0.0012
14.	Copper	IS 3025 Part 65	mg/l	<0.002
15.	Zinc	IS 3025 Part 65	mg/l	0.14
16.	Total Chromium	IS 3025 Part 65	mg/l	<0.00001

Remarks : a) Sample collected by Envirocheck and sent to lab for testing in sealed condition.

b) Result relates only to the sample tested.

Reviewed By :

Tanushree Malik

(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :

Dr. Ajoy Paul

(Dr. Ajoy Paul)
(Quality Manager)

<End of Report>

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 { 033-25792891/25497490, Fax : 033-25289141
 Laboratory : 189,190,192,186 & 51 Rastraguru Avenue, Kolkata - 700028 { 033-25792889
 Email : info@envirocheck.in/envirocheck50@gmail.com / Website : www.envirocheck.in
 Branch Office : • Siliguri • Haldia • Durgapur • Dhanbad • Gangtok • Port Blair • Dehradun • New Delhi
 Overseas : • UAE • Qatar • Netherlands

ANNEXURE- 13A

NOISE MONITORING REPORT

Shakambhari Ispat & Power Limited (Unit - Madandih)

Vill. – Madandih, P.O – Bartoria, P.S – Neturia, District – Purulia, Pin – 723121

MONITORED BY :

ENVIROCHECK
189, Rastraguru Avenue,
Calcutta - 700 028

Report No : ENV/04/Feb/(TR)N/I/25-26

Sampling Locations :	Madandih Village	Date of Study :	04/02/2026
Category :	Steel & Power Unit	Day time :	6 AM to 10 PM

Time (hrs.)	L _{min} dB(A)	L _{max} dB(A)	L _{eq} dB(A)	Day time L _{eq} dB(A)
6:00 AM to 7:00 AM	55.0	58.6	57.16	51.69
7:00 AM to 8:00 AM	53.2	56.7	55.29	
8:00 AM to 9:00 AM	50.3	54.8	53.11	
9:00 AM to 10:00 AM	49.7	53.7	52.15	
10:00 AM to 11:00 AM	46.3	52.5	50.42	
11:00 AM to 12:00 PM	45.8	51.6	49.60	
12:00 PM to 1:00 PM	44.3	52.9	50.45	
1:00 PM to 2:00 PM	42.7	51.0	48.59	
2:00 PM to 3:00 PM	44.8	53.7	51.22	
3:00 PM to 4:00 PM	42.5	52.5	49.90	
4:00 PM to 5:00 PM	43.7	51.4	49.07	
5:00 PM to 6:00 PM	44.6	54.3	51.73	
6:00 PM to 7:00 PM	42.2	52.5	49.88	
7:00 PM to 8:00 PM	41.9	51.3	48.76	
8:00 PM to 9:00 PM	40.3	50.8	48.16	
9:00 PM to 10:00 PM	40.0	49.7	47.13	

Date of Study :	04/02/2026 to 05/02/2026	Night time :	10 PM to 6 AM
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Time(hrs.)	L _{min} dB(A)	L _{max} dB(A)	L _{eq} dB(A)	Night Time L _{eq} dB(A)
10:00 PM to 11:00 PM	39.7	48.3	45.85	46.14
11:00 PM to 12:00 AM	38.2	47.5	44.97	
12:00 AM to 1:00 AM	37.5	45.2	42.87	
1:00 AM to 2:00 AM	36.4	44.9	42.46	
2:00 AM to 3:00 AM	35.2	42.8	40.49	
3:00 AM to 4:00 AM	39.1	47.3	44.90	
4:00 AM to 5:00 AM	42.5	51.4	48.92	
5:00 AM to 6:00 AM	43.4	52.6	50.08	

L_{min} : Minimum Noise level

L_{max} :Maximum Noise level

L_{eq} :Equivalent sound energy

Compiled by : (Signature)
Dr. Ajoy Paul

Envirocheck Seal
Date : 09/02/2026

Certified by : (Signature)
Dr. S. B. Chowdhury



NOISE MONITORING REPORT

Shakambhari Ispat & Power Limited (Unit - Madandih)

Vill. – Madandih, P.O – Bartoria, P.S – Neturia, District – Purulia, Pin – 723121

MONITORED BY :

ENVIROCHECK
189, Rastraguru Avenue,
Calcutta - 700 028

Report No : ENV/04/Feb/(TR)N/II/25-26

Sampling Locations :	Gopalganj Primary School	Date of Study :	04/02/2026
Category :	Steel & Power Unit	Day time :	6 AM to 10 PM

Time (hrs.)	L _{min} dB(A)	L _{max} dB(A)	L _{eq} dB(A)	Day time L _{eq} dB(A)
6:00 AM to 7:00 AM	38.2	45.4	43.15	49.91
7:00 AM to 8:00 AM	39.6	46.1	43.97	
8:00 AM to 9:00 AM	40.3	47.5	45.25	
9:00 AM to 10:00 AM	41.8	48.4	46.25	
10:00 AM to 11:00 AM	41.1	49.6	47.16	
11:00 AM to 12:00 PM	43.2	50.8	48.49	
12:00 PM to 1:00 PM	44.2	51.3	49.06	
1:00 PM to 2:00 PM	43.8	52.5	50.04	
2:00 PM to 3:00 PM	44.6	56.8	54.04	
3:00 PM to 4:00 PM	43.9	57.2	54.39	
4:00 PM to 5:00 PM	42.5	55.4	52.61	
5:00 PM to 6:00 PM	41.9	54.8	52.01	
6:00 PM to 7:00 PM	41.0	53.7	50.92	
7:00 PM to 8:00 PM	40.8	52.5	49.77	
8:00 PM to 9:00 PM	39.5	47.2	44.87	
9:00 PM to 10:00 PM	38.2	46.0	43.66	

Date of Study :	04/02/2026 to 05/02/2026	Night time :	10 PM to 6 AM
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Time(hrs.)	L _{min} dB(A)	L _{max} dB(A)	L _{eq} dB(A)	Night Time L _{eq} dB(A)
10:00 PM to 11:00 PM	37.5	45.1	42.79	40.41
11:00 PM to 12:00 AM	36.2	42.8	40.65	
12:00 AM to 1:00 AM	35.4	39.7	38.06	
1:00 AM to 2:00 AM	34.2	36.8	35.69	
2:00 AM to 3:00 AM	33.5	35.2	34.43	
3:00 AM to 4:00 AM	36.8	40.5	39.03	
4:00 AM to 5:00 AM	37.7	42.8	40.96	
5:00 AM to 6:00 AM	40.3	45.7	43.79	

L_{min} : Minimum Noise level

L_{max} :Maximum Noise level

L_{eq} :Equivalent sound energy

Compiled by : (Signature)
Dr. Ajoy Paul

Envirocheck Seal
Date : 09/02/2026



Certified by : (Signature)
Dr. S. B. Chowdhury

NOISE MONITORING REPORT

Shakambhari Ispat & Power Limited (Unit - Madandih)

Vill. – Madandih, P.O – Bartoria, P.S – Neturia, District – Purulia, Pin – 723121

MONITORED BY :

ENVIROCHECK
189, Rastraguru Avenue,
Calcutta - 700 028

Report No : ENV/04/Feb/(TR)N/III/25-26

Sampling Locations :	East Direction from the Plant Boundary	Date of Study :	05/02/2026
Category :	Steel & Power Unit	Day time :	6 AM to 10 PM

Time (hrs.)	L _{min} dB(A)	L _{max} dB(A)	L _{eq} dB(A)	Day time L _{eq} dB(A)
6:00 AM to 7:00 AM	51.2	56.8	54.85	54.36
7:00 AM to 8:00 AM	53.8	57.2	55.82	
8:00 AM to 9:00 AM	50.4	56.7	54.10	
9:00 AM to 10:00 AM	52.5	57.3	55.34	
10:00 AM to 11:00 AM	53.2	58.1	56.72	
11:00 AM to 12:00 PM	53.8	59.1	57.12	
12:00 PM to 1:00 PM	56.2	58.6	57.83	
1:00 PM to 2:00 PM	53.7	57.5	55.64	
2:00 PM to 3:00 PM	53.3	55.1	54.16	
3:00 PM to 4:00 PM	52.8	56.4	54.39	
4:00 PM to 5:00 PM	53.1	57.5	55.24	
5:00 PM to 6:00 PM	52.2	54.8	53.92	
6:00 PM to 7:00 PM	51.3	53.7	52.81	
7:00 PM to 8:00 PM	53.5	57.2	55.73	
8:00 PM to 9:00 PM	52.6	56.4	54.90	
9:00 PM to 10:00 PM	51.3	55.8	54.11	

Date of Study :	05/02/2026 to 06/02/2026	Night time :	10 PM to 6 AM
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Time(hrs.)	L _{min} dB(A)	L _{max} dB(A)	L _{eq} dB(A)	Night Time L _{eq} dB(A)
10:00 PM to 11:00 PM	40.3	48.6	46.28	44.82
11:00 PM to 12:00 AM	39.7	43.5	41.53	
12:00 AM to 1:00 AM	38.1	42.6	40.82	
1:00 AM to 2:00 AM	40.5	44.7	42.51	
2:00 AM to 3:00 AM	41.2	45.6	43.69	
3:00 AM to 4:00 AM	42.8	47.2	45.22	
4:00 AM to 5:00 AM	43.7	49.1	47.59	
5:00 AM to 6:00 AM	45.2	52.5	50.22	

L_{min} : Minimum Noise level

L_{max} :Maximum Noise level

L_{eq} :Equivalent sound energy

Compiled by : (Signature)
Dr. Ajoy Paul

Envirocheck Seal
Date : 09/02/2026

Certified by : (Signature)
Dr. S. B. Chowdhury



NOISE MONITORING REPORT

Shakambhari Ispat & Power Limited (Unit - Madandih)

Vill. – Madandih, P.O – Bartoria, P.S – Neturia, District – Purulia, Pin – 723121

MONITORED BY :

ENVIROCHECK
189, Rastraguru Avenue,
Calcutta - 700 028

Report No : ENV/04/Feb/(TR)N/IV/25-26

Sampling Locations :	Near Harmadih Rural Hospital	Date of Study :	05/02/2026
Category :	Steel & Power Unit	Day time :	6 AM to 10 PM

Time (hrs.)	L _{min} dB(A)	L _{max} dB(A)	L _{eq} dB(A)	Day time L _{eq} dB(A)
6:00 AM to 7:00 AM	45.3	50.1	48.33	52.60
7:00 AM to 8:00 AM	46.8	51.2	49.53	
8:00 AM to 9:00 AM	46.1	52.6	50.47	
9:00 AM to 10:00 AM	47.2	54.1	51.90	
10:00 AM to 11:00 AM	48.1	54.8	52.63	
11:00 AM to 12:00 PM	49.1	56.5	54.22	
12:00 PM to 1:00 PM	52.8	56.3	54.89	
1:00 PM to 2:00 PM	53.1	57.4	55.76	
2:00 PM to 3:00 PM	52.6	56.1	54.69	
3:00 PM to 4:00 PM	51.8	57.3	55.37	
4:00 PM to 5:00 PM	50.1	55.2	53.36	
5:00 PM to 6:00 PM	49.2	54.1	52.31	
6:00 PM to 7:00 PM	48.1	52.6	50.91	
7:00 PM to 8:00 PM	47.5	50.8	49.46	
8:00 PM to 9:00 PM	46.3	49.4	48.12	
9:00 PM to 10:00 PM	45.2	48.7	47.29	

Date of Study :	05/02/2026 to 06/02/2026	Night time :	10 PM to 6 AM
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Time(hrs.)	L _{min} dB(A)	L _{max} dB(A)	L _{eq} dB(A)	Night Time L _{eq} dB(A)
10:00 PM to 11:00 PM	43.8	47.9	46.32	44.08
11:00 PM to 12:00 AM	41.0	45.2	43.59	
12:00 AM to 1:00 AM	39.7	43.8	42.22	
1:00 AM to 2:00 AM	38.2	42.6	40.93	
2:00 AM to 3:00 AM	37.6	41.5	39.97	
3:00 AM to 4:00 AM	40.3	44.8	43.11	
4:00 AM to 5:00 AM	41.6	49.4	47.06	
5:00 AM to 6:00 AM	43.5	51.5	49.13	

L_{min} : Minimum Noise level

L_{max} : Maximum Noise level

L_{eq} : Equivalent sound energy

Compiled by : (Signature)
Dr. Ajoy Paul

Envirocheck Seal
Date : 09/02/2026

Certified by : (Signature)
Dr. S. B. Chowdhury



ANNEXURE- 13B



ENVIROCHECK

Laboratory Accredited by NABL (ISO/IEC 17025:2017)



FORMAT NO. : ENV/FM/53

TEST REPORT

1.	Name of the Industry / Project	:	Shakambhari Ispat & Power Limited (Unit - Madandih)
2.	Address	:	Vill. - Madandih, P.O - Bartoria, P.S - Nuturia, District - Purulia, Pin - 723121
3.	Type of Industry	:	Steel & Power Unit
4.	Sampling Plan & Procedure	:	ENV/SOP/02
5.	Deviation from the Sampling Method & Plan	:	No
6.	Type of Sample	:	Work Zone Noise
7.	Sample ID	:	ENV/04/Feb/(TR)N/I/25-26
8.	Date of Study	:	04/02/2026
9.	Reporting Date	:	10/02/2026
10.	Method No.	:	IS 15575 (Part 2), 2022
11.	Time of Duration of Noise	:	20 Minutes
12.	Height from Ground Level	:	4 feet
13.	Sample Monitoring by	:	Mr. Manik Saha

RESULT OF NOISE LEVEL STUDY

Time :10:00 - 10:20A.M

DAY TIME

1. Location : Near 16 MW Control Room

Sl. No.	Unit	Minimum dB(A)	Maximum dB(A)	Leq dB(A)	Remarks
01.	dB(A)	70.1	78.9	76.43	East Side
02.	dB(A)	74.2	79.1	77.31	West Side
03.	dB(A)	72.8	77.6	75.83	North Side
04.	dB(A)	73.6	78.7	76.86	South Side
Average dB(A) Leq				76.60	

>End of Report<

Reviewed By:

Mr. Durbadal Chakraborty
(Dy. Quality Manager)

Authorized Signatory

Dr. Ajoy Paul
(Quality Manager)



FORMAT NO. : ENV/FM/53

TEST REPORT

1.	Name of the Industry / Project	:	Shakambhari Ispat & Power Limited (Unit - Madandih)
2.	Address	:	Vill. - Madandih, P.O - Bartoria, P.S - Nuturia, District - Purulia, Pin - 723121
3.	Type of Industry	:	Steel & Power Unit
4.	Sampling Plan & Procedure	:	ENV/SOP/02
5.	Deviation from the Sampling Method & Plan	:	No
6.	Type of Sample	:	Work Zone Noise
7.	Sample ID	:	ENV/04/Feb/(TR)N/II/25-26
8.	Date of Study	:	04/02/2026
9.	Reporting Date	:	10/02/2026
10.	Method No.	:	IS 15575 (Part 2), 2022
11.	Time of Duration of Noise	:	20 Minutes
12.	Height from Ground Level	:	4 feet
13.	Sample Monitoring by	:	Mr. Manik Saha

RESULT OF NOISE LEVEL STUDY

Time :10:30 - 10:50A.M

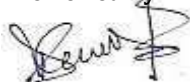
DAY TIME

2. Location : Near DRI 100 TPD Control Room

Sl. No.	Unit	Minimum dB(A)	Maximum dB(A)	Leq dB(A)	Remarks
01.	dB(A)	70.6	75.4	73.63	East Side
02.	dB(A)	71.4	73.9	72.83	West Side
03.	dB(A)	72.2	74.8	73.69	North Side
04.	dB(A)	72.6	76.3	74.83	South Side
Average dB(A) Leq				73.74	

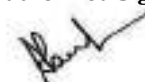
>End of Report<

Reviewed By:



Mr. Durbadal Chakraborty
(Dy. Quality Manager)

Authorized Signatory



Dr. Ajoy Paul
(Quality Manager)





ENVIROCHECK

Laboratory Accredited by NABL (ISO/IEC 17025:2017)



FORMAT NO. : ENV/FM/53

TEST REPORT

1.	Name of the Industry / Project	:	Shakambhari Ispat & Power Limited (Unit - Madandih)
2.	Address	:	Vill. - Madandih, P.O - Bartoria, P.S - Nuturia, District - Purulia, Pin - 723121
3.	Type of Industry	:	Steel & Power Unit
4.	Sampling Plan & Procedure	:	ENV/SOP/02
5.	Deviation from the Sampling Method & Plan	:	No
6.	Type of Sample	:	Work Zone Noise
7.	Sample ID	:	ENV/04/Feb/(TR)N/III/25-26
8.	Date of Study	:	04/02/2026
9.	Reporting Date	:	10/02/2026
10.	Method No.	:	IS 15575 (Part 2), 2022
11.	Time of Duration of Noise	:	20 Minutes
12.	Height from Ground Level	:	4 feet
13.	Sample Monitoring by	:	Mr. Manik Saha

RESULT OF NOISE LEVEL STUDY

Time :11:00 – 11:20A.M

DAY TIME

3. Location : Near DRI 350 TPD Control Room

Sl. No.	Unit	Minimum dB(A)	Maximum dB(A)	Leq dB(A)	Remarks
01.	dB(A)	72.5	76.9	75.23	East Side
02.	dB(A)	70.9	75.3	73.63	West Side
03.	dB(A)	70.4	73.1	71.96	North Side
04.	dB(A)	71.1	74.2	72.92	South Side
Average dB(A) Leq				73.43	

>End of Report<

Reviewed By:

Mr. Durbadal Chakraborty
(Dy. Quality Manager)

Authorized Signatory

Dr. Ajoy Paul
(Quality Manager)





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Laboratory Accredited by NABL (ISO/IEC 17025:2017)



FORMAT NO. : ENV/FM/53

TEST REPORT

1.	Name of the Industry / Project	:	Shakambhari Ispat & Power Limited (Unit - Madandih)
2.	Address	:	Vill. - Madandih, P.O - Bartoria, P.S - Nuturia, District - Purulia, Pin - 723121
3.	Type of Industry	:	Steel & Power Unit
4.	Sampling Plan & Procedure	:	ENV/SOP/02
5.	Deviation from the Sampling Method & Plan	:	No
6.	Type of Sample	:	Work Zone Noise
7.	Sample ID	:	ENV/04/Feb/(TR)N/IV/25-26
8.	Date of Study	:	04/02/2026
9.	Reporting Date	:	10/02/2026
10.	Method No.	:	IS 15575 (Part 2), 2022
11.	Time of Duration of Noise	:	20 Minutes
12.	Height from Ground Level	:	4 feet
13.	Sample Monitoring by	:	Mr. Manik Saha

RESULT OF NOISE LEVEL STUDY

Time :11:30 - 11:50A.M

DAY TIME

4. Location : Near DRI 600 TPD MCC Room

Sl. No.	Unit	Minimum dB(A)	Maximum dB(A)	Leq dB(A)	Remarks
01.	dB(A)	73.1	80.9	78.56	East Side
02.	dB(A)	72.1	79.3	77.05	West Side
03.	dB(A)	73.4	78.2	76.43	North Side
04.	dB(A)	74.8	77.1	76.10	South Side
Average dB(A) Leq				77.03	

>End of Report<

Reviewed By:

Mr. Durbadal Chakraborty
(Dy. Quality Manager)

Authorized Signatory

Dr. Ajoy Paul
(Quality Manager)





ENVIROCHECK

Laboratory Accredited by NABL (ISO/IEC 17025:2017)



FORMAT NO. : ENV/FM/53

TEST REPORT

1.	Name of the Industry / Project	:	Shakambhari Ispat & Power Limited (Unit - Madandih)
2.	Address	:	Vill. - Madandih, P.O - Bartoria, P.S - Nuturia, District - Purulia, Pin - 723121
3.	Type of Industry	:	Steel & Power Unit
4.	Sampling Plan & Procedure	:	ENV/SOP/02
5.	Deviation from the Sampling Method & Plan	:	No
6.	Type of Sample	:	Work Zone Noise
7.	Sample ID	:	ENV/04/Feb/(TR)N/V/25-26
8.	Date of Study	:	04/02/2026
9.	Reporting Date	:	10/02/2026
10.	Method No.	:	IS 15575 (Part 2), 2022
11.	Time of Duration of Noise	:	20 Minutes
12.	Height from Ground Level	:	4 feet
13.	Sample Monitoring by	:	Mr. Manik Saha

RESULT OF NOISE LEVEL STUDY

Time :12:00 – 12:20 P.M

DAY TIME

5. Location : Rolling Mill Dispatch Area

Sl. No.	Unit	Minimum dB(A)	Maximum dB(A)	Leq dB(A)	Remarks
01.	dB(A)	67.7	72.1	70.43	East Side
02.	dB(A)	69.8	71.6	70.79	West Side
03.	dB(A)	70.3	72.8	71.73	North Side
04.	dB(A)	71.4	73.5	72.58	South Side
Average dB(A) Leq				71.38	

>End of Report<

Reviewed By:

Mr. Durbadal Chakraborty
(Dy. Quality Manager)

Authorized Signatory

Dr. Ajoy Paul
(Quality Manager)





ENVIROCHECK

Laboratory Accredited by NABL (ISO/IEC 17025:2017)



FORMAT NO. : ENV/FM/53

TEST REPORT

1.	Name of the Industry / Project	:	Shakambhari Ispat & Power Limited (Unit - Madandih)
2.	Address	:	Vill. - Madandih, P.O - Bartoria, P.S - Nuturia, District - Purulia, Pin - 723121
3.	Type of Industry	:	Steel & Power Unit
4.	Sampling Plan & Procedure	:	ENV/SOP/02
5.	Deviation from the Sampling Method & Plan	:	No
6.	Type of Sample	:	Work Zone Noise
7.	Sample ID	:	ENV/04/Feb/(TR)N/VI/25-26
8.	Date of Study	:	04/02/2026
9.	Reporting Date	:	10/02/2026
10.	Method No.	:	IS 15575 (Part 2), 2022
11.	Time of Duration of Noise	:	20 Minutes
12.	Height from Ground Level	:	4 feet
13.	Sample Monitoring by	:	Mr. Manik Saha

RESULT OF NOISE LEVEL STUDY

Time :12:30 – 12:50 P.M

DAY TIME

6. Location : Near SMS Control Room

Sl. No.	Unit	Minimum dB(A)	Maximum dB(A)	Leq dB(A)	Remarks
01.	dB(A)	67.1	71.9	70.13	East Side
02.	dB(A)	70.2	74.8	73.08	West Side
03.	dB(A)	71.8	75.4	73.96	North Side
04.	dB(A)	73.6	77.2	75.76	South Side
Average dB(A) Leq				73.23	

>End of Report<

Reviewed By:

Mr. Durbadal Chakraborty
(Dy. Quality Manager)



Authorized Signatory

Dr. Ajoy Paul
(Quality Manager)



ENVIROCHECK

Laboratory Accredited by NABL (ISO/IEC 17025:2017)



FORMAT NO. : ENV/FM/53

TEST REPORT

1.	Name of the Industry / Project	:	Shakambhari Ispat & Power Limited (Unit - Madandih)
2.	Address	:	Vill. - Madandih, P.O - Bartoria, P.S - Nuturia, District - Purulia, Pin - 723121
3.	Type of Industry	:	Steel & Power Unit
4.	Sampling Plan & Procedure	:	ENV/SOP/02
5.	Deviation from the Sampling Method & Plan	:	No
6.	Type of Sample	:	Work Zone Noise
7.	Sample ID	:	ENV/04/Feb/(TR)N/VII/25-26
8.	Date of Study	:	04/02/2026
9.	Reporting Date	:	10/02/2026
10.	Method No.	:	IS 15575 (Part 2), 2022
11.	Time of Duration of Noise	:	20 Minutes
12.	Height from Ground Level	:	4 feet
13.	Sample Monitoring by	:	Mr. Manik Saha

RESULT OF NOISE LEVEL STUDY

Time :1:00 - 1:20 P.M

DAY TIME

7. Location : Near Ferro Alloy SEAF Control Room

Sl. No.	Unit	Minimum dB(A)	Maximum dB(A)	Leq dB(A)	Remarks
01.	dB(A)	77.4	81.6	79.99	East Side
02.	dB(A)	78.7	83.4	81.66	West Side
03.	dB(A)	76.5	81.1	79.38	North Side
04.	dB(A)	77.6	82.7	80.86	South Side
Average dB(A) Leq				80.47	

>End of Report<

Reviewed By:

Mr. Durbadal Chakraborty
(Dy. Quality Manager)



Authorized Signatory

Dr. Ajoy Paul
(Quality Manager)

ANNEXURE-14

REPORTS ON
HEAT STRESS MEASUREMENT

for

M/s. Shakambhari Ispat & Power Ltd.,

Vill- Madandih, P.O.- Bartoria, Dist: Purulia, W.B-723121

MAY, 2024

PREPARED BY:

M/s. Pollution And Project Consultants,
P – 145, Bangur Avenue, Block – A,
Kolkata – 700 055
Mob: 9830947639

Name of the Factory	: M/s. Shakambhari Ispat & Power Ltd., Vill- Madandih, P.O.- Bartoria, Dist: Purulia, W.B-723121
Date of Execution of job	: 7 th to 10 th May, 2024

1.0 INTRODUCTION:

M/s. Pollution And Project Consultants have been asked to carry out the measurement of Heat Stress. Accordingly, the Heat Stress measurements have been conducted with the use of Dry Bulb Wet Bulb Thermometer and Heat Stress Globe attached with Glass Thermometer.

The entire fieldwork was completed within the period of 7th to 10th May 2024 and the results of monitoring have been reported.

2.0 ACKNOWLEDGEMENT:

We acknowledge our sincere thanks and gratitude to the following persons for their co-operation and help to our sampling team during the survey work:

i) Management and employees of M/s. Shakambhari Ispat & Power Ltd., Vill- Madandih, P.O.- Bartoria, Dist: Purulia, W.B-723121.



J. Dey

(J. Dey)
Authorized Signatory

TABLE - 1 :-
TEST REPORT
ON
HEAT STRESS MEASUREMENT

Name of the Plant : M/s. Shakambhari Ispat & Power Ltd.,
Address : VIII- Madandih, P.O.- Bareria, Dist: Purulia, W.B-723121.

SECTION : CPP 16 MW And CPP 40 & 31 MW

Sl. No.	Location	Date & Time of Monitoring	T _{db} (°C)	T _{nat} (°C)	T _g (°C)	WBGT(°C)	CAF	WBGT _{eff} (°C)	Metabolic Rate (Watt)	TLV(°C)	Remarks
1	Turbine Floor (CPP 16 MW)	06/05/2024 at 5:30 P.M.	33.0	25.0	34.0	27.70	0	27.70	180	31	WBGT _{eff} is below the TLV
2	Bed Drain Area (CPP 16 MW)	07/05/2024 at 4:00 P.M.	33.5	26.5	37.0	29.30	0	29.30	180	31	WBGT _{eff} is below the TLV
3	Turbine Floor (CPP 40 MW & 31 MW)	09/05/2024 at 4:45 P.M.	34.0	26.0	35.0	28.70	0	28.70	180	31	WBGT _{eff} is below the TLV
4	CFBC Bed Drain Area (CPP 40 MW & 31 MW)	08/05/2024 at 5:45 P.M.	35.0	26.5	38.5	29.75	0	29.75	180	31	WBGT _{eff} is below the TLV

SECTION : SMS

Sl. No.	Location	Date & Time of Monitoring	T _{db} (°C)	T _{nat} (°C)	T _g (°C)	WBGT(°C)	CAF	WBGT _{eff} (°C)	Metabolic Rate (Watt)	TLV(°C)	Remarks
1	SMS-1 (Furnace Floor 1-4) Area	07/05/2024 at 12:05 P.M.	35.0	27.5	38.0	30.65	0	30.65	180	31	WBGT _{eff} is below the TLV
2	SMS-1 (Furnace Floor 5-6) Area	07/05/2024 at 12:45 P.M.	36.0	27.0	38.5	30.45	0	30.45	180	31	WBGT _{eff} is below the TLV
3	CCM-1 Area	08/05/2024 at 11:05 A.M.	36.0	27.5	38.5	30.80	0	30.80	180	31	WBGT _{eff} is below the TLV
4	CCM-2 Area	09/05/2024 at 6:25 P.M.	35.5	28.0	37.5	30.85	0	30.85	180	31	WBGT _{eff} is below the TLV
5	CCM-3 Area	08/05/2024 at 5:15 P.M.	35.0	28.0	37.0	30.70	0	30.70	180	31	WBGT _{eff} is below the TLV

- NOTE: 1) T_{db}: the dry-bulb temperature
2) T_{nat}: the natural wet-bulb temperature
3) T_g: the globe temperature
4) WBGT: Wet Bulb Globe Temperature
5) CAF: Clothing Adjustment Factors
6) WBGT_{eff}: WBGT Effective
7) TLV: Threshold Limit Value

Ref: 1) OSHA Technical Manual Section II: Chapter 4 - Heat Stress



(J. DEV)
Authorized Signatory

TABLE - 2 :-

**TEST REPORT
ON
HEAT STRESS MEASUREMENT**

Name of the Plant : M/s. Shakambhari Ispat & Power Ltd.,

Address : VIII- Madandih, P.O. - Baroria, Dist: Purulia, W.B-723121

SECTION I: DRI

Sl. No.	Location	Date & Time of Monitoring	$T_{db}(^{\circ}\text{C})$	$T_{wet}(^{\circ}\text{C})$	$T_g(^{\circ}\text{C})$	WBGT($^{\circ}\text{C}$)	CAF	WBGT _{eff} ($^{\circ}\text{C}$)	Metabolic Rate (Watt)	TLV($^{\circ}\text{C}$)	Remarks
1	DRI 100 TPD idm-4 Platform	07/05/2024 at 5:05 P.M.	37.0	27.0	41.5	30.90	0	30.90	180	31	WBGT _{eff} is below the TLV
2	DRI 350 TPD idm-2 Platform (3rd Tier Area)	08/05/2024 at 10:45 A.M.	37.5	27.0	41.0	30.85	0	30.85	180	31	WBGT _{eff} is below the TLV
3	DRI 600 TPD idm-2 Platform (3rd Tier Area)	08/05/2024 at 11:30 A.M.	36.5	27.5	39.5	30.80	0	30.80	180	31	WBGT _{eff} is below the TLV

SECTION I: ROLLING MILL

Sl. No.	Location	Date & Time of Monitoring	$T_{db}(^{\circ}\text{C})$	$T_{wet}(^{\circ}\text{C})$	$T_g(^{\circ}\text{C})$	WBGT($^{\circ}\text{C}$)	CAF	WBGT _{eff} ($^{\circ}\text{C}$)	Metabolic Rate (Watt)	TLV($^{\circ}\text{C}$)	Remarks
1	Repeater Control Pulpit Area	08/05/2024 at 12:20 P.M.	36.0	27.5	38.0	30.65	0	30.65	180	31	WBGT _{eff} is below the TLV
2	In Between Old Mill Cooling Bed and Old Mill Roughing Induction Heater Area	08/05/2024 at 1:15 P.M.	37.0	27.5	38.5	30.80	0	30.80	180	31	WBGT _{eff} is below the TLV
3	WRM Laying Head Area	08/05/2024 at 12:50 P.M.	37.0	27.0	39.5	30.75	0	30.75	180	31	WBGT _{eff} is below the TLV
4	New Mill Roughing Stand Area	08/05/2024 at 4:25 P.M.	36.0	27.0	39.0	30.60	0	30.60	180	31	WBGT _{eff} is below the TLV

SECTION I: FERRO ALLOY

Sl. No.	Location	Date & Time of Monitoring	$T_{db}(^{\circ}\text{C})$	$T_{wet}(^{\circ}\text{C})$	$T_g(^{\circ}\text{C})$	WBGT($^{\circ}\text{C}$)	CAF	WBGT _{eff} ($^{\circ}\text{C}$)	Metabolic Rate (Watt)	TLV($^{\circ}\text{C}$)	Remarks
1	Tapping Yard (Furnace-1)	10/05/2024 at 11:30 A.M.	37.0	27.5	38.0	30.65	0	30.65	180	31	WBGT _{eff} is below the TLV
2	Tapping Yard (Furnace-4)	10/05/2024 at 12:20 P.M.	36.5	27.0	37.5	30.15	0	30.15	180	31	WBGT _{eff} is below the TLV
3	Furnace Building 1st Floor (Forklift Operating Area)	10/05/2024 at 1:00 P.M.	35.5	27.0	37.0	30.00	0	30.00	180	31	WBGT _{eff} is below the TLV

- NOTE: 1) T_{db} : the dry-bulb temperature
 2) T_{wet} : the natural wet-bulb temperature
 3) T_g : the globe temperature
 4) WBGT: Wet Bulb Globe Temperature
 5) CAF: Clothing Adjustment Factors
 6) WBGT_{eff}: WBGT Effective
 7) TLV: Threshold Limit Value

Ref: 1) OSHA Technical Manual Section III: Chapter 4 - Heat Stress



(J. DEY)
Authorized Signatory

ANNEXURE-15

ECL



EASTERN COALFIELDS LIMITED

(A Subsidiary of Coal India Ltd.)

Office of the General Manager, Sodepur Area

P.O. – Sunderchak, P.S - Kulti,

Dt. Paschim Bardhaman (W.B), Pin-713 360

Website – www.easterncoal.gov.in

Dated: - 24.02.2022

To

The Authority of Sakhambhari Ispat & Power Limited

Vill: Madandih

P.O: Bartoria

Dist: Purulia

Pin: 723121

Dear Sir,

In response to your letter dated: 18.02.2022, as per discussion with you, you are hereby requested to fill up an illegally Mined place at Bicched Bandh area near Narsamuda Colliery of Sodepur Area, ECL with fly ash, with active help of State Administration.

Yours faithfully


Area Personnel Manager
Sodepur Area

SAUHARD PROPERTIES PRIVATE LIMITED

Regd. Office : 1A/2 Everest House, 46C Chowringhee Road, Kolkata - 700071, West Bengal
Telefax : (033) 4006-1262, E-mail : sauhard.properties@gmail.com

CIN-U45400WB2011PTC160774

Ref: SPPL\DFA\25-26\PO\01

Date: 27th March, 2025

M/s Shakambhari Ispat and Power Ltd.

Village-Madandih, PO-Bartoria,

Dist.-Purulia (W.B.)-723121

Kind Attn: Shri A K Pandey, AGM-Commercial

Subject: Purchase Order for Supply of Dry Fly Ash for quantity 1,50,000 MT (+/-10%) for the period of One Year (up to March'26)

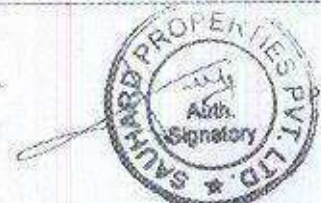
Dear Sir,

With reference to various discussions, we are pleased to award you the Purchase Order for supply of Dry Fly Ash for quantity of 1,50,000 MT (+/- 10%) on the following terms & conditions:

1	Supplier:-	M/s Shakambhari Ispat and Power Ltd							
2	Commodity:-	Fly ash							
3	Quantity:-	1,50,000 tons +/- 10% (May increase on suitable Quality)							
4	Source of Material :	Fly Ash (SIPL)							
5	Contract Period:	April-2025 to March-2026							
6	Quality of Material: -	<table><tr><th>Specification</th><th>Parameter</th></tr><tr><td>LOI :</td><td>≤ 6%</td></tr><tr><td>Blaine</td><td>+200 m2kg</td></tr></table>	Specification	Parameter	LOI :	≤ 6%	Blaine	+200 m2kg	
Specification	Parameter								
LOI :	≤ 6%								
Blaine	+200 m2kg								
7	Price	Free of Cost							
8	Transport Charges:-	All Transport charges will be in scope of SPPL.							
9	Quantity :-	The weigh-bridge quantity recorded at SPPL shall be final for record purpose.							
10	Quality: -	Quality report of SPPL shall be final. Quality of material to be tested on samples collected from every vehicle entering SPPL plant premises. However, quality report shall be shared with SIPL on time to time basis.							
11	Address and other details:-	SAUHARD PROPERTIES PRIVATE LIMITED 1st Floor, 1A/2, EVEREST HOUSE, 46C, CHOWRINGHEE ROAD, KOLKATA, Kolkata, West Bengal, 700071 GST: 19AAPCS7706K12M PAN: AAPCS7706K STATE: WEST BENGAL: CODE:19							
12	Termination of Contract	Order may terminate with prior notice in writing, terminate the Contract without any compensation under following circumstances							



		(A) In the event of insolvency of your firm / insolvency of any partner of firm / dissolution of firm / winding up of the firm or appointment of any receiver. B) If your firm commits breach of any terms herein mentioned even though not specifically provided for, provided always that such termination shall not prejudice any action or remedy, which shall have accrued or shall accrue thereafter to the company and provided also that you shall be liable to compensate the company for damages / claims losses and expenses etc. C) Unsatisfactory performance on your part in meeting the requirements of the company as per the contract. D) IF SIPL fails to provide material beyond the guaranteed specification i.e, below LOI 6% and Blain: 200 above.
13	Validity of Order	: This purchase order is valid for 1-year (up to March'2026) year from the date of commencement of first delivery date.
14	Short fall in supply:	: Subject to the demand of electricity, scheduled and un-scheduled shutdowns also affect power generation and thus generation of fly ash. Though all efforts will be made to maintain fly ash available, nevertheless SIPL does not guarantee availability of fly ash during the period of outage of power plant and SIPL shall not be liable for any compensation or damages for non-delivery of fly ash. However, SIPL shall put endeavor to intimate SPPL at least 7 days in advance only in case of any scheduled shut down & SIPL will not guarantee the supply of fly ash off take. SPPL is not confirming any minimum guarantee of lifting of Dry Fly Ash. The lifting of dry fly ash will be based on plant requirement. Further, there is no liquidity damage clause applicable to this contract in total. It is hereby clarified that in the event of SPPL not able to lift the Minimum Quantity of Fly Ash in a month, it shall not be held liable for any penalty or claims whatsoever reason and same would not constitute the reason for termination of this agreement.
15	Amendment:	: Any amendment and/or variation to this agreement shall be made on mutually agreed terms in writing and executed by the authorized representatives of each of the parties accordingly treating/considering the same as an amendment.
16	Working Hours:	: The loading and delivery of fly ash in fully covered bulkers shall be allowed round the clock on all days including Sundays and holidays as per the decision of Plant Head/Engineer-in-Charge of SIPL, subject to any restrictions about the movements of the trucks in and around SIPL imposed either by the State or Central Government

		Authorities and for reasons beyond SIPL's control.
17	Delivery Point:	17.1 SIPL or its appointed agency would deliver fly ash from the silo exit points of SIPL plant units subject to placement of closed container/pneumatic bulker/ closed trucks by the authorized transporter of SPPL. 17.2 SPPL or its authorized transporter shall collect the designated quantity of fly ash in closed container/pneumatic bulker/ closed trucks from the silo exit points and see that there are no violations of prevailing Acts/laws and/or Rules or guideline/circular issued by State Control Board relating to pollution, transportation or environment laws including motor vehicle laws and guidelines as set forth by the Union of India /State Government from time to time. 17.3 SIPL shall not in any way be responsible for the said transportation of the "Fly Ash" and no liability towards transportation of any type or any nature shall be borne by SIPL. Taxes and duties as applicable under this agreement shall be payable by SPPL directly to the concerned authority. SIPL shall not be liable to pay any tax directly to any authority under this agreement.
18	Arbitration	If any dispute and / or difference shall at any time arise between the parties to this agreement or in relation to any clause (s) or matters herein contained or their respective rights / claims, or liabilities hereunder or otherwise in relation to or arising out of this agreement, such disputes and / or differences shall be settled mutually through discussion between the parties in the first instance, failing which the same shall be referred to and finally settled by arbitration and the provisions of the (Indian) Arbitration and Conciliation Act, 1996 and the rules made there under and any statutory modification and re-enactment thereof shall be deemed to apply and to be incorporated in this agreement. The arbitral tribunal will be composed of a panel of three arbitrators, one to be appointed, by the claimant and one to be appointed by the respondent and two arbitrators so appointed, shall appoint the third arbitrator who shall act as the presiding arbitrator. The award of the arbitral tribunal shall be final and binding on the parties. The place of arbitration shall be: Purulia (West Bengal) and arbitration proceedings shall be conducted in English language.
19	Jurisdiction:	Only The courts of law at Purulia (West Bengal) shall have the exclusive jurisdiction to determine any disputes arising out of this contract.
20	SPPL responsibility during	20.1 SIPL shall not be responsible and shall not be liable for



transportation:	payment of any damages & compensation with regard to the transportation of "Fly Ash" from the site plant of SIPL. SPPL and its authorized transporter will be held responsible for any kind of injuries or accidents to their employees, laborers, drivers, cleaners and others. Any compensation arising due to negligence of SPPL and its authorized transporter shall be paid by SPPL. 20.2 SPPL shall ensure that its authorized transporter shall have valid license and permission either from the central or state or local government authorities with respect of transporting the said fly ash as required as per law. SPPL shall indemnify SIPL and SIPL's directors/staff/officer for any loss caused to it due to SPPL or its authorized transporter not having any valid licenses with regard to transportation of the said "Fly Ash". 20.3 SPPL and its transporter shall be held responsible for the action, if any, initiated by Motor Vehicle Inspector/Road Transport Authority either for overloading of ash or any other transportation/vehicle related issues. 20.4 SPPL and/or its Authorized Transporter/Agency shall have to obtain all statutory clearances, consents, no-objection certificate, writing and confirmations as may be required from various Government authorities for the purpose of eco-friendly transportation of ash by road from SIPL plant to its designated place. 20.5 SPPL and/or its Authorized Transporter shall be responsible for all taxes, cess, duties or other levies in respect of transportation of fly ash. 20.6 SPPL shall ensure that the vehicles deployed by it for transportation of Fly Ash are in good condition, fit for road condition having regard to minimum safety standards, as applicable.
21 Force majeure:	21.1 Neither SPPL nor SIPL shall be considered in default in the performance of its obligation under this agreement, if such performance is provided or delayed because of natural cause or beyond the control of the parties as the case may be including reasons such as natural calamities, accidents, war, embargoes, strike, epidemic, pandemic, cancellation of work order, lockout (statutory or otherwise) failure of the grid and/or grid restrictions beyond the control of SIPL, restriction on water supply imposed by the local/government (state or central) which impede power generation, non-availability of raw materials to the power plant due to (a) short supply from source, (b) disruption to railway network for raw materials movement, raw materials transporters strike or disruption in network to deliver raw materials to the power plant, schedule maintenance of power plant, any labour unrest at the power plant and/or any other prohibition order from the Government.



		21.2 At the time occurrence of a force majeure condition the affected party shall give notice in writing within 07 days from the date of occurrence of force majeure condition indicating the cause of force majeure and the period for which the force majeure condition is likely to remain. In the event of the affected party is prevented from fulfilling its obligation under this agreement owing to force majeure condition continuing for a period of more than 3 months, the parties may have to consult each other and decide the future course of action to fulfill their respective obligations under the agreement. 21.3 Due to the invocation of the force majeure clause by any of the parties, the First party shall not be absolved from his duty to fulfill the payment obligation against material dispatched until unless the Banks are ceased to operate for that period.
22	Upholding Business Ethics:	: SPPL follows a code of conduct demands high standards of moral & ethical behavior in its business dealings. You and/or your sub-contractors/agents shall conduct business ethically and shall NOT subscribe to bribery or corruption in any form. They shall not either directly or indirectly, or request, agree to pay any undue pecuniary or other advantage for the purpose of obtaining, retaining, directing or securing any commercial, contractual, regulatory or personal advantage.
23	Sustainability:	: We are enclosing our Sustainability Policies with this order, you are requested to please maintain at your end for sustainable working place.
24	Confidentiality	Each Party hereto shall, save as otherwise provided herein, maintain in strict confidence, and not disclose or use for a purpose other than the purpose set out herein, any confidential and/or proprietary information ("Confidential Information") of the other Party including this Agreement and the terms and conditions hereof. The foregoing covenant shall not restrict a Party from disclosing Confidential Information to the extent required in connection with any legal proceeding(s) or required for filing with govt. agencies, courts, stock exchanges or other regulatory agencies under applicable laws and regulations. Each Party shall use its best effort to assure that the provisions of this Agreement and its information disclosed to it concerning the other Party and its assets and business which is not otherwise publicly available, shall be kept confidential, unless other required by law, not to be disclosed without the consent of other Party to anyone other. The Parties shall restrict access to the Confidential Information only to its own employees or professional advisers who need to have such access for the purposes of performing the obligations or enforcing the rights under this Agreement and who have agreed with such party to abide by the obligations of confidentiality equivalent to those contained herein with such party. The disclosing party shall remain vicariously liable for such



		disclosure.
		No member of either of the Parties shall make use of the name or logo of the other party for publicity purposes, nor shall publish or permit to be published any information or photographs in connection with this Agreement without the prior written consent of the other party.
25	Authority:	The signatories to this agreement hereby state and confirm that they are the duly authorized personnel from their respective organizations for signing this agreement and the respective organizations approved the terms of this agreement. Each signatory to this contract declares and confirms that they have duly authorized by the competent authority/authorities of their respective companies to negotiate, finalize and enter into this contract. The respective companies on whose behalf this contract has been signed unequivocally undertakes to abide and honor all the terms & conditions of this contract without any demure, protest and delay under all the circumstances.

For, M/s Shakambhari Ispat & Power Ltd

Authorized Signatory
(Seal of the Company)

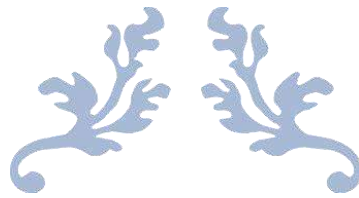


For, Sauhard Properties Private Limited

Authorized Signatory
(Seal of the Company)



ANNEXURE-16

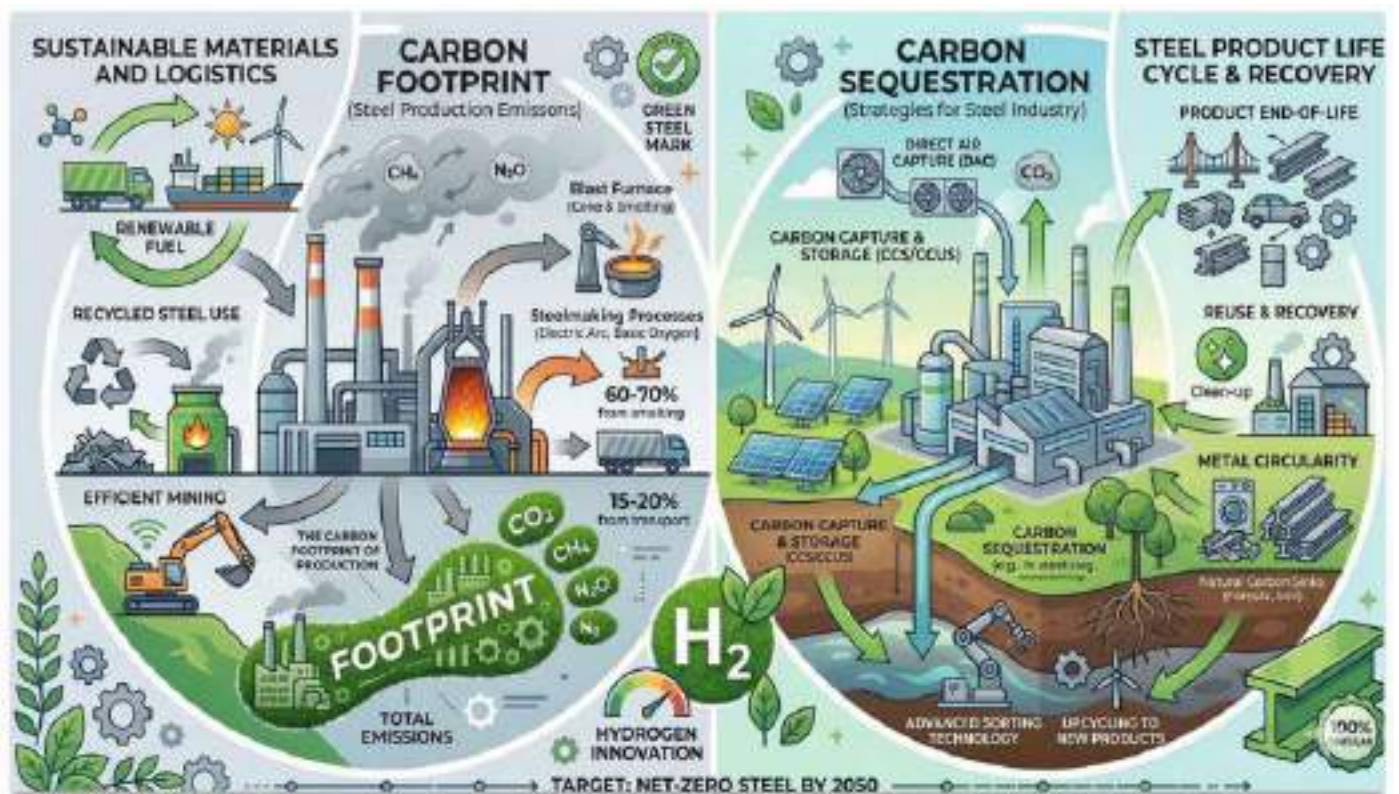


SHAKAMBHARI ISPAT & POWER LIMITED

Village – Madandih, P.O – Bartoria, Dist. – Purulia, West Bengal



ASSESSMENT OF CARBON FOOTPRINT & CARBON SEQUESTRATION STUDY



For
Production of 0.7875 million tons per annum Crude
Steel/Stainless Steel, 0.214272 million tons per annum Ferro-
Alloys (Maximum) along with Allied Facilities

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INTRODUCTION

In 2015, the global response to the threat of climate change took a step forward when 190 nations adopted the Paris Agreement. In 2019, the United Nations announced that over 60 countries including the United Kingdom and the European Union (with the exception of Poland) had committed to carbon neutrality by 2050. Moreover, some nations have pledged to work toward earlier dates. Together, these agreements have led to growing pressure to pursue de-carbonization across all industrial sectors.

India's Nationally Determined Contribution (NDC's) primarily targets by 2030 a reduction in the emissions intensity of Gross Domestic Product (GDP) by 33 to 35 percent; achieving about 40 percent installed power capacity from non-fossil fuel-based energy resources; energy efficiency; and creating an additional carbon sink of 2.5-3 billion tons of carbon dioxide equivalent through additional forest and tree cover.

Steel is one of the core pillars of today's society and, as one of the most important engineering and construction materials, it is present in many aspects of our lives. However, the industry now needs to cope with pressure to reduce its carbon footprint from both environmental and economic perspectives. Currently the steel industry is among the three biggest producers of carbon dioxide, with emissions being produced by a limited number of locations; steel plants are therefore a good candidate for de-carbonization. While the industry must adapt to these new circumstances, it can also use them as a chance to safeguard its license to continue operating in the long term.

The direct CO₂ intensity of crude steel production has been relatively constant in the past few years. In contrast, in the Net Zero Emissions by 2050 Scenario it falls an average 4% annually between 2020 and 2030. Achieving this reduction and maintaining it after 2030 will not be easy. Potential for energy efficiency improvements will likely soon be exhausted. Thus, innovation in the upcoming decade will be crucial to commercialize new low-emissions processes, including those that integrate CCUS and hydrogen, to realize the long-term transformational change required. Governments can help by providing RD&D funding, creating a market for near-zero-emissions steel, adopting policies for mandatory CO₂ emissions reductions, expanding international co-operation and developing supporting infrastructure.

In this report, the carbon footprints from different factors of Shakambhari Ispat & Power Limited (SIPL) will be determined and the carbon sequestration data from the units will be accessed to have an insight on annual carbon emissions from the works. This report also provides measures to further reduce the carbon emissions from the unit through implementation of new cleaner technological advances and sustainable environment methods.

Shakambhari Ispat & Power Limited has relied on following reference for arriving CO₂ Emission Factors for steel industry

- Report on Greenhouse Gas Emissions from Major Industrial Sources –III Iron and Steel Production by International Energy Agency and USEPA; Technical Support Document for the Ferroalloy Production Sector: Proposed Rule for Mandatory Reporting of Greenhouse Gases;), the CO₂ emissions are calculated and carbon footprints are tracked in the unit.
- •2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 3, Industrial Processes and Product Use

CARBON FOOTPRINT

Carbon Footprint (CF) is used to measure the impact of human activities on natural ecosystems, the relative size of human consumption on ecosystems, and it emphasizes on the effect of carbon emission of human energy activities on atmospheric environment. Based on different industries, different levels have been formulated and different greenhouse gases have been considered. Six kinds of greenhouse gas emissions such as CO₂, CH₄ and N₂O produced by human activities in the country have been estimated. The carbon footprint is characterized in three levels:

The first level comes from the direct carbon emissions of the institution itself

The second level expands the boundary to the direct carbon emissions of the Department that provides the energy sector

The third level includes the direct and indirect carbon emissions of the whole life cycle of the supply chain

CARBON FOOTPRINT IN THE IRON & STEEL INDUSTRY

- The steel industry is one of the basic industries of the country and plays a vital role in strengthening the economy. It is one of the fastest-growing sectors as steel is one of the core pillars of modern society and is present in many aspects of our lives as it is one of the most important engineering and construction materials for its application across all industries such as the automobiles industry, real estate industry, transportation, aircraft industry, shipbuilding industry, etc.
- The steel industry is among the three biggest producers of carbon emissions. However, with the need of the hour and responsibility towards an encouraging future, the industry needs to cope with the pressure to reduce its carbon footprint from both environmental and economic perspectives.
- The direct CO₂ intensity of crude steel production has been relatively constant in the past few years. In contrast, in the Net Zero Emissions by 2050 Scenario it falls an average of 4% annually between 2020 and 2030. Achieving this reduction and maintaining it after 2030 will not be easy. The potential for energy efficiency improvements will likely soon be exhausted with the existing technology. Thus, innovation in the upcoming decade will be crucial to commercializing new low emissions processes, including those that integrate CCUS and hydrogen, to realize the long- term transformational change required. Governments can help by providing R&D funding, creating a market for near-zero-emissions steel, adopting policies for mandatory CO₂ emissions reductions, expanding international cooperation and developing supporting infrastructure.
- While the industry must adapt to these new circumstances, it can also use them as a chance to safeguard its license to continue operating in the long term.
- In this report, the carbon footprints through various factors of Shakambhari Ispat & Power Limited (SIPL) have been discussed and the carbon sequestration data from the units provide an insight into annual greenhouse gas emissions from the works are tabulated. The measures to further reduce the carbon emissions from the unit through the implementation of new cleaner technological advances and sustainable environment methods have also been discussed.

M/s Shakambhari Ispat & Power Limited (SIPL) is an existing steel plant at village: Parvatpur, Radhamadhabpur, Madandih, P.O.: Bortoria, Tehsil: Raghunathpur, District: Purulia, West Bengal for production of MS Rolled products and Ferro-alloys. The company has proposed for expansion of existing steel plant for Production of 0.7845 million tons per annum Crude Steel/ Stainless Steel,

0.214271 million tons per annum Ferro-Alloys (Maximum) along with Allied Facilities

FACILITIES UNDER OPERATION

SPONGE IRON DIVISION: DRI Kiln: 4x100TPD + 2x350TPD + 2x600TPD

SMS DIVISION: 9X25T Induction Furnace and 1x30T LRF

ROLLING MILL: 2X1000 TPD

FERRO ALLOYS DIVISION: 6X9MVA SAF

CPP DIVISION: AFBC Boiler (36TPH), CFBC Boiler (100TPH)

Total Power Generation: 33.5MW

WHRB: 4x10TPH+2x35.5TPH+2x64TPH

Total power Generation: 54MW

CARBON FOOTPRINT OF EXISTING PROJECTS

Emission Factor based on 2006 IPCC Guidelines for National Greenhouse Gas Inventories. Following table shows the CO₂ emissions

1. Sponge Iron Division (DRI Plant)

Following table shows the CO₂ emissions from the induction furnace operation in existing project.

Table 1: CO₂ e Emission from DRI Division

Unit	Production (t)	Emission Factor (t CO₂ e/Ton of steel)	CO₂e Emissions of the plant (t CO₂e)
DRI	316390	0.7	221473

Total CO₂ e Emission from Sponge Iron Division- **221473 t CO₂e**

2. SMS Division (Induction Furnace):

Following table shows the CO₂ emissions from the induction furnace operation in existing project.

Table 2: CO₂ e Emission from SMS Division

Unit	Required Raw Materials	Quantity (t)	Carbon Content (W/W)	Total Carbon Taken to IF (t Ce)	Carbon Retained in MS Billet (t Ce)	Carbon Burnt (t)	CO₂e Emissions after proposed expansion of the plant (t CO₂e)
SMS	Pig Iron	40069	0.04	1602.76	780.28	5463.8	20034.10
	Sponge Iron	225814.21	0.02	3387.21			
	Ferro Alloys	5063.49	0.02	101.27			

	Scrap	57644.18	0.02	1152.88			
	BILLET	260094	0.003				

Total CO2 emissions from SMS Division – **20034.10 t CO2e**

3. Captive Power Plant

Following table shows the CO2 emissions from the captive power plant operation at existing project.

Table 3: CO2e Emission from Captive Power Plant

Plant	Required Fuel	Quantity (t)	Carbon Content (W/W)	Combustion Rate	CO ₂ e Emissions (t CO2e)
CPP	Coal	79460.32	0.67	95%	185615.73
	Dolochar	76049.38	0.25	95%	66286.54
Total					251902.27

Total CO₂ e Emission from Captive Power Plant – **251902.27 t CO2e**

4. Ferro Alloy Division

Following table shows the CO2 emissions from the sub-merged electric arc Furnace operation at existing project.

Table 4: CO2e Emission from Ferro Alloys Plant

Unit	Product	Quantity (t)	Emission Factor (T/T)	CO ₂ e Emission (t CO2e)
FERRO ALLOYS	Fe-Mn	22838.09	1.3	29689.51
	Si-Mn	26784.6	1.4	37498.44
Total				67187.95

Total CO₂ e Emission from Ferro alloys division – **67187.95 t CO2e**

Thus, the cumulative CO2e emitted from the exiting project with sum of table 1-4 is 560597 t CO2e.

[Reference Point: Source: Report on Greenhouse Gas Emissions from Major Industrial Sources –III Iron and Steel Production by International Energy Agency and USEPA; Technical Support Document for the Ferroalloy Production Sector: Proposed Rule for Mandatory Reporting of Greenhouse Gases;]

MITIGATION MEASURES TO REDUCE CARBON FOOTPRINTS

With the growing concern over climate change, steel makers are faced with the challenge of finding ways of lowering CO₂ emissions without seriously undermining process efficiency or considerably adding to costs. The iron and steel industry are the largest industrial source of CO₂ emissions due to the energy intensity of steel production, its reliance on carbon-based fuels and reductants.

The technological compendium of industries suggests the need to shift from traditional carbon intensive technologies for iron and steel production to low-carbon environment friendly technologies. Following are the measures which shall be adopted in coming years by the industries to reduce the overall carbon footprints-

- Energy Monitoring & Management System
- Hot charging process of continuously cast products at higher temperature directly to Rolling Mills which eliminate the need for re-heating furnaces.
- Scoping the minimum use of Reheating Furnaces
- Adoption of Variable Voltage Variable Frequency (VVVF) Drives for high-capacity electric motors
- Minimizing energy consumption and improving the energy efficiency of the process Changing to a fuel and/or reducing agent with a lower CO₂ emission factor; Capturing the CO₂ and storing it underground.
- Sufficient and affordable renewable energy needs to be implemented in the industry
- Installing state of art cleaner technologies
- Afforestation and Plantation
- Metallurgical wastes (Slag, Sludge, scales, fines, dust) into Sintering contributes significantly for reducing carbon dioxide emissions
- Availability of supporting infrastructure (Carbon capture and storage (CCS) and Hydrogen networks) needs to be accelerated, especially for industries, to support the transition to low carbon/carbon neutral technologies
- Supporting the deployment of Digital Product Passports (DPPs) in the downstream products and applications of steel (e.g., in construction and transportation industries) can improve the process of steel recovery and reuse. The design of DPPs usually contains product related information by manufacturers, including instructions on disassembly and dismantling. If followed correctly during the recycling or end-of-life phase of steel products, steel recovery rates can be enhanced.
- The continuation and reinforcement of the promotion of sustainable means of transport for commuters, such as bicycles, public transport and, most of all, car-pooling would contribute to reducing carbon emissions

MEASURES BEING TAKEN BY SHAKAMBHARI ISPAT AND POWER LIMITED

The Company has taken some plan under this expansion proposal, which shall be considered as attempts towards clean technology.

- Direct hot charging of billets from SMS to rolling mill.
- Promoting minimum use of vehicles during plant visit.
- Installation solar light system on the roof top of administrative building for office lighting purpose.
- Increasing afforestation in and around the factory premises.
- Promotion of adequate affordable renewable energy in the industry.

- The most important and considerable point here is that SIPL is generating 54 MW power as green energy by using sensible heat through Waste Heat Recovery Boilers (WHRB) installed with individual DRI Kilns (4x100TPD+2x350 TPD & 2x600 TPD) with existing project.
- The use of sensible heat generated during the sponge-iron-making process for power generation falls under criteria of green energy generation.
- Total 54 MW power shall be generated through WHRBs as cogeneration source of power.
- Thus, by using the green energy through WHRB SIPL shall contribute in carbon sequestration with restricting the CO₂ e Emission of 1700883TPA. The United Nations Framework Convention on Climate Change also considers electricity generated through WHR System as green, therefore, such projects are eligible for earning carbon credits.
- The continuation and reinforcement of the promotion of sustainable means of transport for commuters, such as bicycles, public transport and, most of all car-pooling would contribute to reducing carbon emissions.

ATTEMPTS TO REDUCE CARBON EMISSION/ CARBON INTENSITY

- Shakambhari Ispat & Power Limited shall prefer direct charging of hot billets to rolling mills from SMS. This attempt will remarkably reduce dependency on re-heating furnace and burning of fossil fuel like LSHS/LDO and consequently reduce the CO₂ emission. Company shall always scope the optimal use of reheating furnaces proposed in expansion project.
- Company further proposed to generate the 9 MW Power as green energy through blast furnace gas.
- SIPL has purchased 10 Nos. of EV (Electric Vehicle) cars and re-charging of these batteries shall be through electricity generated from solar panel planned to be installed.

These moves should be considered as its positive attempts to bring down Carbon intensity.

Moreover, the company proposes uses of Variable Frequency Drive ID Fans, Energy Monitoring & Management System, Regenerative Burners in Re-heating Furnace of Rolling Mills, Adoption of Variable Voltage Variable Frequency (VVVF) Drives for high-capacity electric motors, Installing state of art cleaner technologies.

CARBON SEQUESTRATION

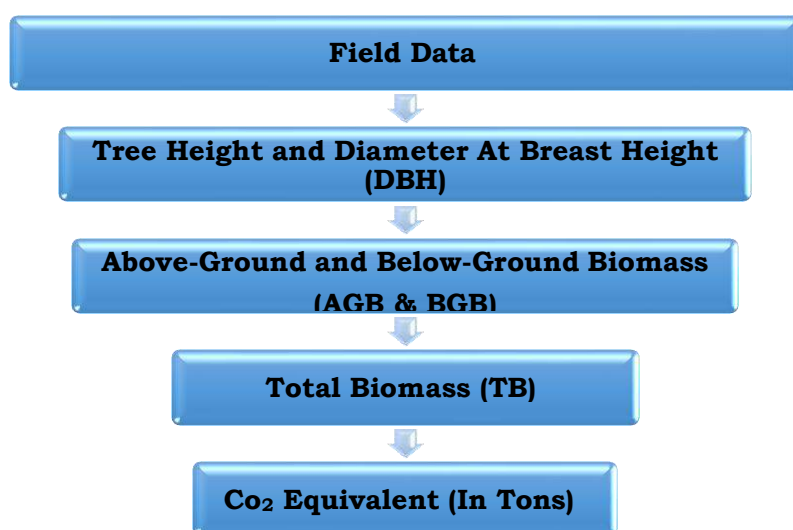
Carbon sequestration is defined as the removal of carbon dioxide from the atmosphere and storage in a system. Carbon sequestration is gaining its importance in carbon credit and trading. Identification of many CDM (Clean Development Mechanism) projects has offered special flexibility and relevance in the carbon reduction and has helped improve the national economy. These projects have estimated the quantity of carbon in various systems and their dynamics associated with it. With these estimations, several strategies and formulations have evolved quantifying and reducing the carbon foot print.

No doubt, carbon sequestration can be achieved through various systems, but trees form to be the largest terrestrial sink of carbon dioxide. Therefore, the plantation is granted as the most efficient and biggest terrestrial carbon sequestration method. Out of the five most important terrestrial carbon sequestration system (above ground biomass, below ground biomass, litter, wood debris, and soil organic carbon), the above and below ground biomass are the top two in the pool.

Biomass of trees develops when plants take in carbon dioxide from the atmosphere in the presence of sunlight and convert them into starch in their tissues. Several studies have revealed that the carbon content in these tissues is half their biomass. So, with their growth and development, trees go on sequestering CO₂ from the atmosphere and store in their tissues as carbohydrates. This continues until the death of the tree. The rate of carbon sequestration is however maximum during the early stages of growth in trees when trees try to produce more and more amount of food to grow, meet the energy required by them and to stabilize in their respective environmental conditions.

ESTIMATION OF CARBON SEQUESTRATION POTENTIAL OF TREES

There are generally two methods to estimate carbon sequestration in plant biomass. Direct method that involves cutting of the tree and Indirect method that is calculated through the above ground biomass and below ground biomass method without slashing the tree. Being ethically and ecologically sound, the second method was preferred for the present study.



METHODOLOGY FOR CARBON SEQUESTRATION FROM TREES

The Girth at Breast Height (GBH) of the trees was measured using a measuring tape at a height of 1.96 m from the ground surface. The height of the trees was measured using reference method (referring to the height of a nearby building or tower), pencil method and angle method as per the convenience. The Above Ground Biomass (AGB) and Below Ground Biomass (BGB) were then calculated as per the formula is given below.

- Basal area (m²) = (GBH)² / 4π
- Bio-volume (m³) = Basal area x Height of the tree
- AGB (kg) = Bio-volume x Wood density (kg/m³)
- BGB (kg) = AGB x 0.26 (Where 0.26 = Root to Shoot ratio)
- Total Biomass (TB) in kg/tree = AGB + BGB
- Total Carbon Sequestered (TC) in kg/tree = TB/2

The Carbon content in trees was taken on an average as 50% of the tree biomass. The wood density of the individual tree species was derived from secondary sources. The CO₂ equivalent was calculated using the following formula:

- CO₂e = (TC x 44) / 12
- Where, 44 and 12 are the molecular and atomic weight of CO₂ and C, respectively.

Shakambhari Ispat & Power Limited. has planted 62700 trees covering (24.45 ha.) land of total project area.

The carbon sequestration by plantation shown in the following table:

Table 5: CARBON SEQUESTRATION THROUGH GREENBELT DEVELOPMENT IN AND AROUND THE PLANT

Sl. No.	Plant Species	Local Name	Periphery (cm.)	Basal Area (M2)	Height (M)	Basal Volume (M3)	Density (Kg/M3)	AG B (Kg)	BG B (Kg)	TB (Kg)	TC (Kg)	CO ₂ e (Kg)	Quantity of Tree	Total CO ₂ e (Kg)
1	<i>Azadirachta indica</i>	Neem	68	0.037	6.5	0.239	900	215.37	56.00	271.37	135.68	497.50	3600	1774062.51
2	<i>Polyalthia longifoila</i>	Debdaru	30	0.007	4	0.029	875	25.08	6.52	31.60	15.80	57.93	1300	74601.3406
3	<i>Acacia auriculiformis</i>	Sonajhuri	48	0.018	5	0.092	625	57.32	14.90	72.23	36.11	132.42	5970	783068.138
4	<i>Dalbergia sissoo</i>	Shishu	59	0.028	8	0.222	800	177.38	46.12	223.49	111.75	409.74	6890	2796378.44
5	<i>Ficus benghalensis</i>	Bot	78	0.048	7	0.339	700	237.35	61.71	299.07	149.53	548.29	1200	651717.312
6	<i>Ficus religiosa</i>	Peepal	95	0.072	10	0.719	700	502.99	130.78	633.76	316.88	1161.90	750	863175.768
7	<i>Anthocephalus cadamba</i>	Kadam	59	0.028	6	0.166	600	99.77	25.94	125.72	62.86	230.48	4550	1038749.06
8	<i>Mimusops elengi</i>	Bakul	58	0.027	3.5	0.094	1008	94.49	24.57	119.06	59.53	218.28	747.5	161617.538
9	<i>Albizia lebbeck</i>	Sreesh	85	0.058	8	0.460	630	289.92	75.38	365.30	182.65	669.72	3680	2441231.31
10	<i>Cono Carpus</i>	Cono Carpus	54	0.023	7	0.163	580	94.26	24.51	118.77	59.38	217.74	18330	3953381.67
11	<i>Caesalpinia pulcherrima</i>	Radhachura	64	0.033	4.5	0.147	530	77.78	20.22	98.00	49.00	179.67	3315	589962.748
12	<i>Delonix regia</i>	Krishnachura	54	0.023	4.5	0.104	510	53.28	13.85	67.14	33.57	123.08	1820	221888.259
13	<i>Lagerstroemia speciosa</i>	Jarul	45	0.016	3	0.048	700	33.86	8.80	42.66	21.33	78.21	1105	85605.0384
14	<i>Millettia pinnata</i>	Karanj	61	0.030	4	0.119	680	80.58	20.95	101.53	50.77	186.14	2145	395501.920
15	<i>Eucalyptus globulus</i>	Eucalyptus	48	0.018	8	0.147	582	85.41	22.21	107.62	53.81	197.30	455	88920.0236
16	<i>Alstonia scholaris</i>	Chhatim	72	0.041	4	0.165	700	115.57	30.05	145.61	72.81	266.96	370.5	97972.4487
17	<i>Wodyetia bifurcata</i>	Fox Tail Palm	45	0.016	2.8	0.045	540	24.38	6.34	30.72	15.36	56.31	585	32630.6264
18	<i>Artocarpus heterophyllus</i>	Katahal	68	0.037	4.5	0.166	600	99.40	25.84	125.25	62.62	229.62	338	76876.0421
19	<i>Syzygium cumini</i>	Jamun	68	0.037	4.2	0.155	700	108.24	28.14	136.38	68.19	250.03	3640	901486.579
20	<i>Terminalia arjuna</i>	Arjun	68	0.037	7	0.258	750	193.28	50.25	243.53	121.77	446.48	520	229971.066
21	<i>Areca catechu</i>	Areca	68	0.037	3	0.110	880	97.19	25.27	122.46	61.23	224.51	715	159008.565
22	<i>Tecoma stans</i>	Ttikoma	68	0.037	3	0.110	580	64.06	16.66	80.71	40.36	147.98	325	47636.8637
23	<i>Swietenia</i>	Mehguni	68	0.037	5	0.184	750	138.06	35.89	173.95	86.98	318.91	65	20533.1309
24	<i>Hibiscus rosa-sinensis</i>	Hibiscus	38	0.011	2.5	0.029	700	20.12	5.23	25.35	12.68	46.48	244	11232.7940
25	<i>Hyophorbe lagenicaulis</i>	Bottle palm	68	0.037	6	0.221	900	198.80	51.69	250.49	125.25	459.23	40	18195.5129
												TOTAL	62,700	17515404.73

The total carbon sequestration by plantation in stipulated time period is **8758 tons CO₂e**.

INSTALLATION OF SOLAR FACILITIES

M/s SIPL has install 800 Kwp Solar panels to produce non-conventional green energy for office & auxiliary usage. It will be helpful in carbon sequestration as follows shown in Table 07(a) & 07(b). Installation solar panel is under progress.

Table - 06 (a)

The capacity of Solar Panel	800 Kwp
Av. Power Generation	0.12 MWh
Power generation in 24 hours (per day)	2.88 MW
Power generation in a year	524.16 5MW

Table - 06 (b)

CARBON SEQUESTRATION	
Av Coal consumption per MW	0.90 t
Total Coal consumption for 524.16 MW	471.74 t
Total Carbon as FC	316.07 t
Total CO2e emission Sequestration	1158.92 t

Table 05 shows that the total CO2e sequestration potential from greenbelt development (62,700 nos. trees) is estimated to be 8758 t CO2e. This number is aimed to be maintained on a yearly basis target by plantations & gap filling to reduce & sequester CO2 e emissions.

In addition to afforestation, installation of the solar panel shall contribute carbon sequestration up to 1159 t CO2e.

Thus, through various small-scale & large-scale methodologies, the organization aims to minimize its carbon footprint.

CONCLUSION

M/s Shakambhari Ispat & Power Limited is committed to reducing the overall Green House Gases and Ambient pollution levels by adopting cleaner technologies and carrying out ecological development activities. The company aims to reduce carbon emissions by introducing different energy-efficient technologies with usages of renewable energy resources,

Further, with the implementation of Carbon capture and storage (CCS) plants in steel industries, steel plants could progress to become near-zero emitters of CO2. The commercial viability of CCS partly depends on the price of carbon emissions which is set by government policy. Developing new technologies, such as the HIsarna process, that are designed to generate a nitrogen-free and CO2-rich off gas which will make CO2 capture & control easier and cheaper.

To conclude, no single option can yield the necessary CO2 emission reductions but a combination of technologies available can be retrofitted to achieve significant reductions, which is possible after commercial deployment of the same by the Government of India.

ANNEXURE-17

40	SUNITA DAS	43	PJ000007	ACCOUNTS	183	74	76751390	12/7/1	28	MILD RESTRICTION	25.3	25.3	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.7	4.32	1,85,000	1,500	44	11	01	01	00	03.0	100.0	30.0	28.0	07
41	SUSHITA SARMANAR	33	PJ000002	ACCOUNTS-COMM	183	74	76751394	12/7/1	23	SPECIMETRY WNL	20.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.1	5.56	1,80,000	1,500	44	10	04	02	00	31.1	91.0	27.0	23.4	11
42	SUCHITHA SARMANAR	38	PJ000106	ACCOUNTS-COMM	180	73	76751396	10/7/1	20	MODERATE RESTRICTION	20.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	14.4	4.91	1,10,000	1,400	29	24	04	01	00	45.8	101.0	25.0	21.4	07
43	SURESH KUMAR	38	PJ000103	ACCOUNTS	172	73	728710004	11/7/1	00	SPECIMETRY WNL	21.1	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	14.3	4.84	1,40,000	1,500	44	30	02	01	00	17.8	90.0	25.0	25.0	04
44	AMRUDH ROY	42	PJ000104	ACCOUNTS	175	77	800114282	11/7/1	04	SPECIMETRY WNL	21.6	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	13.5	4.80	1,80,000	1,500	44	21	09	01	00	44.0	100.0	20.0	20.0	04
45	DRISYI SRENI NARAYAN	25	PJ000421	OFF	157	45			00	MILD RESTRICTION	20.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.0	5.30	1,30,000	1,500	44	10	04	01	00	43.0	99.0	20.0	20.0	11
46	SINAPATI SUREN	52		CONTRACTOR-S. MISHRA	157	56	70000400	1/6/70	21	MILD RESTRICTION	21.2	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.7	4.54	1,40,000	1,500	47	27	04	01	00	43.0	80.0	24.0	20.0	07
47	NABANN KSEU	40	PJ000074	DRIVER	185	50			22	MODERATE RESTRICTION	21.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	14.5	5.55	1,30,000	1,500	44	10	01	01	00	40.0	81.0	24.0	20.0	10
48	CHANDRA BHUSAN BA	33	PJ000102	FERRO-PRODUCTION	157	71	85580004	11/7/1	06	MODERATE RESTRICTION	21.0	18.2	6/12	6/12	NO ABILITY TO RESTRICT	GREEN SHADOW SHOWN LEFT SIDEWALK CONFLUENCE	15.7	4.47	1,80,000	1,500	45	15	02	02	00	45.4	91.0	24.0	20.0	01
49	SURESH KUMAR	41	PJ000272	OFF	160	79	761540144	11/7/1	01	MILD RESTRICTION	21.4	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	14.2	5.03	1,55,000	1,500	70	39	01	01	00	40.7	93.0	24.0	20.0	11
50	RIYAT SAHU	42	-	CONTRACTOR-ARTECH	160	50		11/7/1	04	MILD RESTRICTION	20.0	18.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	11.7	3.80	1,50,000	1,500	70	25	04	02	00	33.4	101.4	20.0	20.0	08
51	PRASANTA SAHU	33		CONTRACTOR-ARTECH	162	55	800200705	12/7/1	01	MODERATE RESTRICTION	21.1	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.3	4.83	1,40,000	1,500	40	20	02	01	00	37.5	77.0	25.0	25.0	10
52	ANIL SUREA	52	PJ000107	ARMY MECHANICAL	175	73		11/7/1	12	MODERATE RESTRICTION	18.2	18.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.4	4.27	1,70,000	1,500	44	30	04	01	00	35.1	91.0	24.0	20.0	08
53	S. K. SAHA	40	PJ000400	OFF (ARMY OPERATOR MANAGER)	170	85	80030001	11/7/1	16	MILD RESTRICTION	20.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	11.0	4.25	1,70,000	1,500	70	27	02	01	00	40.0	100.0	20.0	20.0	11
54	SUNIL SUREN	31		CONTRACTOR-ARTECH	170	38	800300407	11/7/1	17	MODERATE RESTRICTION	16.0	16.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	11.0	4.48	1,50,000	1,500	67	28	01	01	00	38.0	80.7	24.0	20.0	10
55	TULSI DATAPANDAI	34		CONTRACTOR-ARMY	170	61		11/7/1	01	MODERATE RESTRICTION	21.0	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	11.7	4.80	1,50,000	1,500	64	31	01	01	00	37.0	94.0	24.0	20.0	10
56	RAJESH SAHU	42		CONTRACTOR-ARMY	180	43	707250112	12/7/1	01	SPECIMETRY WNL	18.0	20.0			NO ABILITY TO RESTRICT	STUDY WNL	11.0	4.44	1,40,000	1,500	67	28	04	01	00	33.0	80.2	20.0	20.0	07
57	LEENA GHOSH	17	PJ000000	OFF (ARMY ELECTRICAL & SUBSTATION)	174	62	807101011	10/7/1	01	MILD RESTRICTION	21.0	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	11.0	5.30	1,50,000	1,500	69	33	03	01	00	33.1	81.0	27.0	20.0	08
58	SARASWATI ANAND	28	PJ000101	FERRO-ELECTRICAL	161	78	710700400	11/7/1	01	MODERATE RESTRICTION	21.0	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	11.2	4.59	1,50,000	1,500	69	37	01	01	00	45.4	100.2	21.0	21.0	08
59	NATIAJ PRASAD	30		CONTRACTOR-NABA ANUR	165	52		10/7/1	12	MODERATE RESTRICTION	20.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.0	5.13	1,40,000	1,500	60	30	01	01	00	38.0	80.4	24.0	20.0	07
60	SANDIPAN SAHU	54		CONTRACTOR-NABA ANUR	137	60	710000000	11/7/1	01	MODERATE RESTRICTION	20.0	18.0	6/24	6/24	NO ABILITY TO RESTRICT	STUDY WNL	10.0	4.63	1,10,000	1,500	64	34	01	01	00	30.0	77.1	22.0	20.0	14
61	MANI SAHU	38		CONTRACTOR-NABA ANUR	154	51	67990001	11/7/1	01	MILD RESTRICTION	21.0	18.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.0	5.32	1,30,000	1,500	68	28	02	02	00	35.4	73.1	21.0	20.0	09
62	ANAND KUNDARAK	49		CONTRACTOR-NABA ANUR	158	52	700701022	12/7/1	01	MODERATE RESTRICTION	25.0	25.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	14.7	5.10	1,10,000	1,500	64	30	01	01	00	47.2	88.0	21.0	20.0	06
63	KRISH SAHU	38		CONTRACTOR-NABA ANUR	167	48	804200025	10/7/1	01	SPECIMETRY WNL	20.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.0	4.52	1,15,000	1,500	68	27	01	01	00	41.4	95.0	20.0	20.0	10
64	RAJASRAM SARMAN	34		CONTRACTOR-NABA ANUR	180	67	701300704	11/7/1	01	MODERATE RESTRICTION	20.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.7	4.44	1,80,000	1,500	63	37	04	01	00	40.0	100.4	21.0	20.0	07
65	KRISHNA SAKSAR	45	PJ000017	ARMY MECHANICAL	180	68	800000000	11/7/1	01	SPECIMETRY WNL	21.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	11.4	4.17	1,25,000	1,500	64	31	01	01	00	44.2	101.0	20.0	20.0	08
66	SHRADDHA SAHU	71		CONTRACTOR-NABA ANUR	170	11	801000000	11/7/1	07	MODERATE RESTRICTION	21.0	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.0	5.67	1,20,000	1,500	67	29	01	01	00	47.1	74.0	15.0	20.0	09
67	BIHAR CHANDRABORTI	50		CONTRACTOR-NABA ANUR	170	68	801001020	10/7/1	01	SPECIMETRY WNL	20.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.5	4.17	1,60,000	1,500	69	31	01	01	00	41.0	94.0	20.0	20.0	07
68	KISHOR DAS	24		CONTRACTOR-NABA ANUR	167	50	804010006	07/00	12	MILD RESTRICTION	16.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	11.1	4.45	1,80,000	1,500	63	34	01	01	00	40.5	90.0	20.0	20.0	08
69	KRISH SAHU	24		CONTRACTOR-NABA ANUR	170	54	800701006	06/04	01	MILD RESTRICTION	21.0	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	11.4	4.71	1,40,000	1,500	64	30	04	01	00	41.1	85.0	18.0	20.0	08
70	SUNANDANA TUNU	51		CONTRACTOR-S. MISHRA	154	68	910007022	06/04	01	SPECIMETRY WNL	12.0	16.4	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	10.1	5.00	1,40,000	1,500	63	33	01	01	00	36.0	79.0	18.0	20.0	10
71	LATIPAH SUREN	46		CONTRACTOR-S. MISHRA	154	52	804010000	12/7/1	04	SEVERE RESTRICTION	20.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	11.1	4.38	1,25,000	1,500	68	31	01	01	00	38.1	80.0	20.0	20.0	10
72	ANAND KUNDAR	48		CONTRACTOR-PNS (MANETAN)	171	80	804010000	11/7/1	11	MILD RESTRICTION	12.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	21.0	5.02	1,80,000	1,500	62	34	01	01	00	51.0	100.0	18.0	20.0	08
73	RAJASRAM SARMAN	46		CONTRACTOR-PNS	200	45	804010000	11/7/1	16	MILD RESTRICTION	20.0	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	14.0	4.85	1,40,000	1,500	63	32	01	01	00	45.0	93.0	20.0	20.0	08
74	DRONKAR PATHAN	20		CONTRACTOR-PNS	206	48	802010000	11/7/1	01	MILD RESTRICTION	20.0	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.0	3.89	1,45,000	1,500	61	34	01	01	00	41.0	104.1	12.0	20.0	08
75	RAJESH KUNDAR	40		CONTRACTOR-PNS	180	14	800010000	11/7/1	19	MODERATE RESTRICTION	18.0	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	14.1	4.55	1,45,000	1,500	59	37	01	01	00	40.0	102.0	18.0	20.0	07
76	GANESH PACHAN	21		CONTRACTOR-PNS	171	50	801000000	12/7/1	01	MILD RESTRICTION	18.0	21.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	13.1	4.80	1,80,000	1,500	67	28	04	01	00	40.0	99.0	20.0	20.0	08
77	RAJESH KUNDAR	37		CONTRACTOR-S. MISHRA	152	48	700010000	12/7/1	01	MILD RESTRICTION	20.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	14.0	4.80	1,40,000	1,500	65	29	01	01	00	40.0	98.0	18.0	20.0	08
78	DEB KUNDAR	48		CONTRACTOR-S. MISHRA	154	42	802010000	12/7/1	01	MILD RESTRICTION	20.0	20.0	6/12	6/12	NO ABILITY TO RESTRICT	STUDY WNL	14.0	4.55	1,50,000	1,500	58	37	01	01	00	41.0	97.0	18.0	20.0	08
79	ANANT KUNDAR	21	PJ000004	ARMY	180	70	801000000	12/7/1	10	MILD RESTRICTION	15.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.4	4.80	1,40,000	1,500	65	29	01	01	00	40.0	94.0	18.0	20.0	08
80	SURESH KUNDAR	31	PJ000006	ARMY	177	62	800010000	12/7/1	01	SPECIMETRY WNL	15.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	11.1	4.55	1,45,000	1,500	61	34	01	01	00	40.0	104.1	12.0	20.0	08
81	SURESH KUNDAR	52	PJ000008	ARMY	180	75	700010000	12/7/1	01	MILD RESTRICTION	20.0	20.0	6/5	6/5	NO ABILITY TO RESTRICT	STUDY WNL	12.1	4.34	1,80,000	1,500	69	26	04	01	00	40.0	98.0	18.0	20.0	07

Shankar Kumar & Power Limited

Factory Manager

81	BETAMANO SINGH	34	PL0004005	IND-IT/IT	171	89	109128047	125/75	83	MODERATE RESTRICTION	23.8	25.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	14.0	5.16	2,25,000	8,200	63	33	94	02	90	45.3	87.7	27.8	30.8	07
82	SHRAMEE BISHANANAH	32	PL0004046	IND-MECHANICAL	181	13	844874134	112/75	85	WILD RESTRICTION	16.0	25.5	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	12.8	4.34	1,70,000	8,200	71	25	83	01	90	42.8	98.2	38.5	38.9	08
83	DEBASISH SAHU	35	PL0004059	OP 11MM INSTRUMENTATION	187	42	946099389	108/74	86	WILD RESTRICTION	16.0	25.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	13.8	6.44	2,00,000	1,000	83	31	88	02	88	42.4	93.4	24.7	31.4	08
84	SHAMSHY MEHTA	36	PL0004052	IND-MECHANICAL	183	51	742887894	110/75	78	WILD RESTRICTION	20.0	21.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	13.5	6.51	1,60,000	8,800	64	26	84	01	88	41.5	98.3	25.5	31.7	07
85	DEEPAKAR PALZER	31	PL0004038	IND-MECHANICAL	166	34	738430745	86/67	88	SPERMETRY WNL	28.0	31.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	11.7	4.82	2,10,000	8,800	71	24	83	02	88	39.5	100.8	38.8	38.7	04
87	SUBHITA RAJAL	33		CONTRACTOR-S. MISHRA	171	89	907289528	117/84	73	MODERATE RESTRICTION	15.5	25.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	12.0	3.92	1,85,000	1,000	85	25	84	02	88	41.7	106.3	36.7	38.8	08
88	DANAPATI BISHH	41		CONTRACTOR-S. MISHRA	180	55	804288901	146/96	75	WILD RESTRICTION	12.3	31.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	12.4	4.34	2,15,000	1,600	85	31	88	01	88	39.8	93.5	29.2	31.2	08
89	BUDHAN MONDAL	42		CONTRACTOR-S. MISHRA (SARA)	158	46	809211250	112/83	82	SPERMETRY WNL	19.3	25.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	13.6	4.96	1,80,000	8,000	84	38	84	02	88	41.4	101.1	38.9	36.3	06
90	SASTRADIL MUDI	37		CONTRACTOR-S. MISHRA	183	56	806384850	145/98	88	WILD RESTRICTION	11.8	30.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	14.2	5.52	2,10,000	1,800	84	30	84	02	88	41.5	88.5	36.6	31.1	07
91	GOPAL WENBHAM	31		CONTRACTOR-S. MISHRA	180	48	817285279	124/91	80	SPERMETRY WNL	21.8	28.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	11.8	3.87	2,15,000	1,800	84	27	84	02	88	41.5	77.8	28.3	38.8	40
92	SARMAH BOURI	29		CONTRACTOR-UNITECH	158	45	803103184	111/74	77	MODERATE RESTRICTION	28.0	35.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	12.5	4.82	2,10,000	8,500	85	36	84	01	88	41.0	88.8	27.1	38.5	08
93	ASHI DAS	49		CONTRACTOR-CAS CONSTRUCTION	153	49	908275862	145/98	74	WILD RESTRICTION	18.0	31.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	11.8	4.65	1,82,000	10,000	84	27	83	02	88	41.0	100.8	28.5	28.3	08
94	HARIDAS SINGH	30		CONTRACTOR-UNITECH	183	52		146/98	86	MODERATE RESTRICTION	20.0	31.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	11.2	4.43	2,10,000	8,000	87	30	82	01	88	38.6	87.5	25.4	28.3	08
96	ANIL KUMAR	33		CONTRACTOR-UNITECH	150	41		118/81	72	WILD RESTRICTION	18.3	31.0	6/5	6/5	NO LABORATORY TESTED	CARDIAC SHADOW SHOW LEFT VENTRICULAR COMPRESSION	11.7	4.27	1,70,000	8,500	88	27	83	02	88	39.8	88.4	27.6	28.4	18
98	SOMAJI HANNA	36		CONTRACTOR-UNITECH	181	51	742818270	125/74	78	SPERMETRY WNL	21.3	21.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	11.8	3.88	1,75,000	1,000	85	30	84	01	88	40.4	85.0	14.3	28.6	11
97	RAJESH DEY	37		CONTRACTOR-UNITECH	180	45		118/98	82	WILD RESTRICTION	11.8	26.5	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	12.4	4.33	2,10,000	7,500	88	26	83	02	88	41.8	97.1	28.8	29.7	07
98	SCITAM PAUL	41	PL0004033	ACCOUNTS	183	60	804751893	136/74	101	WILD RESTRICTION	21.3	21.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	14.2	5.43	1,80,000	1,800	70	27	83	01	88	44.8	85.7	24.3	30.6	36
99	SUDIP CHATTERJEE	49	PL0004088	ACCOUNTS	187	76		156/93	118	WILD RESTRICTION	21.3	21.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	11.7	4.81	1,70,000	1,800	86	30	83	01	88	40.6	94.9	28.5	30.0	07
100	RAJ KUMAR SINGH	48	PL0004074	IND-MECHANICAL	156	42		148/98	87	WILD RESTRICTION	19.3	21.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	14.4	4.83	1,70,000	1,900	86	28	84	02	88	42.0	88.1	24.5	28.7	12
3-4-23																														
101	ANAMI DEBACHALIA	40	PL0004003	OP 11MM OPERATION	182	44	012818888	146/96	84	SPERMETRY WNL	21.3	30.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	14.2	5.43	1,80,000	1,000	86	30	83	01	88	40.5	85.7	18.1	36.6	35
102	SAGAR SALLU	30	PL0004014	OP 21+10MM OPERATION	155	52	709812100	136/70	80	SPERMETRY WNL	21.3	30.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	12.8	4.81	1,70,000	7,000	88	28	84	02	88	42.6	88.3	24.5	36.7	10
103	SANJAY KASHI	31		CONTRACTOR-RASH CONSTRUCTION	187.5	36	701170418	115/74	86	MODERATE RESTRICTION	21.3	30.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	11.8	4.96	1,60,000	1,000	85	30	83	02	88	38.3	89.5	28.8	38.7	10
104	ROY GOKUL	32		CONTRACTOR-S. MISHRA	179	74	703018738	150/96	88	SPERMETRY WNL	21.8	18.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	14.5	5.86	1,80,000	1,000	87	27	84	02	88	40.1	87.1	28.8	36.7	10
105	SABJEET KUNJA CHAKRA	25	PL0004023	OP 10MM MECHANICAL	185	40	803251136	128/74	88	WILD RESTRICTION	21.0	18.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	12.5	4.45	1,80,000	1,800	85	30	84	01	88	41.4	88.5	28.1	29.4	10
106	MONDAL DEW	43	PL0004089	OP 10MM MECHANICAL	172	20	803231880	140/96	77	SPERMETRY WNL	21.6	30.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	12.8	4.59	1,70,000	1,800	78	26	82	03	88	42.1	93.0	27.4	29.5	08
107	KUPUL HEMBRAM	18		CONTRACTOR-S. MISHRA	150	38	819788881	130/70	76	WILD RESTRICTION	21.8	30.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	12.0	4.71	1,20,000	1,000	85	30	84	01	88	38.5	84.7	25.8	30.0	06
108	SANJAY BHANDARI	40		CONTRACTOR-UNITECH	186	39	814187668	130/70	97	MODERATE RESTRICTION	21.8	30.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	11.8	4.43	1,88,000	1,000	75	35	82	03	88	40.8	102.0	31.4	38.8	07
109	HORRAT SASMIT	27		CONTRACTOR-S. MISHRA	180	48		130/90	83	MODERATE RESTRICTION	18.0	25.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	11.5	4.28	1,70,000	1,800	87	28	83	02	88	38.3	88.4	24.4	29.5	10
110	MAHABH MANDI	30		CONTRACTOR-S. MISHRA	183	47	809801247	130/70	84	WILD RESTRICTION	20.0	21.0	6/5	6/5	NO LABORATORY TESTED	CARDIAC SHADOW SHOW LEFT VENTRICULAR COMPRESSION	10.0	4.43	1,80,000	7,500	85	30	84	01	88	38.3	77.1	21.4	28.3	08
111	MR. NATHAN ARJUN	30	PL0004061	OP 2 11MM INSTRUMENTATION	172	30	781291530	130/70	90	WILD RESTRICTION	18.0	25.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	14.1	5.44	1,80,000	1,800	88	27	84	01	88	40.7	88.4	26.9	30.9	10
112	MR. RAJESH KUMAR	30	PL0004025	OP 10MM OPERATION	188	30	809540870	125/80	78	WILD RESTRICTION	21.3	21.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	13.7	4.30	2,10,000	8,400	85	32	82	01	88	44.5	91.7	21.8	36.4	08
113	SHANU KUMAR KAI	44	PL0004072	OP 10MM OPERATION	172	65	886128517	134/80	96	MODERATE RESTRICTION	21.3	21.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	13.5	4.35	1,60,000	8,900	84	34	83	02	88	44.5	98.3	28.8	36.3	07
115	PROBOD KUMAR CHATTERJEE	48	PL0004070	CENTRAL ASE-SE	168	21	8180713277	156/98		WILD RESTRICTION	21.3	21.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	14.0	4.77	2,00,000	1,900	85	32	84	01	88	40.5	97.6	25.4	38.2	10
116	ANUPAM KUMAR	32	PL0004087	OP 10MM QC	177	52	803388621	110/90	81	SPERMETRY WNL	18.3	28.0	6/5	6/5	NO LABORATORY TESTED	CARDIAC SHADOW SHOW LEFT VENTRICULAR COMPRESSION	14.8	4.91	1,60,000	8,000	88	27	83	02	88	44.2	97.1	26.2	31.3	08
114	MR. DEWAS SALLU	34	PL0004075	IND- ELECTRICAL	162	38	804818550	146/98	138	MODERATE RESTRICTION	18.3	28.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	11.1	4.25	1,18,000	1,800	88	25	84	02	88	40.9	73.1	21.2	29.0	06
117	LAKSHMAN HEMBRAM	30		CONTRACTOR-S. MISHRA	151	41	812113070	130/70	88	WILD RESTRICTION	20.3	28.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	11.3	5.14	1,30,000	7,100	88	28	83	01	88	45.4	88.3	27.8	30.6	10
114	SANJAY KUMAR	38		CONTRACTOR-S. MISHRA	169	52	747810588	116/80	84	MODERATE RESTRICTION	14.8	18.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	14.1	4.27	1,10,000	7,300	87	12	84	02	88	44.8	52.6	27.2	28.8	08
115	SUNIL KUMAR	30	PL0004082	OP 10MM QC	150	31	840448006	130/74	85	SPERMETRY WNL	20.8	25.0	6/5	6/5	NO LABORATORY TESTED	STUDY WNL	12.1	4.57	2,00,000	1,800	87	18	84	01	88	42.1	78.7	21.8	29.7	11

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121	RAJESH CHANDRA BHAKTI	38	PL000029	AUTOMOBILE	189	38	854752286	18/76	88	MODERATE RESTRICTION	30.0	21.8	N/24	5/28	NO INFORMATION DETECTED	STUDY WML	11.8	5.28	1,70,000	5,500	88	21	63	82	88	88.5	71.7	125	28.8	70
122	SHAMU SARANYA	30	PL000029	CPE BMMW MECHANICAL	189	34	800000000	18/71	86	MILD RESTRICTION	30.0	18.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	18.1	4.88	1,80,000	8,200	82	34	62	81	69	46.8	86.1	29.2	38.2	87
123	SADHAN PATEL	38	PL000048	CPE BMMW ELECTRICAL	171	38	700354388	18/70	89	SPRINOMETRY WML	30.0	18.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	14.3	4.90	2,05,000	6,700	88	27	61	62	83	60.8	95.7	28.8	36.8	85
124	PRANALAM	21	CONTRACTOR K.S. SHIRGA	CONTRACTOR K.S. SHIRGA	100	70	864334877	11/70	70	MODERATE RESTRICTION	30.0	18.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	15.7	5.32	2,00,000	7,800	67	80	61	61	88	68.8	93.8	29.8	32.8	80
125	SE SAMR KOSMAN	23	CONTRACTOR K.S. SHIRGA	CONTRACTOR K.S. SHIRGA	161	38	639600751	18/70	83	MILD RESTRICTION	23.3	15.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	14.3	4.30	1,80,000	8,500	94	34	64	62	88	12.8	82.8	28.3	38.8	87
126	KRISHNA RUTY	36	CONTRACTOR K.S. SHIRGA	CONTRACTOR K.S. SHIRGA	101	35	729584255	18/70	84	SEVERE RESTRICTION	23.3	25.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	18.1	5.18	1,78,000	6,900	70	27	80	85	88	47.2	88.8	27.1	39.8	88
127	MANJUL BAHU	26	CONTRACTOR K.S. SHIRGA	CONTRACTOR K.S. SHIRGA	164	65	807055900	18/70	83	MODERATE RESTRICTION	22.2	25.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	18.7	5.31	1,83,000	7,700	65	38	83	85	88	49.8	88.8	28.1	28.8	86
128	KADAR GADAN SINGH	36	CONTRACTOR K.S. SHIRGA	CONTRACTOR K.S. SHIRGA	164	67	8507530075	18/70	72	SPRINOMETRY WML	23.3	25.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	18.2	5.40	1,83,000	7,500	68	38	84	85	88	49.8	88.8	28.1	28.8	86
129	SHRUTI KANAK	45	PL000076	AUTOMOBILE	251	58	750092816	18/70	102	MILD RESTRICTION	23.3	25.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	12.4	4.80	2,00,000	7,000	68	27	65	81	88	42.2	87.2	25.1	25.5	80
130	SHRUTI KANAK	23	PL000086	CPE BMMW ELECTRICAL	183	11	768884214	11/70	65	MILD RESTRICTION	23.3	25.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	12.5	4.88	1,80,000	7,000	66	38	84	87	88	48.8	91.0	18.2	13.0	87
131	SANDHU MUK	30		CONTRACTOR-PMS	129	88	815873881	11/70	88	MODERATE RESTRICTION	30.0	38.8	0/6	6/6	NO INFORMATION DETECTED	CARDIAC SHADOW SHOWS LEFT VENTRICULAR CONGESTION	11.0	5.17	1,80,000	7,000	67	88	82	81	88	88.8	74.7	21.5	28.8	86
132	SUBASH BAHU	38	CONTRACTOR-PMS	CONTRACTOR-PMS	259	58		18/70	70	MILD RESTRICTION	23.3	25.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.5	5.55	1,55,000	8,000	67	27	88	82	88	48.2	72.4	20.1	36.8	87
133	SUBAL BAHU	19	PL000000	TMH OFFICE ADMIN	236	50	770254789	11/70	111	MILD RESTRICTION	23.0	25.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.5	5.78	1,60,000	8,800	78	25	88	87	88	48.2	78.8	20.8	38.8	88
134	SUBHATA SAREKCE	45	PL000217	CPE BMMW OPERATION	385	78	818888889	11/70	78	SEVERE RESTRICTION	25.0	25.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	10.6	5.57	1,50,000	8,900	88	28	84	81	88	31.2	66.7	18.1	28.8	87
135	PANU BHATE	23		CONTRACTOR K.S. SHIRGA	388	58	712981578	11/70	83	SEVERE RESTRICTION	23.6	25.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.6	4.55	1,80,000	10,200	65	38	83	83	88	44.8	87.8	18.0	36.8	80
136	KAJAL DEY	38	PL000269	CPE BMMW ELECTRICAL	178	68	816702064	18/70	79	SPRINOMETRY WML	23.0	25.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.3	4.88	1,80,000	7,000	18	27	82	81	88	44.8	87.4	28.8	38.8	81
137	ANAN GARGA	38	PL000302	DR 600 PROCESS	158	68	863731200	11/70	77	SPRINOMETRY WML	23.0	25.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.2	4.64	2,10,000	8,800	82	18	85	82	88	48.2	85.8	28.1	28.8	88
138	MANJUL U. MARUT	27	PL000389	BMD OPERATION	184	75	740778321	12/70	77	MILD RESTRICTION	23.0	20.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	12.7	4.85	1,75,000	7,900	85	28	81	81	88	42.8	87.6	28.8	28.7	87
139	ANNA SHAW	25	PL000385	BMD OPERATION	181	127	801185154	18/70	91	MODERATE RESTRICTION	23.5	25.0	0/6	6/6	NO INFORMATION DETECTED	PREHEAT COMBUSTION NOTED	12.8	4.24	1,50,000	8,200	85	38	81	81	88	48.8	100.4	30.2	28.5	88
140	CHANDU SHAW	34	PL000372	AUTOMOBILE	172	65	813068889	18/70	86	MODERATE RESTRICTION	23.0	20.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	10.3	1.88	1,80,000	8,200	68	31	82	81	88	35.8	88.7	25.5	25.2	88
141	ANILKANTH GOWDARI	43	PL000357	FEED-DC	173	51	801625249	18/70	80	MODERATE RESTRICTION	23.8	20.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.3	1.88	1,80,000	8,200	67	28	83	82	88	37.2	102.8	30.5	29.7	88
142	LOKANATHA KODU	38		CONTRACTOR PATEL	170	77	788488242	11/70	85	MILD RESTRICTION	23.5	20.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.3	1.63	2,40,000	8,200	67	38	81	81	88	42.8	71.5	11.8	28.8	80
143	SHYAM KUMARAB	21		CONTRACTOR PATEL	235	67	888888888	11/70	68	MILD RESTRICTION	23.5	20.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.4	4.38	2,10,000	7,700	68	27	84	83	88	44.8	88.8	28.8	38.2	88
144	KIRAN SHIVANAR	21	PL000389	CPE BMMW ELECTRICAL	182	77	888888888	11/70	80	MILD RESTRICTION	23.8	20.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	12.4	1.67	2,40,000	10,100	68	28	82	82	88	42.8	75.8	12.3	28.5	87
145	CHANDAN SAI	26	PL000288	BMD OPERATION	185	70	748888888	11/70	74	SPRINOMETRY WML	23.5	20.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.3	4.88	1,80,000	7,500	65	38	83	83	88	44.8	88.8	28.8	38.8	81
146	SURAN KUMARAB	22	PL000478	DR 600 PROCESS	167	70	628478888	11/70	75	MILD RESTRICTION	23.0	20.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.3	1.67	3,00,000	10,200	65	38	83	83	88	44.8	88.8	28.8	38.8	81
147	AJAY KHA	21	PL000388	SMS-MECHANICAL	186	68	838888888	11/70	113	MILD RESTRICTION	23.5	18.8	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	18.7	5.28	1,80,000	8,800	61	31	81	82	88	42.8	88.8	17.8	11.8	88
148	ANILU GHOSH	28	PL000385	SMS-MECHANICAL	187	65	813078888	11/70	86	MODERATE RESTRICTION	20.0	15.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.8	4.25	2,00,000	8,800	66	38	83	82	88	42.8	88.8	28.8	38.8	81
149	ANILU PANDY	36	PL000384	BMD OPERATION	182	74	898878888	11/70	86	MODERATE RESTRICTION	20.0	15.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.8	5.89	1,60,000	8,900	85	31	82	82	88	42.8	78.8	38.8	38.8	81
150	SARISH KIRAN	45	PL000389	BMD OPERATION	250	61	788888888	11/70	74	MODERATE RESTRICTION	20.0	15.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	12.1	3.73	1,80,000	8,800	81	32	88	81	88	42.8	108.8	32.8	38.8	88
151	PRASAD KIRAN	38	PL000255	BMD OPERATION	175	78	888888888	11/70	75	MODERATE RESTRICTION	23.3	10.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	12.9	2.55	2,10,000	8,800	64	32	83	81	88	42.8	130.5	38.8	10.8	88
152	SUBHAS KIRAN	48	PL000478	BMD OPERATION	183	74	710222020	11/70	86	MILD RESTRICTION	23.3	18.8	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.8	2.75	1,80,000	7,200	67	28	83	81	88	42.8	138.2	38.2	73.0	89
153	VOICHI KUNAR SINGH	25	PL000488	BMD OPERATION	188	67	813188888	11/70	102	MILD RESTRICTION	23.4	18.8	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.8	4.19	1,75,000	8,100	61	32	83	81	88	42.8	98.5	38.2	30.7	87
154	PURAN KIRAN	10	PL000378	AUTOMOBILE	157	65	877188888	11/70	78	SPRINOMETRY WML	15.0	18.8	0/6	6/6	NO INFORMATION DETECTED	PROBABLE ACUTE KIDNEY NOTED	11.4	3.10	1,05,000	8,700	71	34	84	81	88	48.8	88.5	18.0	28.5	82
155	SHRANESHU PANDU	17	PL000378	BMD OPERATION	185	54	888234888	11/70	88	MILD RESTRICTION	20.0	15.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.8	4.23	2,40,000	1,000	72	34	81	82	88	48.8	95.1	28.8	31.8	88
156	KRISHNA SINGH	34	PL000378	BMD OPERATION	184	50	818888888	11/70	78	SPRINOMETRY WML	15.0	20.0	0/12	6/11	NO INFORMATION DETECTED	STUDY WML	14.4	4.88	1,80,000	1,000	61	32	81	82	88	48.8	95.8	28.8	31.8	87
157	KIRAN KIRAN	30	PL000388	BMD OPERATION	188	61	847743888	11/70	82	MILD RESTRICTION	23.8	18.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.0	4.10	1,20,000	8,000	66	38	81	82	88	42.2	93.8	28.8	38.8	81
158	DEBIPATI CHOWHAN	25	PL000387	CCM-MECHANICAL	159	68	854726388	11/70	85	MILD RESTRICTION	23.2	15.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.2	4.37	1,60,000	8,800	68	38	81	81	88	42.8	88.2	28.8	38.8	88
159	KIRAN KIRAN	48	PL000386	BMD MECHANICAL	187	67	838872388	11/70	86	SPRINOMETRY WML	23.8	15.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	18.5	4.88	1,80,000	8,000	62	38	88	81	88	48.8	87.0	28.8	38.8	88
160	SE SHAW	27		CONTRACTOR PMS	180	67	803864888	11/70	84	MILD RESTRICTION	20.0	18.8	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.1	4.29	1,80,000	8,500	64	32	80	81	88	42.8	88.5	28.1	38.8	88
161	SAJ KUMARAB	25		CONTRACTOR PMS	177	61	888878888	11/70	63	MODERATE RESTRICTION	23.3	22.8	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.8	4.31	2,25,000	8,500	82	34	82	81	88	42.8	95.0	28.6	38.2	88
162	BROUNDO ROY	23	PL000313	BMD OPERATION	184	60	858872088	11/70		SPRINOMETRY WML	18.8	18.8	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	14.1	4.3	2,50,000	8,800	62	34	82	81	88	48.8	107.1	12.8	38.8	87
163	ANIL KIRAN	12	PL000418	BMD OPERATION	184	63	700000000	11/70	81	SPRINOMETRY WML	20.8	18.0	0/6	6/6	NO INFORMATION DETECTED	STUDY WML	11.1	4.3	2,50,000	8,800	68	38	82	81	88	48.8	108.1	11.5	38.8	88

Shakambhari Paper & Power Limited

Factory Manager

Signature

181	SUBIN SAREN	35	ROLL NO 15	CSR ADMIN	158	88	70200241	180/58	38	MODERATE RESTRICTION	25.0	25.3	G/G	G/A	NO ANOMALY DETECTED	RIGHT DOWN IS ELUATED	11.7	5.35	1,30,000	1,300	43	37	04	01	00	19.4	196.4	17.5	38.7	43
184	ANNE CH MONDAL	42	ROLL NO 143	END-OPERATION	161	67	6738722198	140/58	88	MILD RESTRICTION	23.3	21.6	G/A	G/A	NO ANOMALY DETECTED	FROM FRONT ADRIC BRACKET NOTED	14.4	4.38	140,000	1,300	45	35	07	02	00	19.3	191.2	114	31.0	87
185	KULSH KUNJA BHAWATO	34	ROLL NO 1005	END-OPERATION	161	78	6806011186	150/58	78	SPERMATRY WNL	18.8	20.0	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	11.3	5.86	585,280	15,200	49	27	08	01	00	18.2	20.3	264	19.4	98
186	ANANTA MEHA	42	ROLL NO 1008	END-OPERATION	155	85		140/75	75	SEVERE RESTRICTION	36.5	30.0	G/G	G/G	NO ANOMALY DETECTED	STUDY WNL	14.2	3.19	240,000	1,500	54	35	04	03	00	18.9	193.3	275	19.4	11
187	DR HANARAJ DASH	38	ROLL NO 0089	DR 150 MECHANICAL	173	76	967940154	114/62	64	MILD RESTRICTION	30.0	23.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	14.5	4.77	130,000	1,600	49	27	03	01	00	17.3	195.1	285	19.9	10
188	SHAKTI GUPTA	48	ROLL NO 0756	DR 150 MECHANICAL	168	82	6530017078	114/60	62	SPERMATRY WNL	23.3	25.0	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	16.2	4.31	170,000	1,700	46	30	02	02	00	17.1	196.4	293	19.1	02
189	SHISHU MEHAR SINGH	86	ROLL NO 0608	HMS	177	82	742798236	120/60	60	MILD RESTRICTION	18.8	21.6	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	13.0	5.63	140,000	1,400	48	28	05	01	00	16.7	192.1	303	25.7	11
190	BABBARA KUMAR	85	ROLL NO 0090	SMS-MECHANICAL	158	58	0731147121	140/58	74	SPERMATRY WNL	18.3	18.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	12.1	4.32	140,000	15,500	39	38	02	02	00	15.8	198.4	303	19.4	98
191	SALAM PRASADHAN	76	ROLL NO 0080	SMS ELECTRICAL	166	63	0340471130	100/50	76	MODERATE RESTRICTION	15.0	21.8	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	14.4	4.80	240,000	1,500	43	30	04	03	00	15.4	193.5	291	17.2	05
192	DEEPA KUMAR SINGH	77	ROLL NO 0778	DR 150 MECHANICAL	177	52	08040871	140/58	100	MILD RESTRICTION	16.6	18.3	G/G	G/A	NO ANOMALY DETECTED	STUDY WNL	13.3	4.20	144,000	15,500	47	28	04	03	00	15.5	195.8	321	19.4	07
193	PRASANT MUKHERJEE	38	ROLL NO 0195	DR 150 MECHANICAL	188	73	029404851	100/75	72	SPERMATRY WNL	25.0	18.3	G/G	G/A	NO ANOMALY DETECTED	STUDY WNL	13.3	4.88	172,000	8,700	43	31	03	01	00	14.4	188.3	261	19.0	30
194	MITHUN SAHAI	38	ROLL NO 0157	DR 150 MECHANICAL	154	58	039804851	120/55	72	MODERATE RESTRICTION	20.0	26.0	G/G	G/A	NO ANOMALY DETECTED	STUDY WNL	10.8	4.84	235,000	1,500	47	28	04	03	00	14.0	182.3	259	17.9	07
195	PRASANT DUTTA	33	ROLL NO 0174	DR 150 MECHANICAL	171	44	8078802001	130/57	78	SPERMATRY WNL	25.0	18.3	G/G	G/A	NO ANOMALY DETECTED	STUDY WNL	13.3	4.39	2,50,000	6,300	45	30	03	03	00	14.0	182.3	259	17.9	07
196	KUMAR PRIT DAS	47	ROLL NO 0118	DR 150 MECHANICAL	168	44	0250167194	118/57	82	MILD RESTRICTION	20.0	23.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	13.3	4.51	1,00,000	4,800	47	27	08	03	00	14.3	191.4	277	16.4	16
197	ABHIRAM KUMAR SHARMA	10	ROLL NO 0253	CHS ADMIN	174	75	804408246	120/68	100	SPERMATRY WNL	18.3	23.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	14.4	4.06	2,80,000	8,700	44	30	03	03	00	14.0	190.8	193	15.2	06
198	ATINTRA MOHAR KUNGU	36	ROLL NO 0135	CHS ADMIN	188	74	039818520	130/58	98	SPERMATRY WNL	21.4	18.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	13.3	5.25	1,40,000	5,300	48	28	01	03	00	14.4	194.7	286	15.8	11
199	ASRUL ARSADY	38	ROLL NO 0003	CHS ADMIN	152	38	808815748	125/55	38	SPERMATRY WNL	21.4	23.3	G/D	G/A	NO ANOMALY DETECTED	STUDY WNL	12.2	4.11	1,40,000	5,200	44	30	03	03	00	14.0	186.6	198	14.3	07
200	PRASANTA DUTTA	45	ROLL NO 0204	CHS ADMIN	185	71	039812221	146/144	83	MILD RESTRICTION	30.0	18.6	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	13.8	4.86	2,40,000	7,000	48	27	02	01	00	13.9	183.9	281	14.1	10
201	HARADHAN SAGGI	36		CONTRACTOR MD NABHAN ANSARI	158	93	8615773198	130/71	78	SPERMATRY WNL	23.3	18.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	12.2	4.40	1,60,000	6,800	45	30	03	03	00	14.7	187.0	194	14.1	10
202	KARTIKA DAS	17	ROLL NO 0179	CSR	171	76	039418485	100/71	82	MILD RESTRICTION	16.6	18.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	15.3	5.68	1,00,000	7,000	45	30	08	01	00	14.3	188.0	238	13.7	08
203	PRATILISA MOHAMMATA	34	ROLL NO 0487	OPF 30MW ELECTRICAL	165	65	029404940	100/50	90	SPERMATRY WNL	20.0	20.0	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	14.0	4.87	2,40,000	7,300	48	27	03	03	00	14.5	187.9	193	14.1	10
204	SARIN SARADYA	41	ROLL NO 0244	HR ADMIN	175	77	104718514	140/60	72	MILD RESTRICTION	21.4	23.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	12.2	4.88	1,40,000	1,500	48	28	04	01	00	13.7	177.2	249	12.2	11
205	AMRIT SAHAI	30		CONTRACTOR SHITA ENTERPRISE	154	61	086019007	120/71	82	SPERMATRY WNL	25.0	15.0	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	12.1	4.86	1,40,000	6,800	45	30	03	03	00	13.7	179.1	249	12.2	10
206	YASIR KAZI	39		CONTRACTOR MD NABHAN ANSARI	158	57	039818485	114/71	78	SPERMATRY WNL	23.3	22.0	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	11.0	4.07	2,10,000	7,400	48	27	02	01	00	13.2	174.7	222	11.4	08
207	MITUN BHANJA	11		CONTRACTOR MD NABHAN ANSARI	186	63	034818506	128/64	88	MILD RESTRICTION	15.3	20.0	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	12.0	5.40	1,50,000	5,800	45	30	01	03	00	13.0	171.7	213	11.3	08
208	SUNIT PAI	48	ROLL NO 0062	HR ADMIN	158	82	035508001	120/64	94	SPERMATRY WNL	18.3	18.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	13.2	4.24	2,50,000	15,500	49	28	02	01	00	13.1	181.3	113	14.1	06
209	UTTAM DAS	45	ROLL NO 12	ALYDABLE	162	65	085218488	100/71	80	MILD RESTRICTION	20.0	18.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	15.3	4.88	2,40,000	5,800	48	28	04	02	00	13.1	188.1	113	15.5	07
210	BABU TUDU	30		CONTRACTOR SHITA ENTERPRISE	164	72	039407000	130/71	88	MILD RESTRICTION	20.0	18.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	11.5	5.07	1,60,000	1,500	48	27	07	03	00	13.1	180.1	113	15.5	07
211	ANIRBAN SAHAI	64	CONTRACTOR MD NABHAN ANSARI	CONTRACTOR MD NABHAN ANSARI	166	58	037093980	130/62	75	MILD RESTRICTION	25.0	14.1	G/D	G/A	NO ANOMALY DETECTED	STUDY WNL	11.8	4.01	1,52,000	5,100	47	31	04	02	00	14.1	185.9	294	14.2	06
212	SHITAM SAHAI	63	CONTRACTOR MD NABHAN ANSARI	CONTRACTOR MD NABHAN ANSARI	162	57	036812000	130/74	71	MODERATE RESTRICTION	15.3	18.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	13.2	5.00	1,40,000	7,400	49	28	03	03	00	13.1	186.7	213	13.2	11
213	SHIBU SAHAI	55	CONTRACTOR MD NABHAN ANSARI	CONTRACTOR MD NABHAN ANSARI	148	43	050817994	120/67	79	MILD RESTRICTION	18.3	21.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	10.7	5.07	1,80,000	8,500	48	31	01	02	00	13.4	171.8	218	10.1	09
214	MOHAMMAD MAJ	71	ROLL NO 0117	CENTRAL ELECTRICAL	167	61	001170490	130/71	104	SPERMATRY WNL	23.3	18.0	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	14.8	4.57	2,40,000	8,800	48	28	03	01	00	14.2	196.7	119	14.0	11
215	SURESH SAHAI	71		CONTRACTOR SHITA ENTERPRISE	167	70	037071805	130/74	81	MILD RESTRICTION	18.3	21.0	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	13.3	4.18	1,40,000	10,200	44	30	04	03	00	14.1	190.3	229	12.0	27
216	BABUL KISHI	77		CONTRACTOR MD NABHAN ANSARI	168	58	038812229	140/60	87	MILD RESTRICTION	20.0	20.0	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	11.8	5.19	2,30,000	7,100	49	27	03	01	00	13.9	188.3	229	12.0	27
217	SHIBU SAHAI	38		CONTRACTOR MD NABHAN ANSARI	216	52		120/64	65	MODERATE RESTRICTION	16.3	18.3	G/A	G/A	NO ANOMALY DETECTED	STUDY WNL	13.9	5.55	1,80,000	1,600	43	31	08	02	00	13.7	177.0	259	10.1	10
218	MAHMOUD AHMED	30	ROLL NO 1044		200	49	037068880	140/100	96	MILD RESTRICTION	23.1	21.6	G/A	G/A	NO ANOMALY DETECTED	DOSES ARE ELUATED	12.9	5.88	1,80,000	4,800	45	27	01	01	00	14.9	195.1	33.1	14.8	10
219	SHAH SAHAI	47	CONTRACTOR MD NABHAN ANSARI	CONTRACTOR MD NABHAN ANSARI	210	46	035808004	120/77	63	MODERATE RESTRICTION	26.1	25.4	G/A	G/A	NO ANOMALY DETECTED	CRACK SHOWN SHOW LEFT VENTRICULAR CONFIGURATION	12.5	4.17	1,13,000	10,100	48	27	03	02	00	14.1	186.4	243	11.0	17
220	SHAH ALMAJID	42	CONTRACTOR MD NABHAN ANSARI	CONTRACTOR MD NABHAN ANSARI	247	54	039239283	140/68	69	MILD RESTRICTION	20.0	14.9	G/A	G/A	NO ANOMALY DETECTED	SHOW LEFT VENTRICULAR CONFIGURATION	14.4	4.79	2,50,000	1,600	48	28	04	01	00	14.9	190.7	10.0	14.3	05
221	MAHU SAHAI	11	ROLL NO 180	DR 150 HOUSEKEEP	162	67	801582761	140/100	70	MODERATE RESTRICTION	20.0	21.0	G/A	G/A	NO ANOMALY DETECTED	UNUSUAL NOISE	13.3	4.88	1,40,000	1,500	48	27	03	03	00	14.3	188.1	113	15.5	07

Shakamchan Ispat & Power Limited

Factory Manager

240	CHANDRA SECAR CHANNAGIRY	34	P1000189	FR ADMIN	158	71	20688425	175/75	78	MODGATE RESTRICTION	20.0	15.0	6/6	6/6	NO ARCHITECTURE DETAIL	CARDINAL WINDOW SHOW LEFT VENTRICULAR CONFIGURATION	10.2	5.37	1,80,000	15,000	66	38	04	02	08	33.6	54.2	38.0	38.1	10
241	BAIR NAG	40		CONTRACTOR STEEL CONSTRUCTION	157	35	98328480	156/73	78	MOD RESTRICTION	20.0	15.0	6/6	6/6	NO ARCHITECTURE DETAIL	CARDINAL WINDOW SHOW LEFT VENTRICULAR CONFIGURATION	11.3	4.35	2,00,000	1,700	66	30	03	01	08	25.9	82.3	27.3	21.0	81
242	SMALL RETEVAL	80	P1000071	DR 100 ELECTRICAL	166	95	981225880	114/74	80	MOD RESTRICTION	20.0	10.0	6/6	6/6	NO ARCHITECTURE DETAIL	STUDY WIRE	12.7	4.30	1,80,000	7,500	65	31	03	02	06	38.1	90.1	31.1	31.4	11
243	KHOSLA NAM	27	P1000458	DR 100 ELECTRICAL	162	68	703163432	124/78	71	MODGATE RESTRICTION	20.0	15.0	6/6	6/6	NO ARCHITECTURE DETAIL	STUDY WIRE	18.8	5.04	2,40,000	7,000	64	33	02	01	06	41.3	87.1	29.3	33.1	02
244	WAGHAR KHAN	30		CONTRACTOR STEEL CONSTRUCTION	175	62	984150880	125/74	88	MOD RESTRICTION	20.0	15.0	6/6	6/6	NO ARCHITECTURE DETAIL	BRICK CORNER ELEVATED	14.1	4.78	1,80,000	7,500	68	27	03	02	06	42.5	88.8	29.9	33.0	08
245	MD. RAJIB	82	P1000047	DR 100 ELECTRICAL	156	54	947841808	110/78	81	MODGATE RESTRICTION	20.0	15.0	6/6	6/6	NO ARCHITECTURE DETAIL	MURTY WIRE	12.2	4.80	2,10,000	7,500	64	31	04	01	06	31.5	77.7	21.3	32.6	11
246	WAGHAR KHAN	80		CONTRACTOR LIMITED	152	35	918886178	110/78	81	SPICANTY WIRE	20.0	15.0	6/6	6/6	NO ARCHITECTURE DETAIL	VENTILATING OF ACQUA BOTTLE	13.3	4.90	1,70,000	6,500	65	30	03	02	06	40.2	81.8	27.1	33.1	06
247	SUNANDA BIR	30	P1000141	STEEL ADMIN	110	83	981270128	120/76	80	MOD RESTRICTION	20.0	15.0	6/6	6/6	NO ARCHITECTURE DETAIL	STUDY WIRE	14.5	4.71	4,42,000	3,000	58	27	04	05	00	40.1	85.3	28.2	32.8	08
248	NOY BIR	32		CONTRACTOR LIMITED	117	48	807787054	140/78	76	MODGATE RESTRICTION	20.0	15.0	6/6	6/6	NO ARCHITECTURE DETAIL	STUDY WIRE	13.6	6.40	1,80,000	8,000	64	31	03	01	06	40.4	72.3	22.7	31.4	31
249	STERDAS KUMAR CHAURAKAR	35		CONTRACTOR MR SPMVASAN	189	67	809607580	85/76	79	MOD RESTRICTION	20.0	15.0	6/6	6/6	NO ARCHITECTURE DETAIL	STUDY WIRE	13.7	5.18	2,10,000	8,000	67	30	03	01	06	43.1	72.1	21.9	31.8	08
250	PRATAP BIR CHAUDHARI	36	P1000181	STEEL ADMIN	168	64	812887580	112/78	72	SPICANTY WIRE	23.1	23.1	6/6	6/6	NO ARCHITECTURE DETAIL	STUDY WIRE	13.5	4.75	3,00,000	8,000	68	26	04	02	10	39.5	83.8	28.4	33.9	35

Shakambhari Ispat & Power Limited

Factory Manager

ANNEXURE-18

CORPORATE ENVIRONMENTAL POLICY

M/S Shakambhari Ispat & Power Limited (SIPL) is engaged in production of steel products is committed towards clean and sustainable environment. The mission of Shakambhari Ispat & Power Limited is to produce steel in an environment friendly manner and strive to:

- ❖ Integrate sound environmental management practices in all the activities.
- ❖ Conduct the operations in environmentally responsible manner to minimize pollution and its' impact on environment.
- ❖ Comply with applicable legal and other requirements related to environmental aspects of the operations and strive to go beyond. The environmental management cell will be headed by EHS-Head.
- ❖ The company shall ensure that deviations from this policy and cases of violations/non-compliances of Environment or Forest Laws, if any, shall be reported to the Board of Directors through ED-Corporate and shall identify and designate responsible person for ensuring compliance with the Environmental Laws and Regulations.
- ❖ Conserve energy, and other natural resources, minimize waste generation and promote recovery, recycle and reuse practices.
- ❖ Increase greenery in and around the plant.
- ❖ Ensure continual improvement in environmental performance by setting & reviewing objectives & targets.
- ❖ Encourage environmental awareness amongst employees and the general populace around the plant.
- ❖ Maintain transparency in matters of Environmental Compliance.

The hierarchical system/administrative order to deal with issues related to environmental compliance shall be as follows:

For **M/S Shakambhari Ispat & Power Limited**


Director



ANNEXURE-19

ANNEXURE-20

SHAKAMBHARI ISPAT & POWER LIMITED

Village – Madandih, P.O – Bartoria, Dist. – Purulia, West Bengal

ENVIRONMENTAL INFORMATION DATA DISPLAY BOARD

[illegible]

ANNEXURE-21

Submission of Environmental Statement (Form-V) for FY: 2024-25 of M/s Shakambhari Ispat & Power Limited

From R K Mishra <rk.mishra@shakambhargroup.in>

Date Tue 9/30/2025 6:02 PM

To ee11wbpcb-wb <ee11.wbpcb-wb@bangla.gov.in>

Cc Sub Office Kolkata <iro.kolkata-mefcc@gov.in>; Sanjeev Kumar Sachan <sanjeev.sachan@shakambhargroup.in>

 1 attachment (982 KB)

SIPL_Env. Statement_FY-2024-25.pdf;

Dear Sir,

With reference to the subject, we are submitting attached herewith the Environmental Statement (Form-V) for Financial Year (2024-25) ending 31st March, 2025 of M/s Shakambhari Ispat & Power Limited, Vill-Madandih, PO-Bartoria, Dist-Purulia (WB) for your kind consideration please.

Kindly acknowledge our submission

With regards,

Yours faithfully,

for **Shakambhari Ispat & Power Limited**

R. K. Mishra
GM-EHS

ANNEXURE-22



ENVIROCHECK

Recognised by MoEF&CC, WBPCB & JSPCB
Accredited by QCI / NABET
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TCLP REPORT

1.	Name of the Industry	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)
2.	Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121
3.	Report No.	:	ENV/488/TR(SLAG)/M(ii)/25-26
4.	Date of sampling	:	05.02.2026
5.	Reporting Date	:	16.02.2026
6.	Type of sample	:	Slag
7.	Location	:	Silico Manganese Slag

Sl. No.	PARAMETERS	METHOD	UNIT	RESULTS
1.	Iron (Fe)	EPA 1311 : 1992 / EPA 3050 B, 1996/EPA 200.9 : 1998	mg./l	2.60
2.	Zinc (Zn)	EPA 1311 : 1992 / APHA 23 rd Ed., 3111 B : 2017	mg./l	3.20
3.	Copper (Cu)	EPA 1311 : 1992 / EPA 3050 B, 1996/EPA 200.6 : 1998	mg./l	1.50
4.	Nickel (Ni)	EPA 1311 : 1992 / APHA 23 rd Ed., 3111 B : 2017	mg./l	1.20
5.	Lead (Pb)	EPA 1311 : 1992 / EPA 3050 B, 1996/EPA 200.9 : 1998	mg./l	0.90
6.	Cadmium (Cd)	EPA 1311 : 1992 / EPA 3050 B, 1996/IS 3050 (Part 46)	mg./l	0.70
7.	Chromium (Cr)	APHA 23 rd Ed., 3111 B : 2017	mg./l	0.90

Remarks : Result relates only to the sample tested.

Reviewed By :


(Tanushree Malik)
(Jr. Chemist)

Authorised Signatory :


(Dr. Ajoy Paul)
(Quality Manager)



ENVIROCHECK

Recognised by MoEF&CC, WBPCB & JSPCB
Accredited by QCI / NABET
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018



TCLP REPORT

1.	Name of the Industry	:	Shakambhari Ispat & Power Ltd. (Unit – Madandih)
2.	Address	:	Vill. – Madandih, P.O. – Bartoria, P.S. – Neturia, Dist. – Purulia, (WB)– 723121
3.	Report No.	:	ENV/488/TR(SLAG)/M(ii)/25-26
4.	Date of sampling	:	05.02.2026
5.	Reporting Date	:	16.02.2026
6.	Type of sample	:	Slag
7.	Location	:	Ferro Manganese Slag

Sl. No.	PARAMETERS	METHOD	UNIT	RESULTS
1.	Iron (Fe)	EPA 1311 : 1992 / EPA 3050 B, 1996/EPA 200.9 : 1998	mg./l	4.78
2.	Zinc (Zn)	EPA 1311 : 1992 / APHA 23 rd Ed., 3111 B : 2017	mg./l	3.95
3.	Copper (Cu)	EPA 1311 : 1992 / EPA 3050 B, 1996/EPA 200.6 : 1998	mg./l	3.89
4.	Nickel (Ni)	EPA 1311 : 1992 / APHA 23 rd Ed., 3111 B : 2017	mg./l	3.80
5.	Lead (Pb)	EPA 1311 : 1992 / EPA 3050 B, 1996/EPA 200.9 : 1998	mg./l	2.80
6.	Cadmium (Cd)	EPA 1311 : 1992 / EPA 3050 B, 1996/IS 3050 (Part 46)	mg./l	1.60
7.	Chromium (Cr)	APHA 23 rd Ed., 3111 B : 2017	mg./l	2.70

Remarks : Result relates only to the sample tested.

Reviewed By :


(Tanushree Malik)
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<End of Report>